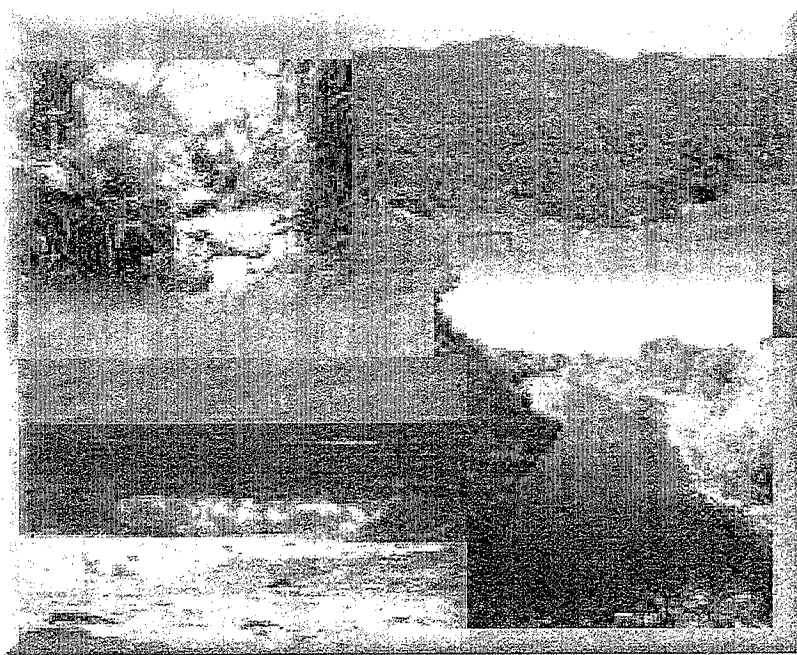


STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 09-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR  
STORM WATER (WET WEATHER) AND NON-STORM WATER (DRY WEATHER)  
DISCHARGES FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS WITHIN THE VENTURA  
COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND  
THE INCORPORATED CITIES THEREIN.

May 7, 2009



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STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 08-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR

STORM WATER DISCHARGES FROM THE MUNICIPAL SEPARATE STORM  
SEWER SYSTEM WITHIN THE VENTURA COUNTY WATERSHED PROTECTION  
DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN

**FINDINGS**

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter called Regional Water Board), finds that:

**A. Permit Parties and History**

1. Ventura County Watershed Protection District (Principal Permittee), County of Ventura, cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura (Ventura), Santa Paula, Simi Valley and Thousand Oaks (hereinafter referred to separately as Permittees) have joined together to form the Ventura Countywide Storm Water Quality Management Program to discharge wastes. The Permittees discharge or contribute to discharges of storm water and non-storm water from municipal separate storm sewer systems (MS4s), also called storm drain systems, into the Watershed Management Areas of Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek and Miscellaneous Ventura Coastal all within Ventura County and Los Angeles County (see Attachment "A").
2. Prior to the issuance of this permit, storm water discharges from the Ventura County MS4 were covered under the countywide waste discharge requirements contained in Order No. 00-108, adopted by the Regional Water Board on July 27, 2000, which replaced Order No. 94-082, adopted by the Regional Water Board on August 22, 1994. Order No. 00-108 also served as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of municipal storm water.
3. The Ventura County Board of Supervisors approved the concept of a countywide NPDES permit program and the use of the Flood Management District (presently the Watershed Protection District) benefit assessment authority to finance it on April 14, 1992. On June 30, 1992, the Ventura County Board of Supervisors adopted a benefit assessment levy for storm water and flood management in the unincorporated areas of Ventura County and the cities within the County, to be used in part to finance the implementation of a countywide NPDES municipal storm water

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permit program. The Ventura County MS4 Permittees have entered into an agreement with the Watershed Protection District to finance the activities related to the Ventura County MS4 Permit for shared and district wide expenses. The Permittees are also given the option to use the Benefit Assessment Program to finance their respective activities related to reducing the discharge of storm water pollutants under the MS4 Permit.

- 4. The Regional Water Board may require a separate NPDES permit for any entity that discharges storm water into the watersheds of Ventura County. Such an entity can be any State or Federal facility, special district or other public or private party.

**B. Nature of Discharge**

- 1. Storm water discharges consist of surface water runoff generated from various land uses in all the hydrologic drainage basins, which discharge into Waters of the State. The quality of these discharges varies and is affected by geology, land use, season, hydrology, and sequence and duration of hydrologic events. Based on the Ventura Countywide Storm Water Monitoring Program's Water Quality Monitoring Reports which were required under Order No. 00-108, the dry weather and wet weather Pollutants of Concern (POC) in urban stormwater include an anion, bacteria, conventional pollutants, metals, a nutrient, organic compounds, and pesticides. The POC are identified in Attachment "B" of this Order. Many of the POC listed are causing impairments identified on the federal Clean Water Act (CWA) § 303(d) list of impaired waterbodies.

The State Water Board submits a report (a list of water quality limited segments (§ 303(d) list)) on the State's water quality to the U.S. EPA pursuant to § 305(b) of the 1972 CWA, and Title 40, CFR 130.7, every 2 years. The Report provides water quality information to the general public and serves as the basis for the U.S. EPA's National Water Quality Inventory Report to Congress. Section 303(d) requires that all waters that are not attaining standards after the implementation of those controls required by 1977, shall be included on the list. Title 40 CFR 130.7(b)(3) defines "water quality standard applicable to such waters" as "those water quality standards established under § 303 of the Clean Water Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements."

- 2. Common pollutants in urban storm water and their respective sources are: bacteria from animal droppings and illegal discharges; Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications and from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints and automotive parts; copper

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from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; and dioxins as products of combustion.

- 3. In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems. In addition, the high volumes and high velocities of storm water discharged from MS4s into natural watercourses can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed hydromodification. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California.
- 4. Ammonia as Nitrogen, and Nitrate plus Nitrite as Nitrogen are biostimulatory substances that can cause or contribute to eutrophic effects such as low dissolved oxygen and algae growth impairing warm freshwater and wildlife habitats. Ammonia is highly toxic to fish and other aquatic life. Excessive ammonia can cause aquatic life toxicity.
- 5. Elevated bacterial indicator densities impair the water contact recreation (REC-1) beneficial use at beaches, creeks, estuaries, lagoons, and marinas. Swimming in waters with elevated bacterial indicator densities has been associated with adverse health effects. Specifically, local and national epidemiological studies indicate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities. Sources of elevated bacteria to marine and fresh waters may also include illegal discharges from improperly maintained standard septic systems, onsite wastewater treatment systems (OWTS) and illicit discharges from private drains.
- 6. Pesticides are substances used to prevent, destroy, repel or mitigate pests such as insects, weeds, and microorganisms. Their effects can be direct (e.g. fish die from exposure to a pesticide entering waterways, or birds do not reproduce after ingesting contaminated fish), or indirect (a hawk becomes sick from eating a mouse dying from pesticide poisoning). Pesticide categories include: Organochlorine, Organophosphorus, Organophosphate, and Pyrethroid.
- 7. Polychlorinated Biphenyls (PCBs) are a subset of the synthetic organic chemicals known as chlorinated hydrocarbons. Concern over PCBs toxicity, persistence (chemical stability) in the environment and bioconcentration in aquatic organisms has led to prohibitions on PCBs.
- 8. Rising groundwater and swimming pool water have been found to be sources of pollutants such as salts (chloride). Salts increase the salinity of otherwise freshwater systems and disrupt physiological processes. The Regional Water Board has

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waterbodies listed on the CWA § 303(d) list for impairment due to salts and has adopted Basin Plan amendments to include Total Maximum Daily Loads (TMDLs) for salts. This Order includes provisions to control the discharges from these activities in order to directly or indirectly reduce or eliminate the discharge of salts to fresh water systems where salts may impair water quality and beneficial uses.

- 9. Trash and debris are pervasive pollutants which accumulate in streams, rivers, bays, and ocean beaches throughout Southern California. They pose a serious threat to our oceans and coasts, navigation, biological resources, recreation, human health and safety, aesthetics, and economies.
- 10. Municipal storm water (wet weather) and non-storm water (dry weather) discharges may contain pollutants that cause or threaten to cause an exceedance of the water quality standards, as outlined in the Los Angeles Region's Basin Plan. Wet weather and dry weather discharges from the MS4 are subject to conditions and requirements established in the Basin Plan for point source discharges. Discharges from the MS4 may not cause or contribute to exceedances of water quality standards.
- 11. Biological communities act to integrate the effects of water quality conditions in a stream by responding with changes in their population abundances and species composition over time. These populations are sensitive to multiple aspects of water and habitat quality, and provide expressions of ecological health easier to understand than the results of chemical and toxicity tests. Biological assessments and criteria address the cumulative impacts of all stressors, especially habitat degradation, and chemical contamination, which result in a loss of biological diversity. Biological information can help provide an ecologically based assessment of the status of a waterbody. Bioassessment is a cost-effective tool and protocol for assessing the biological and physical habitat conditions of streams and rivers for evaluation of the overall health of a watershed. The Principal Permittee consents to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program.
- 12. The increased volume, increased velocity, and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainages. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters. Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces. Percentage impervious cover is a reliable indicator and predictor of potential water quality degradation expected from new development.

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- 13. Studies indicate that facilities with paved surfaces subject to frequent motor vehicular traffic (such as: strip malls, parking lots, commercial business parks, and fast food restaurants), or facilities that perform vehicle repair, maintenance, or fueling (automotive service facilities) are potential sources of POC in storm water.
- 14. Retail Gasoline Outlets (RGOs) are points of convergence for vehicular traffic and are similar to parking lots and urban roads. Studies indicate that storm water discharges from RGOs have high concentrations of hydrocarbons and heavy metals.
- 15. The industries and businesses listed in this Order that are to be inspected by Permittees have the potential to discharge contaminated storm water into the MS4. This storm water is an environmental threat because it can adversely impact public health and safety, and the quality of receiving waters. For example, pretreatment program compliance inspections and audits performed in the Los Angeles and Ventura Counties indicate that automotive service and food service facilities sometimes discharge polluted storm water to the MS4s. The POC in such wash waters include oil and grease, toxic chemicals, and food waste. Spills from clogged sanitary sewer lines have a high likelihood to reach the receiving waters via MS4s. Overall, the most common POC identified in storm water discharge to the MS4s are: (i) heavy metals, (ii) oil and grease/ PAHs, (iii) sediments, (iv) oxygen demanding substances, (v) litter/ trash/ debris, (vi) nutrients, (vii) other toxic materials, such as pesticides. Municipal storm water monitoring data and industrial storm water monitoring data indicate that industrial and commercial sites continue to contribute significant quantities of pollutants in storm water runoff.
- 16. Development and urbanization increase pollutant loads, volume, and discharge velocity. First, natural vegetated pervious ground cover is converted to impervious surfaces (paved) such as highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, impervious surfaces (such as pavement and concrete) can neither absorb water nor remove pollutants, and thus the natural purification characteristics are lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants. Development and urbanization especially threaten environmentally sensitive areas. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. These environmentally sensitive areas (ESAs) designated by the State in the Ventura County watershed include:
  - (a) Drainages to waters identified in the Basin Plan as supporting the "Rare, Threatened, or Endangered Species (RARE)" Beneficial Use; and

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- (b) California Coastal Commission's Environmentally Sensitive Habitat Areas as delineated on maps in Local Coastal Plans (LCPs).
- (c) Additional ESAs that may be identified by California Department of Fish and Game.

17. The implementation of Low Impact Development (LID) techniques across the United States and Canada has demonstrated that the proper implementation of LID techniques not only results in water quality protection benefits and in a reduction of the cost of land development and construction but also bears other positive attributes that go beyond economic benefits such as enhanced property values, improved habitat, aesthetic amenities, and improved quality of life. *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, USEPA Doc No. EPA 841-F-07-006, December 2007.* Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse affects of hydromodification on stream habitat. *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption, Low Impact Development Center and State of California, State Water Resources Control Board, December 2007.* The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to benefit from these additional enhancements.
18. The Regional Water Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R4-2005-0080) on November 3, 2005. The objective of the program is to monitor runoff from irrigated agriculture facilities in the coastal watersheds of Ventura and Los Angeles Counties. The Basin Plan, which designates beneficial uses and establishes water quality objectives for the Region, recognizes that agricultural activities can generate pollutants such as sediment, pesticides, and nutrients that upon discharge to receiving water, can degrade water quality and impair beneficial uses. A category identified by the Conditional Waiver as a source of pollutants is nursery operations. This Order includes requirements for the municipal operator to confirm that nursery operators implement pollutant reduction and control measures with the objective of reducing pollutants in storm water runoff discharges.
19. Research conducted on the contribution of aerial deposition of trace heavy metals in Los Angeles County watersheds indicates that dry indirect deposition may account for a significant load of pollutants into surface waters. Similar patterns of aerial deposition likely occur in Ventura County. Of the atmospherically deposited pollutants on the watersheds, ten to twenty percent may account for the total load for copper, zinc, nickel, lead, and chromium to the waterbodies. Land reservoirs and sequestration may account for the remaining eighty to ninety percent of the atmospherically deposited pollutants on the watersheds. Emissions of semi-volatile

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organics such as polycyclic aromatic hydrocarbons (PAHs) and pesticides and their subsequent deposition may contribute to the contamination of receiving waters but appear to be less significant. The remaining percentage is stored in land reservoirs and eventually shows up in receiving waters.

**C. Permit Background**

1. The essential components of the Storm Water Management Program, as required by the Code of Federal Regulations (CFR) [40 CFR122.26(d)] are:
  - (a) Adequate Legal Authority.
  - (b) Fiscal Resources.
  - (c) Storm Water Quality Management Program (SMP)
    - (1) Public Information and Participation Program
    - (2) Industrial/ Commercial Facilities Program
    - (3) Planning and Land Development Program
    - (4) Development Construction Program
    - (5) Public Agency Activities Program
    - (6) Illicit Connection and Illicit Discharges Elimination Program
  - (d) Reporting Program (Monitoring Report and Program Report)
  
2. The Ventura County SMP, dated November 2001 (revision 2) identifies seven program areas, which are listed below and were previously approved under Board Order No. 00-108. For purposes of consistency, they are titled as follows:
  - (a) Ventura County SMP.
    - (1) Program Management
    - (2) Programs for Residents
    - (3) Programs for Industrial/ Commercial Businesses
    - (4) Programs for Planning and Land Development
    - (5) Programs for Construction Sites
    - (6) Programs for Public Agency Activities
    - (7) Programs for Illicit Connections/ Illegal Discharges
  - (b) For purposes of region-wide consistency, the program titles are revised and consolidated into the six areas listed in the preceding C.1(c). All Permittee storm water documents submitted to the Regional Water Board are to follow the organization enumerated in C.1(c).
  
3. The Permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The Permittees applied for renewal of their waste discharge requirements for a 5-year period, which serves as an NPDES permit to discharge wastes to surface waters.
  
4. The Regional Water Board reviewed the ROWD and determined it to be partially complete under the reapplication policy for MS4s issued by the United States Environmental Protection Agency (U.S. EPA) (61 Fed. Reg. 41697). The Regional

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Water Board has prepared this Order so that implementation of provisions contained in this Order by Permittees will meet the requirements of the federal NPDES regulations at 40 CFR122.26.

- 5. The Permittees ROWD contained a proposed Storm Water Management Program and a Monitoring Program to be considered by the Regional Water Board for incorporation into an MS4 NPDES Permit as permit conditions and to demonstrate compliance with federal law.
- 6. To-date, the monitoring program has consisted of mass emission, receiving water (tributaries), and land-use monitoring stations, toxicity testing, special studies for bioassessment of the Ventura River and hydrology, identification of ESAs, implementation of the Storm Water Quality Urban Impact Mitigation Plan (SQUIMP), and has provided support for volunteer monitoring programs. This Order requires a monitoring program consisting of mass emission, toxicity, TMDL storm water (wet weather) MS4 water quality-based effluent limits, TMDL non-storm water (dry weather) MS4 water quality-based effluent limits, trash and debris study, Pyrethroid assessment study, continuation of the hydromodification study, low impact development study, and participation in the Southern California Regional Bioassessment Program and Southern California Bight Project (SCBP).
- 7. The Principal Permittee is a member of the Southern California Coastal Water Research Project (SCCWRP) Commission. The Principal Permittee also participates in the Regional Monitoring Programs and research partnerships, such as the Southern California Storm Water Monitoring Coalition (SMC) and the Bioassessment Working Group.

**D. Permit Coverage**

- 1. The area covered by this Order includes all areas within Ventura County boundaries and all areas within each co-permittee's boundaries (see Figure 1) that drain into the MS4.
- 2. The Permittees covered under this Order were designated on a system-wide basis under Phase I of the CWA § 402(p)(3)(B)(i). The action of covering all Ventura County municipalities under a single MS4 permit on a system-wide basis was consistent with the provisions of 40 CFR122.26(a)(3)(iv), which states that one permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems; and the Regional Water Board may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

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- 3. Federal, State, Regional, or local entities within the Permittees' boundaries or in jurisdictions outside the Ventura County Watershed Protection District, and not currently named in this Order, may operate storm drain facilities and/ or discharge storm water to storm drains and watercourses covered by this Order. The Permittees may lack legal jurisdiction over these entities under State and Federal constitutions. The Regional Water Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. The Regional Board may consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations.  
Permittees have expressed their intention to work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system. Permittees shall make good faith efforts to control the contribution of pollutants to the MS4 from non-permittee dischargers such as Caltrans, the U.S. Department of Defense, and other state and federal facilities.
- 4. TMDLs are numerical calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (Waste Load Allocation (WLA) and non-point sources (Load Allocation (LA)). Discharges from the MS4s are considered point sources discharges, because the MS4 is a point source.
- 5. This Order incorporates applicable WLAs that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA. The TMDL WLAs in the Order are expressed as water quality-based effluent limits in a manner consistent with the assumptions and requirements of the TMDL from which they are derived.
- 6. The CWA and the California Water Code contain specific provisions on how wastewater discharges from point sources are to be permitted. Urban non-storm water (dry weather) discharge is not considered a storm water (wet weather) discharge.
- 7. Permittees should work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system through inter-agency agreements or other formal arrangements.

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**E. Federal, State and Regional Regulations**

- 1. The Water Quality Act of 1987 added § 402(p) to the CWA (33U.S.C. § 1251-1387). This section requires the U.S. EPA to establish regulations setting forth NPDES requirements for storm water discharges in 2 phases.

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- (a) U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase I Final Rule was published on November 16, 1990 (55 Fed. Reg. 47990).
- (b) U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (population of less than 100,000), small construction projects (less than 5 acres), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the U.S. The Phase II Final Rule was published on December 8, 1999 (64 Fed. Reg. 68722).
2. The U.S. EPA published an Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits on August 9, 1996 (61 Fed. Reg. 41697). This policy requires that MS4 reapplication for reissuance for a subsequent five-year permit term contain certain basic information and information for proposed changes and improvements to the storm water management program and monitoring program.
  3. The U.S. EPA has entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service for enhancing coordination regarding the protection of endangered and threatened species under section 7 of the Endangered Species Act, and the CWA's water quality standards and NPDES programs. Among other actions, the MOA establishes a framework for coordination of actions by the U.S. EPA, the Services, and CWA delegated States on CWA permit issuance under § 402 of the CWA [66 Fed. Reg. 11202-11217].
  4. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is a delegated State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of pollutants into all waters of the State, including waters of the United States, and tributaries thereto.
  5. Under CWA § 303(d) of the CWA, States are required to identify a list of impaired water-bodies and develop and implement TMDLs for these waterbodies (33 USC § 1313(d)(1)). The most recent 303(d) list's U.S. EPA approval date was June 28, 2007. The U.S. EPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monica BayKeeper on March 22, 1999, under which the Regional Water Board must adopt all TMDLs

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for the Los Angeles Region within 13 years from that date. This Order incorporates provisions incorporating approved WLAs for municipal storm water discharges and requires amending the SMP after subsequent pollutant loads have been allocated and approved.

6. Collectively, the restrictions contained in the TMDL Provisions for Storm Water (Wet Weather) Discharges and Non-Storm Water (Dry Weather) Discharges of this Order on individual pollutants are no more stringent than required to implement the provisions of the TMDL, which have been adopted and approved in a manner that is consistent with the CWA. Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the assumptions and requirements of the available WLAs in TMDLs (40 CFR122.44(d)(1)(vii)(B)).

7. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. This Order implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B)) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass'n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 CFR122.44(d)(1)(vii)(B)).

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Second, the local agency Permittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4th 1351, 1358-1359.). The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric

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restrictions on their discharges. (See finding 5., supra.) To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, where MS4 Permittees are regulated under a Best Management Practices (BMP) based storm water management program rather than end-of-pipe numeric limits, there exists no compulsion of a specific regulatory scheme that would violate the 10<sup>th</sup> Amendment to the United States Constitution. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

- 8. Under § 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Coastal States with approved coastal zone management programs are required to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: 1) agriculture; 2) silviculture; 3) urban; 4) marinas; and 5) hydromodification. This Waste Discharge Requirement addresses the management measures required for the urban category and the hydromodification category, with the exception of septic systems.
- 9. The Regional Water Board addresses septic systems through the administration of non-Chapter 15 regulatory programs and the implementation of Regional Water Board Order No.R4-2004-0146. Septic systems are also addressed under State Assembly Bill (AB) 885 (2000). The Regional Water Board will implement and enforce regulations issued by the State Board pursuant to AB 885. Taken together, these State and Local agency requirements when imposed on septic system operators are expected to reduce the bacterial contamination of storm water from improperly maintained septic systems.
- 10. The State Water Board has issued waste discharge requirements for discharges from utility vaults (CAG990002). The Regional Water Board has issued waste discharge requirements for discharges from well heads and hydrostatic pipe testing (CAG674001). These discharges to the MS4 shall be conducted under coverage of a separate NPDES permit specific to that activity.
- 11. On May 18, 2000, the U.S. EPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR) 65 Fed. Reg.

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31682 (40 CFR131.38) for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays and estuaries.

12. The State Water Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) in 2005. The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's coastal waters. It applies to point and nonpoint source discharges. The Ocean Plan identifies the applicable beneficial uses of marine waters that include preservation and enhancement of designated Areas of Special Biological Significance (ASBS) (now called "State Water Quality Protection Areas") and establishes a set of narrative and numerical water quality objectives designed to protect beneficial uses. The SWRCB adopted the California Ocean Plan, and both the SWRCB and the six coastal Regional Water Quality Control Boards (RWQCBs) implement and interpret the California Ocean Plan.
13. This Regional Water Board adopted a revised Water Quality Control Plan (Basin Plan) for the Los Angeles Region on June 13, 1994. The Basin Plan specifies the beneficial uses of Ventura County waterbodies and their tributary streams, and contains both narrative and numerical water quality objectives for these receiving waters. The following beneficial uses identified in the Basin Plan apply to all or portions of each watershed covered by this Order:
  - (a) Municipal and domestic supply
  - (b) Agricultural supply
  - (c) Industrial service supply
  - (d) Industrial process supply
  - (e) Ground water recharge
  - (f) Freshwater replenishment
  - (g) Navigation
  - (h) Hydropower generation
  - (i) Water contact recreation
  - (j) Non-contact water recreation
  - (k) Ocean commercial and sport fishing
  - (l) Warm freshwater habitat
  - (m) Cold freshwater habitat
  - (n) Preservation of Areas of Special Biological Significance
  - (o) Saline water habitat
  - (p) Wildlife habitat
  - (q) Preservation of rare and endangered species
  - (r) Marine habitat
  - (s) Fish migration
  - (t) Fish spawning
  - (u) Shellfish harvesting

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14. On March 22, 1999 the Consent Decree in Heal the Bay, Inc.; Santa Monica BayKeeper, Inc. v. Browner, Case No. 98-4825 SBA was approved. Under Establishment of TMDLs- The parties understand that California has the initial opportunity pursuant to § 303(d) of the CWA to adopt and submit to U.S. EPA for approval TMDLs to be established under this Consent Decree. TMDLs developed by Regional Water Boards are generally adopted through Basin Plan amendments. Basin plan amendments adopted by the State Board pursuant to Water Code section 13246, and the regulatory portions must be approved by the Office of Administrative Law pursuant to Government Code section 11353(b). TMDLs established pursuant to CWA section 303(d)(1) must be submitted to U.S. EPA for approval pursuant to section 303(d)(2), and incorporated into the state's water quality management plan
15. The Regional Water Board has adopted amendments to the Basin Plan, to incorporate TMDLs for the following:
- (a) The following TMDLs have been or will be incorporated into the Basin Plan within the term of the Order.
- (1) Santa Clara River - Nitrogen Compounds
- (A) Regional Water Board Resolution No. 2003-011
- (B) State Water Board Resolution No. 2003-0073
- (C) OAL file No. 04-0123-35
- (D) U.S. EPA approval date March 18, 2004
- (E) Final fee exemption date March 23, 2004 (effective date).
- (F) Compliance is 1 year after effective date (March 23, 2005)
- (2) Malibu Creek and Lagoon - Bacteria.
- (A) Regional Water Board Resolution No. 2004-019
- (B) State Water Board Resolution No. 2005-0072
- (C) OAL file No. 05-1018-03 S
- (D) U.S. EPA approval date January 10, 2006
- (E) Final fee exemption date January 24, 2006 (effective date)
- (F) Compliance for Summer Dry is 3 years after effective date (January 24, 2009)
- (G) Compliance for Winter Dry is 6 years after effective date (January 24, 2012)
- (H) Compliance for Wet Weather is 10 years after effective date (January 24, 2016), which is beyond the term of this Order
- (3) Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, Its Tributaries and Mugu Lagoon.
- (A) Regional Water Board Resolution No. 2005-009
- (B) State Water Board Resolution No. 2005-0067
- (C) OAL file No. 05-1110-02 S

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- (D) U.S. EPA approval date March 14, 2006  
 (E) Final fee exemption date March 24, 2006 (effective date)  
 (F) Compliance for Toxicity and Interim WLA is effective date (March 24, 2006)  
 (G) Compliance for Final WLA is 2 years after effective date (March 24, 2008)
- (4) Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation in Calleguas Creek, Its Tributaries and Mugu Lagoon.  
 (A) Regional Water Board Resolution No. 2005-010  
 (B) State Water Board Resolution No. 2005-0068  
 (C) OAL file No. 05-1206-03 S  
 (D) U.S. EPA approval date March 14, 2006  
 (E) Final fee exemption date March 24, 2006 (effective date)  
 (F) Compliance for Interim WLA is effective date (March 24, 2006)  
 (G) Compliance for Final WLA is 20 years after effective date (March 24, 2026), which is beyond the term of this Order
- (5) Calleguas Creek Watershed Metals  
 (A) Regional Water Board Resolution No. 2006-012  
 (B) State Water Board Resolution No. 2006-0078  
 (C) OAL file No. 06-1222-015 S  
 (D) U.S. EPA approval date March 26, 2007  
 (E) Final fee exemption date March 27, 2007 (effective date)  
 (F) Compliance for Interim WLA is effective date (March 27, 2007)  
 (G) Compliance for Final WLA is Within 15 years after the effective date (March 27, 2022), which is beyond the term of this Order
- (6) Revolon Slough & Beardsley Wash Trash TMDL  
 (A) Regional Water Board Resolution No. 2007-007  
 (B) State Water Board Resolution No 2007-0076  
 (C) OAL file No 2007-1227-05 S  
 (D) U.S. EPA approval date February 27, 2008  
 (E) Final fee exemption date March 6, 2008 (effective date)  
 (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)  
 (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)
- (7) Ventura River Estuary Trash TMDL  
 (A) Regional Water Board Resolution No. 2007-008  
 (B) State Water Board Resolution No 2007-0072  
 (C) OAL file No 2007-1227-01 S

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- (D) U.S. EPA approval date February 27, 2008
- (E) Final fee exemption date March 6, 2008 (effective date)
- (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
- (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)
- (8) Harbor Beaches of Ventura County Bacteria TMDL
  - (A) Regional Water Board Resolution No. 2007-017
  - (B) State Water Board Resolution No 2008-0072
  - (C) OAL file No 2007-1023-01 S
  - (D) U.S. EPA approval date December 18, 2008
  - (E) Final fee exemption date January 17, 2009 (effective date)

16. The Regional Water Board adopted and approved requirements for new development and significant redevelopment projects in Ventura County to control the discharge of storm water pollutants in post-construction storm water, on January 26, 2000, in Board Resolution No. R-00-02. The Regional Water Board Executive Officer issued the approved Standard Urban Storm Water Mitigation Plans (SUSMPs) on March 8, 2000 for Los Angeles County and the Cities in Los Angeles County. Since 2000, new development and redevelopment water quality criteria have been implemented by the Permittees to be consistent with SUSMP. The State Board affirmed the Regional Water Board action and SUSMPs in State Board Order No. WQ 2000-11, issued on October 5, 2000.

- (a) A statewide policy memorandum (dated December 26, 2000), which interprets the Order to provide broad discretion to Regional Water Boards and identifies potential future areas for inclusion in SUSMPs and the types of evidence and findings necessary. Such areas include ministerial projects, projects in environmentally sensitive areas, and water quality design criteria for Retail Gasoline Outlets (RGOs, see part 7 for definition). The Regional Water Board properly justified the extensions of SUSMPs and water quality criteria to ministerial projects, projects in environmentally sensitive areas, and RGOs, during the adoption of Regional Water Board Order 01-182. The Regional Water Board's action was upheld by the County of Los Angeles Superior Court (In Re: *County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4<sup>th</sup> 985).
- (b) The State Water Board's Chief Counsel interpreted the Order to encourage regional solutions and endorsed a mitigation fund or "bank" as alternatives for new development and significant redevelopment. The Regional Water Board has included provisions for regional solutions and the establishment of a mitigation bank in this Order.

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- 17. The Regional Water Board supports Watershed Management planning to address water quality protection in the region. The objective of the Watershed Management planning is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with available resources.
- 18. To facilitate compliance with federal regulations, the State Water Board has issued the following 4 Statewide General NPDES Permits associated with storm water:
  - (a) Industrial General Permit (IASGP- Industrial Activities Storm Water General Permit), NPDES No. CAS000001, issued on November 19, 1991, reissued on September 17, 1992 and April 17, 1997, currently under review for reissuance.
  - (b) Construction General Permit (CASGP- Construction Activities Storm Water General Permit), NPDES No. CAS000002, issued on August 20, 1992, reissued August 19, 1999, currently under review for reissuance.
  - (c) Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), NPDES No. CAS000005, issued on June 18, 2003.
  - (d) Small MS4 Permit WQ Order No. 2003-0005-DWQ, NPDES No. CAS000004, adopted on April 30, 2003.
- 19. Facilities discharging storm water associated with industrial activities, construction projects that disturb one or more acres of soil, or construction projects that disturb less than one acre but are part of a larger common plan of development or sale that in total disturbs 1 or more acres, and construction activities associated with small linear underground/ overhead projects that result in land disturbances greater than one acre, but less than five acres (small LUPs), are all required to obtain individual NPDES permits for storm water discharges, or be covered by the statewide General Permits by completing and filing a Notice of Intent (NOI) with the State Board. The U.S. EPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in storm water discharges to the MS4.
- 20. State Water Board Resolution No. 68-16 contains the state Antidegradation Policy, titled "Statement of Policy with Respect to Maintaining High Quality Waters in California" (Resolution 68-16), which applies to all waters of the state, including ground waters of the state, whose quality meets or exceeds (is better than) water quality objectives. Resolution No. 68-16 is considered to incorporate the federal Antidegradation Policy (40 CFR131.12) where the federal policy applies, (State Water Board Order WQO 86-17). Administrative policies that implement both, federal and state antidegradation policies acknowledge that an activity that results in a minor water quality lowering, even if incrementally small, can result in violation of

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Antidegradation Policies through cumulative effects, for example, when the waste is a cumulative, persistent, or bioaccumulative pollutant.

(a) Federal Antidegradation Policy (40 CFR131.12) states that the State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:

- (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- (2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
- (3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
- (4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

(b) State Water Board Resolution No. 68-16 establishes essentially a 2-step process for compliance with the policy.

- (1) Step 1- if a discharge will degrade high quality water, the discharge may be allowed if any change in water quality:
  - (A) Will be consistent with maximum benefit to the people of the State.
  - (B) Will not unreasonably affect present and anticipated beneficial use of such water.
  - (C) Will not result in water quality less than that prescribed in state policies (e.g., water quality objectives in Water Quality Control Plans).
- (2) Step 2- any activities that result in discharges to high quality waters are required to:
  - (A) Meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to avoid a pollution or nuisance.

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(B) Maintain the highest water quality consistent with the maximum benefit to the people of the State.

- 21. The State Water Board on June 17, 1999, adopted Order No. WQ 99-05, which specifies standard receiving water limitation language to be included in all municipal storm water permits issued by the State and Regional Water Boards.
- 22. Cal. Water Code § 13263(a) requires that waste discharge requirements issued by Water Boards shall implement any relevant water quality control plans that have been adopted; shall take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose; other waste discharges; and the need to prevent nuisance.
- 23. Clean Water Act section 402(p)(3)(B)(iii) requires municipal separate storm sewer system (MS4) operators to control pollution in storm water to the "maximum extent practicable" (MEP). The MEP requirement is analogous to a technology-based requirement in that it focuses upon the feasibility of pollutant reduction measures rather than achievement of water quality standards in the receiving waters to achieve improvements in the quality of the storm water that is discharged. Compliance with the MEP requirement can range from implementation of structural and nonstructural best management practices to installation of end-of-pipe treatment systems. MEP generally provides the MS4 operators the flexibility to determine what controls should be implemented through the development of a storm water management plan, subject to the Regional Board's approval. Nevertheless, MEP does not define the limits of pollution control measures that may be required of MS4 operators, and the requirement to implement controls that reduce pollutants to the MEP is not limited by the goal of attaining water quality standards. In some circumstances, compliance with MEP may result in controls more stringent than applicable WQS, and in others, less stringent. The Regional Board may use its discretion to impose other provisions beyond MEP, as it determines appropriate for the control of pollutants, including ensuring strict compliance with water quality standards. (*Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1168.)
- 24. The California Supreme Court has ruled that although Water Code section 13263 requires the Water Boards to consider the factors set forth in Water Code section 13241 when issuing an NPDES permit, the Water Boards may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613). However, when the pollutant restrictions in an NPDES are more stringent than federal law requires, Water Code section 13263 requires that the Water Boards consider the factors described in section 13241 as they apply to those specific restrictions.

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- 25 The City of Burbank case related to NPDES permits for publicly owned treatment works, not permits for municipal separate storm sewer systems (MS4s). Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the storm sewers, in addition to requiring controls to reduce the discharge of pollutants to the maximum extent practicable. Therefore, a 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4, or for practicable controls to reduce the discharge of pollutants to the maximum extent, as those requirements are mandated by federal law.
- 26. The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR122.26 or in U.S. EPA guidance. However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA § 402(p)(3)(B)(ii) and (iii) and the related federal regulations. Consistent with federal law, all of the conditions in this permit could have been included in a permit adopted by U.S. EPA in the absence of the in lieu authority of California to issue NPDES permits.
- 27. The Board finds that all requirements in this order are practicable. Moreover, while commenters have alleged that the permit requirements are “beyond MEP,” no commenter has presented evidence that demonstrates that any particular permit requirement that is not dedicated to the effective prohibition on non-storm water discharges into the MS4, is not actually practicable.
- 28. Notwithstanding findings 23 through 27, the Regional Board has developed an economic analysis of the permit’s requirements, consistent with Water Code section 13241. That analysis is contained in the “Economic Considerations of the Proposed Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein , June 2, 2008, which is contained in the administrative record for this Order. The Regional Board has considered all of the evidence that has been presented regarding the 13241 factors in adopting this permit, both as contained in the economic analysis and as reflected in the fact sheet and comments (and responses thereto) submitted to the many drafts of this permit. The Regional Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan, and the economic information related to costs of compliance and other 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, additional time to implement certain measures and achieve water quality objectives can be provided through the iterative storm water management plan process.

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**F. Implementation**

1. The California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code § 2100 et seq.) requires that public agencies consider the environmental impacts of the projects they approve for development. CEQA applies to projects that are considered discretionary (a governmental agency can use its judgment in deciding whether and how to carry out or approve a project, § 15357) and does not apply to ministerial projects (the law requires a governmental agency to act on a project in a set way without allowing the agency to use its own judgment, § 15369). A ministerial project may be made discretionary by adopting local ordinance provisions or imposing conditions to create decision-making discretion in approving the project. In the alternative, Permittees may establish standards and objective criteria administratively for storm water mitigation for ministerial projects. For water quality purposes regardless of whether a project is discretionary or ministerial, the Regional Water Board considers that all new development and significant redevelopment activity in specified categories, that receive approval or permits from a municipality, are subject to storm water mitigation requirements in a manner that is consistent with and complies with the provisions of CEQA.
  
2. The objective of this Order is to ensure that discharges from the MS4 in Ventura County comply with water quality standards, including protecting the beneficial uses of receiving waters. To meet this objective, the Order requires that Best Management Practices (BMPs) will be implemented to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and achieve water quality objectives and standards. The U.S. EPA envisioned that municipal storm water programs would be implemented in an iterative manner and improved with each iteration by using information and experience gained during the previous permit term (*Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits* - 61 Fed. Reg. 41697). Municipalities are required to evaluate what is effective and make improvements in order to protect beneficial uses of receiving waters. This Order requires implementation of an effective combination of pollution control and pollution prevention measures, education, public outreach, planning, and implementation of source control BMPs and Structural and Treatment Control BMPs. The better-tailored BMPs combined with the performance objectives outlined in this Order have the purpose of attaining water quality objectives and standards (*Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*- 61 Fed. Reg. 43761). Where WLAs have been adopted for storm water (wet weather) and non-storm water (dry weather) discharges from MS4s, this Order requires Permittees to implement controls to achieve the WLAs within the compliance schedule provided in the TMDLs.

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3. The implementation of measures set forth in this Order are reasonably expected to reduce the discharge of pollutants conveyed in storm water discharges into receiving waters, and to meet the TMDL WLAs for discharges from MS4s that have been adopted by the Regional Water Board.
4. The U.S. EPA has recommended that all future TMDLs and TMDL amendments be expressed as daily increments consistent with a federal court ruling (*Friends of the Earth, Inc. v. EPA, et al.* No. 05-5015 (D.C. Cir. 2006)). However, this interpretation does not affect the discretionary authority of the Regional Water Board to express NPDES permit limits and conditions in non daily terms because there is no express or implied statutory limitation (CWA §502(11)) (*Establishing TMDL "Daily Loads" in Light of the Decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of the Earth, Inc. v. EPA, et al. (April 2006) and Implications for NPDES Permits*, U.S. EPA Office of Water, memorandum, Nov 15, 2006). This Order translates MS4 TMDL WLAs adopted by the Regional Water Board into forms "consistent with the assumptions and requirements of the TMDL".
5. During the term of the Order, the Permittees shall implement all necessary control measures to reduce pollutant(s) which cause or continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, to eliminate the water quality impairment(s). Successful efforts to reverse the wet weather impairments during the permit term for such pollutants, may avoid the need for a WLA for wet weather or the need to develop a TMDL in the future.
6. This Order promotes land development and redevelopment strategies that consider water quality and water management benefits associated with smart growth techniques. Such measures may include hydromodification mitigation requirements, minimization of impervious surfaces, integrated water resources planning, and low impact development guidelines. (Reference: *Protecting Water Resources with Smart Growth*, EPA 231-R- 04-002, U.S. EPA 2004; *Using Smart Growth Techniques as Storm Water Best Management Practices*, EPA 231-B-05-002, U.S. EPA 2005; *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*, EPA 231-K-06-001, U.S. EPA 2006; *Protecting Water Resources with Higher-Density Development*, EPA 231-R-06-001, U.S. EPA 2006.)
7. The implementation of an effective Public Information and Participation Program is a critical component of a storm water management program. While commercial and industrial facilities are traditionally subject to multiple environmental regulations and receive environmental protection guidance from multiple sources, the general public, in comparison, receives significantly less education in environmental protection. An effective Public Information and Participation Program is required because:
  - (a) Activities conducted by the public such as vehicle maintenance, improper household waste materials disposal, improper pet waste disposal and the improper

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application of fertilizers and pesticides have the potential to generate a significant amount of pollutants that could be discharged in storm water.

(b) An increase in public knowledge of storm water regulations, proper storage and disposal of household wastes, proper disposal of pet wastes and appropriate home vehicle maintenance practices can lead to a significant reduction of pollutants discharged in storm water.

- 8. This Order also provides flexibility for Permittees to seek authorization from the Regional Water Board Executive Officer to substitute a BMP under this Order with an alternative BMP, if they can provide information and documentation on the effectiveness of the alternative, equal to or greater than the prescribed BMP in meeting the objectives of this Order.
- 9. This Order contemplates that the Permittees are responsible for considering potential storm water impacts when making planning decisions in order to fulfill the Permittees' CWA requirement to reduce the discharge of pollutants in municipal storm water to the MEP and attain water quality objectives from new development and redevelopment activities. However, the Permittees retain authority to make the final land-use decisions and retain full statutory authority for deciding what land uses are appropriate at specific locations within each Permittee's jurisdiction. This Order and its requirements are not intended to restrict or control local land use decision-making authority.
- 10. The State Water Board amended the Policy for the Implementation of Toxics Standards In Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy – SIP) on February 24, 2005. The SIP does not apply directly to the stormwater discharges. However, this Order includes a Monitoring Program that incorporates Minimum Levels (MLs) established under the State Implementation Policy. The MLs represent the lowest quantifiable concentration for priority toxic pollutants that is measurable with the use of proper method-based analytical procedures and factoring out matrix interference. The SIP's MLs therefore represent the best available science for determining MLs and are appropriate for a storm water monitoring program. The use of MLs allows the detection of toxic priority pollutants at concentrations of concern using recent advances in chemical analytical methods.
- 11. This Order establishes Municipal Action Levels (MALs) for selected pollutants based on regional Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were computed using one of three approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). MALs

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are identified in Attachment "C". Permittees shall utilize the MALs to identify subwatersheds that require additional action to reduce the discharge of pollutants.

12. The International Storm Water Best Management Practices (BMP) Database was established in 1996 as a cooperative initiative between the U.S. EPA and the American Society of Civil Engineers (ASCE) to provide scientifically sound information to improve the design, selection and performance of storm water BMPs. The BMP database includes standardized BMP monitoring and reporting protocols, a storm water BMP database, BMP performance evaluation protocols, and BMP monitoring guidance. The storm water BMP database is updated approximately semi-annually to add new BMP studies and performance data. The International Storm Water Database is now maintained by the Water Environment Research Foundation (WERF).
13. This Order is not intended to prohibit the inspection for or abatement of vectors by the State Department of Public Health or local vector agencies in accordance with CA Health and Safety Code, § 116110 et seq. Certain Treatment Control BMPs if not properly designed, operated or maintained may create habitats for vectors (e.g. mosquitoes and rodents). This Order contemplates that the Permittees will closely cooperate and collaborate with local vector control agencies and the State Department of Public Health for the implementation, operation, and maintenance of Treatment Control BMPs in order to minimize the risk to public health from vector borne diseases.
14. This Order contemplates that Permittees will ensure that implemented Treatment Control BMPs will not pose a safety or health hazard to the public. This Order contemplates that Permittees will ensure that the maintenance of implemented Treatment Control BMPs will comply with all applicable health and safety regulations, such as, but not limited to requirements for worker entry into confined spaces under OSHA Safety and Training education, § 1926.21(b)(6)(i).
15. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from construction sites to the MEP. The BMPs are identified in Table 6 (BMPs at Construction sites less than 1 acre), Table 7 (BMPs at Construction Sites 1 acre or greater but less than 5 acres), and Table 8 (BMPs at Construction sites 5 acres or greater). These BMPs include erosion control, sediment control, and construction site waste management practices. The BMPs listed in part 5.F of the Order were selected based on the Water Boards' experience of regulating such sites since 1992, and are referenced in the *California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Construction (January 2003)* and from the *Stormwater Quality Handbooks, Project Planning and Design Guide, Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Plan (WPCP) Preparation Manual, Construction Site Best Management Practices (BMPs)*

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Reference Manual, March 2007 (Caltrans Document Number CTSW-RT-06-171.11-1) which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable on a particular site, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

16. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from commercial and industrial sites to the MEP. The BMPs are identified in Table 2 (BMPs at Restaurants), Table 3 (BMPs at Automotive Service Facilities), Table 4 (BMPs at Retail Gasoline Outlets), and Table 5 (BMPs at Nurseries). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste management practices, and implement control practices to keep pollutants away from any entrance to the storm drainage system. The BMPs listed in part 5.D of the Order were selected based on the Water Boards' experience of regulating such sites since 1992 and referenced in the California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Commercial/Industrial Activity (January 2003) and from the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

17. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from Public Agency Activities to the MEP. The BMPs are identified in Table 9 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste management practices, implement control practices to keep pollutants away from any entrance to the storm drainage system and from being deposited or discharged directly into waters of the U.S. The BMPs listed in part 5.G of the Order were selected based on the Water Boards' experience of regulating such sites since 1990, and are referenced in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serves as a statewide standard for the California Department of Transportation (Caltrans). The BMPs identified in the Table are technically feasible, practicable, and cost-effective, and are the standard of practice for Caltrans sites statewide. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

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- 18. This Order incorporates BMPs to ensure that authorized Non-Storm Water Discharges are not a source of pollutants to the MS4, Table 1 (Required Conditions for Non-Storm Water Discharges). The BMPs included are for the purpose of dechlorination and/or for prevention of erosion and sediment loss, or to reduce other harmful pollutants during the discharge of authorized non-storm water discharges to the MS4. The BMPs listed in part 1.B of the Order were selected from the *American Water Works Association AWWA Guidelines For The Development Of Your Best Management Practices (BMP) Manual For Drinking Water System Releases Developed by the CA-NV AWWA Environmental Compliance Committee (2005)* which serves as an industry standard for California, from the results of studies directed by the Los Angeles Water Board, - *Evaluation of Non-Storm Water Discharges to California Storm Drains and Potential Policies for Effective Prohibition Methods, Final Report*, University of California, Los Angeles, Contract No. 5-104-140-0 (1997), and *Water Quality Concerns and Regulatory Controls for Non Storm Water Discharges to Storm Drains*, Duke L.D. and M. Kihara, Journal of the American Water Resources Association, Vol. 34: 661-676, (1998), and from the Water Boards' experience of controlling authorized non-storm discharges to the MS4 since 1990. The BMPs identified in the Table are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.
- 19. In accordance with Federal regulations at 40 CFR 124.8, a Fact Sheet has been prepared to explain the principal facts and the significant factual, legal, methodological, policy, and economic matters considered in preparing the Tentative Order. Also included are the analyses of factors required under Cal. Water Code 13241. This Fact Sheet has been made a part of the Administrative Record.
- 20. The State Water Board adopted statewide General Waste Discharge Requirements for Sanitary Sewer Systems, (WQ Order No. 2006-0003) on May 2, 2006, to provide a consistent, statewide regulatory framework to address sanitary sewer overflows ("SSO Orders"). The SSO Order establishes requirements for public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and to report SSOs. SSOs that enter MS4s have the potential to impair the recreational use of receiving waters, and to harm public health. This Order establishes coordination, response, and notification requirements for MS4 Permittees when SSOs result in a discharge to the MS4 system.
- 21. This Order takes into consideration the housing needs in the area under the Permittees' jurisdiction by balancing the implementation of Smart Growth and Low Impact Development techniques with the protection of the water resources of the region. Although not required, the Regional Water Board considered the need for

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housing and the appropriate techniques to allow for reasonable development while protecting the receiving waters from degradation.

- 22. This Order may have an effect on costs required for compliance with the provisions contained herein. Although not required, the Regional Water Board has considered costs in preparing this Order. Though also not required, the Regional Water Board has also considered the factors set forth in Water Code section 13241.

**G. Public Notification**

- 1. The issuance of waste discharge requirements pursuant to California Water Code section 13370 et seq. is exempt from the California Environmental Quality Act in accordance with California Water Code section 13389. *County of Los Angeles et al., v. California Water Boards et al.*, (2006), 143 Cal.App.4<sup>th</sup> 985.
- 2. The Regional Water Board has notified the Permittees, and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to make statements and submit their comments.
- 3. The Regional Water Board staff has conducted more than 35 meetings from February 9, 2007 through December 19, 2008, with Permittees, their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIAGLA/ VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Collation for Practical Regulation (CPR), Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government commission, Los Angeles City; Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper). On April 5, 2007 and September 20, 2007 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the Permittees and the public regarding proposed changes.
- 4. This Order shall serve as a NPDES permit, pursuant to CWA § 402, and shall take effect 90 days from Order adoption date provided the Regional Administrator of the U.S. EPA has no objections.

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- 5. Pursuant to Cal. Water Code § 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board within 30 days of the date of adoption of the Order by the Regional Water Board. A petition must be sent to:

State Water Resources Control Board  
 Office of the Chief Counsel  
 P.O. Box 100  
 Sacramento, CA 95812-0100

- 6. This Order may be modified or alternatively revoked or reissued prior to its expiration date or any administrative extension thereto, in accordance with 40 CFR122.41(f) and 122.62.

**IT IS HEREBY ORDERED** that the Permittees, in order to meet the provisions contained in Division 7 of the Cal. Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, shall comply with the following:

**PART 1 - DISCHARGE PROHIBITIONS**

**A. Prohibitions - Non-Storm Water Discharges**

- 1. The Permittees shall, within their respective jurisdictions, effectively prohibit non-storm discharges into the MS4 and watercourses, except where such discharges:
  - (a) Originate from a State, Federal, or other source for which they are pre-empted from regulating by State or Federal law; or
  - (b) Are covered by a separate individual or general NPDES permit, or conditional waiver for irrigated lands; or
  - (c) Fall within one of the categories below, are not a source of pollutants that exceed water quality standards, and meet all conditions where specified by the Regional Water Board Executive Officer:
    - (1) Category A – Natural flows
      - (A) Stream diversions authorized by the State Water Board
      - (B) Natural springs and rising ground water
      - (C) Uncontaminated ground water infiltration [as defined by 40 CFR35.2005(20)]<sup>1</sup>
      - (D) Flows from riparian habitats or wetlands
    - (2) Category B – Flows from emergency fire fighting activities.
    - (3) Category C – Flows incidental to urban activities, providing conditions listed in table below:
      - (A) Flows from non-emergency fire fighting activities
      - (B) Discharges from potable water sources<sup>2</sup>.

<sup>1</sup> NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County.

<sup>2</sup> The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro-testing or flushing of water supply and distribution mains and

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- (C) Gravity flow from foundation, footing and crawl space drains.
- (D) Air conditioning condensate
- (E) Reclaimed and potable landscape irrigation runoff
- (F) Dechlorinated/ debrominated swimming pool discharges [see def. part 7]
- (G) Non-commercial car washing by residents or non-profit organizations
- (H) Sidewalk rinsing
- (I) Pooled storm water from treatment BMPs<sup>1</sup>

Table 1 – Required Conditions for Non-Storm Water Discharges

Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Stream diversions permitted by the State Board;	Authorization by the State Water Board	Permittees shall comply with all conditions in the authorization.
Natural springs and rising ground water	1. Ground water dewatering requires a separate NPDES permit. 2. Segregate flow to prevent introduction of pollutants.	Permittees shall comply with all conditions in the authorization.
Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)] (Utility vault dewatering requires a separate NPDES permit.)	NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Flows from riparian habitats or wetlands	Provided that all necessary permits or authorizations are received prior to diverting the stream flow.	Permittees shall comply with all conditions in the authorization.
Flows from emergency fire fighting activity	Pooled water after fire must be controlled.	
Discharges from potable water sources <sup>1</sup>	See Footnote #1. Provided discharges from water lines and	See Footnote #2. To be discharged, this type of water shall be dechlorinated using

incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

2 All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
	potable water sources shall be dechlorinated, pH adjusted if necessary, reoxygenated, and volumetrically and velocity controlled to prevent resuspension of sediments.	aeration and/ or sodium thiosulfate and/ or other appropriate means and/or be allowed to infiltrate to the ground. BMPs such as sand bags or gravel bags, or other appropriate means shall be utilized to prevent sediment transport. All sediments shall be collected and disposed of in a legal and appropriate manner.
Drains for foundation, footing and crawl drains	Dewatering requires a separate NPDES permit.	Permittees shall comply with all conditions in the authorization.
Air conditioning condensate	Segregation of flow to prevent introduction of pollutants. Percolation whenever possible.	Permittees shall comply with all conditions in the authorization.
Water from crawl space pumps	Dewatering requires a separate NPDES permit within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Reclaimed and potable landscape irrigation runoff	Segregation of flow to prevent introduction of pollutants.	Implement conservation programs to minimize this type of discharge by using less water.
Dechlorinated/ debrominated swimming pool discharges [see definition Part 8]	Where the discharge is not excepted by the sanitary sewer operator. Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments.	Pool water may be dechlorinated using time, aeration, and/ or sodium thiosulfate.
	Cleaning waste water and filter back wash	

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<sup>1</sup> The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro-testing or flushing of water supply and distribution mains and incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
	<p>shall not be discharged to municipal separate storm sewers.</p> <p>No discharges are allowed containing salts in excess of Water Quality Standards.</p> <p>Chlorine residual in discharge shall not exceed 0.1mg/L.</p>	
<p>Non-commercial car washing by residents or non-profit organizations</p>	<p>Preferably at a commercial carwash or designated area where wash water can percolate. Pumps or vacuums may be used to direct water to pervious areas.</p>	<p>Permittees shall comply with all conditions in the authorization.</p>
<p>Sidewalk rinsing</p>	<p>This may be undertaken only if high pressure low volume is used as described in the glossary under "Sidewalk Rinsing".</p>	
<p>Pooled storm water from treatment BMPs<sup>1</sup></p>	<p>All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer. All storm water BMPs shall be designed to drain within 72 hours of the end of the rain event to avoid the breeding of vectors. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. The discharge shall cease before the discharge has become a source of a pollutant(s), (bottom sediment included). Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.</p>	

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2. If the Regional Water Board Executive Officer determines that any of the preceding categories of non-storm water discharges are a source of pollutants that exceed water quality standards, the Permittee(s) shall either:
  - (a) Prohibit the discharge from entering the MS4; or
  - (b) Authorize the discharge category and require implementation of appropriate or additional BMPs to ensure that the discharge will not be a source of pollutants; or

<sup>1</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

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- (c) Require or obtain coverage under a separate RWQCB or SWRCB permit for discharge into the MS4.
- 3. The following BMPs for non-stormwater discharges are required pursuant to this Order:
  - (a) Flows from non-emergency fire fighting activity: Implement a program to reduce pollutants from non-emergency activities such as controlled or practice blazes and maintenance activities identified to be significant sources of pollutants.
  - (b) Discharges from potable water system releases: Water shall be dechlorinated using aeration and/or sodium thiosulfate and/or other appropriate means and/or be allowed to infiltrate to the ground. BMPs such as sand bags or gravel bags shall be utilized to prevent sediment transport. All sediments shall be collected and disposed of in a legal and appropriate manner.
  - (c) Swimming pool discharges: Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments.
  - (d) Sidewalk rinsing: Sidewalk rinsing in commercial areas may be undertaken only if high pressure low volume is used as described in the glossary under "sidewalk rinsing."

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**PART 2 – MUNICIPAL ACTION LEVELS**

- 1. This Order establishes Municipal Action Levels (MALs) to identify subwatersheds requiring additional Best Management Practices (BMPs) to reduce pollutant loads and prioritize implementation of additional BMPs. MALs for selected pollutants based on a Climate Zone 6 subset of nationwide Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were obtained by computing the 80<sup>th</sup> percentile for selected pollutants. MALs are identified in Attachment "C".
- 2. Under this Order, the Municipal Action Levels (MALs) shall be utilized by Permittees to identify subwatersheds discharging pollutants at levels in excess of the MALs. Within those subwatersheds where pollutant levels in the discharge are in excess of the MALs, Permittees shall implement controls and measures necessary to reduce the discharge of pollutants.
- 3. In order to determine if MS4 discharges are in excess of the MALs, Permittees shall conduct outfall monitoring as required in the Monitoring and Reporting Program (MRP). A MAL Assessment Report shall be submitted to the Executive Officer as part of the Annual Report. The Report shall present the monitoring data in comparison to the applicable MALs, and identify those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs listed in Attachment "C" in discharges of storm water from the MS4 to waters of the U.S..

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4. Beginning Year 3 after Order adoption date, each Permittee shall submit a MAL Action Plan with the Annual Report (first MAL Action Plan due with Dec. 15, 2011 Annual Report) to the Executive Officer, for those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in any discharge of storm water from the MS4 to waters of the U.S.. The plan is to include an assessment of the sources responsible for the MAL exceedances, the existing stormwater programs and BMPs that address those sources, an assessment of potential program enhancements, alternative BMPs and actions the Permittee shall implement to reduce discharges to a level that is equivalent to or below the MALs, and an implementation schedule for such actions for Executive Officer approval. The MAL Action Plan shall provide the technical rationale to demonstrate the proposed measures and controls will attain the MALs. If the MAL Action Plan is not approved within 90 days of the due date, the Executive Officer may establish an appropriate plan with at least 90 day notification and consultation to the Permittees.
5. Within 90 days of the plan approval by the Regional Board Executive Officer, the Permittee shall initiate the BMPs and actions proposed in the MAL Action Plan, together with any other practicable BMPs or actions that the Executive Officer determines to be necessary to meet the MALs. The Permittee shall complete the proposed actions in accordance with the approved implementation schedule.
6. Upon completion of the actions specified in the approved MAL Action Plan, the Permittee shall re-monitor the subject subwatershed in accordance with the MRP, and submit a Post-Project MAL Assessment Report to the Executive Officer.
7. As additional data become available through the MRP or from the Regional Subset of the National Dataset, MALs may be revised annually by the Executive Officer in accordance with an equivalent statistical method as that used to establish the MALs in Attachment C of this order with at least 90 day notification and consultation to the Permittees.

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**PART 3 – RECEIVING WATER LIMITATIONS**

1. Discharges from the MS4 that cause or contribute to a violation of water quality standards are prohibited.
2. Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible, shall not cause or contribute to a condition of nuisance.
3. The Permittee shall comply with Receiving Water Limitations 1 and 2 through timely implementation of control measures and other actions to reduce pollutants in the storm water discharges in accordance with the requirements of this Order including any modifications. The Permittees' Program shall be designed to achieve compliance with Receiving Water Limitations 1 and 2. If exceedance(s) of water quality

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objectives or water quality standards (collectively WQS) persist, notwithstanding implementation of this permit, the Permittees shall ensure compliance with Receiving Water Limitations 1 and 2 by complying with the following procedure:

- (a) Upon determination by either the Permittees or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee(s) upstream of the point of discharge shall promptly notify and thereafter submit a report to the Regional Water Board Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be included with the Annual Report, unless the Regional Water Board Executive Officer directs an earlier submittal. The Regional Water Board Executive Officer may require modifications to the report.
- (b) Submit any modifications to the report required by the Regional Water Board Executive Officer within 30 days of notification.
- (c) Within 30 days following approval of the Report described above by the Regional Water Board Executive Officer, the Permittees shall revise their Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.
- (d) Implement the revised Program and monitoring program according to the approved schedule.

- 4. Permittees shall annually report the effectiveness of BMPs in reducing exceedances of receiving water limitations. The Regional Board Executive Officer may direct implementation of additional BMPs if there are continuing or recurring exceedances of the same receiving water limitation.

**PART 4 - STORM WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION**

**A. General Requirements**

- 1. Each Permittee shall, at a minimum, adopt and implement applicable terms of this Order within its jurisdictional boundary. The Principal Permittee shall be responsible for program coordination as described in this Order as well as compliance with applicable portions of the permit within its jurisdiction. This Order shall be implemented no later than (90 days after Order adoption date), unless a later date has been specified for a particular provision in this Order and provided the Regional Administrator of the U.S. EPA has no objections.

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- 2. Each Permittee shall comply with the requirements of 40 CFR122.26(d)(2) and implement programs and control measures so as to reduce the discharges of pollutants in storm water to the MEP and achieve water quality standards.
- 3. Each Permittee shall require that treatment control BMPs being implemented under the provisions of this Order shall be designed, at a minimum, to achieve the BMPperformance criteria for storm water pollutants likely to be discharged as identified in Attachment "C", Table 3. Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database. Permittees shall select Treatment BMPs based on the primary class of pollutants likely to be discharged from the site/facility (e.g. metals from an auto repair shop). Permittees may develop guidance for appropriate Treatment BMPs for project type based on Attachment "C". For the treatment of pollutants causing impairments within the drainage of the impaired waterbody, permittees shall select BMPs from the top three performing BMP categories or alternative BMPs that are designed to meet or exceed the performance of the highest performing BMP for the pollutant causing impairment.
- 4. Each Permittee shall implement programs and measures to comply with the TMDLs' WLAs for the MS4 as specified in Part 6.
- 5. If TMDL requirements, including Implementation Plans and Reports, address substantially similar requirements as the MS4 permit, the Executive Officer may approve the applicable reports, plans, data or submittals under the applicable TMDL as fulfilling requirements under the MS4.

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**B. Legal Authority**

- 1. Permittees shall possess the necessary legal authority to prohibit, including, but not limited to:
  - (a) Illicit connections and illicit discharges, and to remove illicit connections.
  - (b) The discharge of non-storm water to the MS4 from:
    - (1) Washing or cleaning of gas stations, auto repair garages, or other types of automotive service facilities
    - (2) Mobile auto washing, carpet cleaning, steam cleaning, sandblasting and other such mobile commercial and industrial operations
    - (3) Areas where repair of machinery and equipment which are visibly leaking oil, fluid or antifreeze, is undertaken
    - (4) Storage areas for materials containing grease, oil, or other hazardous substances, and uncovered receptacles containing hazardous materials
    - (5) Swimming pools<sup>1</sup> that have a concentration greater than:
      - (A) Chlorine/ bromine- 0.1mg/L

<sup>1</sup> MS4s discharging directly to the ocean are not subject to this prohibition.

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- (B) Chloride- 250mg/L
- (6) Swimming pool filter backwash
- (7) Decorative fountains and ponds
- (8) Industrial/ Commercial areas, including restaurant mats
- (9) Concrete truck cement, pumps, tools, and equipment washout
- (10) Spills, dumping, or disposal of materials other, such as:
  - (A) Litter, landscape and construction debris, garbage, food, animal waste, fuel or chemical wastes, batteries, and any other materials which have the potential to adversely impact water quality; and
  - (B) Any pesticide, fungicide or herbicide
- (11) Stationary and mobile pet grooming facilities
- (12) Trash container leachate

2. The Permittees shall possess adequate legal authority to:
  - (a) Control through interagency agreement, the contribution of pollutants from one portion of the MS4 to another portion of the MS4.
  - (b) Require persons within their jurisdiction to comply with conditions in the Permittees' ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows).
  - (c) Utilize enforcement measures (e.g., stop work orders, notice of violations, fines, referral to City, County, and/ or District Attorneys, referral to strikeforces, etc.) by ordinances, permits, contracts, orders, administrative authority, and civil and criminal prosecution.<sup>1</sup>
  - (d) Control pollutants, including potential contribution<sup>2</sup> in discharges of storm water runoff associated with industrial activities, including construction activities to its MS4, and control the quality of storm water runoff from industrial sites, including construction sites.
  - (e) Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges to the MS4.
  - (f) Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality objectives.
  - (g) Require that Treatment Control BMPs be properly operated and maintained.
  
3. Each Permittee has adopted a Storm Water Quality Ordinance based upon a countywide model. Each Permittee shall ensure, no later than (one year after Order adoption date), that its Storm Water Quality Ordinance authorizes the Permittee to enforce all requirements of this Order.

<sup>1</sup>In the case of private responsible parties such as, HOAs, the Permittee must retain enforcement authority.  
<sup>2</sup>“Potential contributions” and “potential to discharge,” means adequate legal authority to prevent an actual discharge of pollutants to the municipal separate storm sewer system.

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- 4. Each Permittee shall submit no later than two years after Order adoption date, a statement by its legal counsel that the Permittee has obtained and possesses all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.

**C. Fiscal Resources**

- 1. The Permittees shall implement the activities required to comply with the provisions of this Order.<sup>1</sup> Each Permittee shall:
  - (a) Submit an Annual Budget Summary that shall include:
    - (1) Budgets for the upcoming report year (estimated expenditure) for the following specific categories (estimated percentages and written explanations where necessary):
      - (A) Program Management Activities.
        - (i) Overall Administrative costs
      - (B) Program Implementation Activities (storm water related activities only). Provide figures breakdown of expenditures for the categories below:
        - (i) Illicit connection/ illicit discharge program.
        - (ii) Development planning and approval
        - (iii) Construction program including inspection activities
        - (iv) Industrial/ Commercial program including inspection activities
        - (v) Public Agency Activities
          - (I) Maintenance and inspection of Treatment Control BMPs
          - (II) Municipal Street Sweeping
          - (III) Municipal Drainage Maintenance including catch basin clean-outs
          - (IV) Other costs associated with storm water management (describe)
        - (vi) Public Information and Participation.
        - (vii) Monitoring Program
        - (viii) Miscellaneous Expenditures (describe)

**D. Modifications/ Revisions**

- 1. No later than two years after the Order adoption date, each Permittee shall modify its storm water management programs, protocols, practices, and municipal codes to make them consistent with the requirements herein.

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<sup>1</sup> The sources of funding may be the general funds, and/or Benefit Assessment, plan review fees, permit fees, industrial/ commercial user fee, revenue bonds, grants or other similar funding mechanism.

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**E. Designation and Responsibilities of the Principal Permittee**

1. The Ventura County Watershed Protection District is hereby designated as the Principal Permittee. The Principal Permittee shall:
  - (a) Participate in the County Environmental Crimes Task Force
  - (b) Coordinate and facilitate activities necessary to comply with the requirements of this Order, but the Principal Permittee is not responsible for ensuring compliance of any other individual Permittee
  - (c) Coordinate permit activities among Permittees and act as liaison between the Permittees and the Regional Water Board on permitting issues
  - (d) Provide technical and administrative support for committees that will be organized to implement this Order and its requirements
  - (e) Evaluate, assess, and synthesize the results of the monitoring program and the effectiveness of the implementation of BMPs
  - (f) Convene the Committee Meetings constituted pursuant to subpart 4.F.1., below, upon designation of representatives
  - (g) Implement the Countywide Monitoring Program required under the Order and evaluate, assess and synthesize the results of the monitoring program
  - (h) Provide personnel and fiscal resources for the collection, processing and submittal to the Regional Water Board of monitoring and annual reports, and summaries of other reports required under this Order
  - (i) Comply with the "Responsibilities of the Permittees" in part 4.F. below

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**F. Responsibilities of the Permittees**

1. Each Permittee is required to comply with the requirements of this Order applicable to discharges within its boundaries (see Findings- Permit Coverage D.1 and D.2). Permittees are not responsible for the implementation of the provisions applicable to the Principal Permittee or other Permittees. Each Permittee shall:
  - (a) Comply with the requirements of this Order and any modifications thereto
  - (b) Coordinate among its internal departments and agencies, as necessary, to facilitate the implementation of the requirements of this Order applicable to such Permittees in an efficient and cost-effective manner
  - (c) Participate in intra-agency coordination (e.g., Planning Department, Fire Department, Building and Safety, Code Enforcement, Public Health, Parks and Recreation, and others) necessary to successfully implement the provisions of this Order
  - (d) Report, in addition to the Budget Summary, any supplemental dedicated budgets for the same categories
  - (e) Participate in Committee Meetings, as necessary

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**PART 5 - SPECIAL PROVISIONS (BASELINE)**

**A. General Requirements**

- 1. This Order and the provisions herein, are intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the MEP and not cause or contribute to exceedances of water quality standards for the permitted areas in the County of Ventura.
- 2. Best Management Practice Substitution
  - (a) The Regional Water Board Executive Officer may approve any site-specific BMP substitution upon written request by a Permittee(s) and after public notice, if the Permittee can document that:
    - (1) The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants.
    - (2) The fiscal burden of the original BMP or program is greater than the proposed alternative and does not achieve a greater improvement in storm water quality.
    - (3) The proposed alternative BMP or program will be implemented within a similar period of time.
    - (4) BMP substitution will be in accordance with the public review provisions of the Order (Part 8C.1 and Part 8C.2).

**B. Watershed Initiative Participation**

- 1. The Principal Permittee shall participate in water quality meetings for watershed management and planning, including but not limited to the following:
  - (a) Southern California Stormwater Monitoring Coalition (SMC)
  - (b) Other Watershed planning groups as appropriate
- 2. The Principal Permittee shall participate in the following regional water quality programs, and projects for watershed management and planning:
  - (a) SMC Regional Monitoring Programs
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six

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- (ii) Integrator sites per watershed
  - (I) Ventura River - One
  - (II) Santa Clara River - One
  - (III) Calleguas Creek - One
- (iii) Fixed bioassessment sites
  - (I) The Permittees shall perform bioassessment at one fixed urban site in each major watershed. Site selection shall be determined by the results of the first year SMC results, as approved by the Executive Officer.
- (b) Southern California Bight Projects
  - (1) Regional Monitoring Survey - 2008, and successive years.

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**C. Public Information and Participation Program (PIPP)**

1. The Principal Permittee shall implement a Public Information and Participation Program (PIPP) that includes, but is not limited to, the requirements listed in this part. The Principal Permittee shall coordinate with Permittees to implement specific PIPP requirements. The objectives of the PIPP are as follows:
  - (a) To increase the knowledge of the target audience about the MS4, the adverse impacts of storm water pollution on receiving waters and potential solutions to mitigate the impacts
  - (b) To change the waste disposal and storm water pollution generation behavior of target audiences by encouraging implementation of appropriate solutions
  - (c) To involve and engage communities in Ventura County to participate in mitigating the impacts of storm water pollution
2. Residential Program
  - (a) "No Dumping" Message
 

Each Permittee shall label all storm drain inlets that they own with a legible "no dumping" message. In addition, signs with prohibitive language discouraging illegal dumping shall be posted at designated public access points to creeks, other relevant waterbodies, and channels. Signage and storm drain messages shall be legible and maintained.
  - (b) Public Reporting
 

Each Permittee shall identify staff who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/dumping, faded or missing catch basin labels, and general storm water management information. Permittees shall include this information, updated by July 1 of each year, in public information media such as the government pages of the telephone book, and internet web sites. The Principal Permittee shall compile a list of the general public reporting contacts submitted by all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon

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request. Each Permittee is responsible for providing current, updated information to the Principal Permittee.

(c) Outreach and Education

- (1) Collaboratively, the Permittees shall implement the following activities:
  - (A) Conduct a Storm Water pollution prevention advertising campaign.
  - (B) Conduct Storm Water pollution prevention public service announcements.
  - (C) Distribute storm water pollution prevention public education materials to:
    - (i) Automotive parts stores
    - (ii) Home improvement centers/ lumber yards/ hardware stores
    - (iii) Pet shops/ feed stores
  - (D) Public education materials shall include, but are not limited to information on the proper disposal, storage, and use of:
    - (i) Vehicle waste fluids
    - (ii) Household waste materials
    - (iii) Construction waste materials
    - (iv) Pesticides and fertilizers (including integrated pest management practices-IPM)
    - (v) Green waste (including lawn clippings and leaves)
    - (vi) Animal wastes
  - (E) Work with existing local watershed groups or organize watershed Citizen Advisory Groups/ Committees to develop effective methods to educate the public about storm water pollution no later than (365 days after Order adoption date).
  - (F) Organize events targeted to residents and population subgroups; and
  - (G) Maintain the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), which shall include educational material listed in the preceding subpart C.1(c)(1)(C).
- (2) The Principal Permittee shall develop a strategy to educate ethnic communities through culturally effective methods. Details of this strategy should be incorporated into the PIPP, and implemented, no later than (365 days after Order adoption date).
- (3) Each Permittee shall continue the existing outreach program to residents on the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices.
- (4) Each Permittee shall conduct educational activities within its jurisdiction and participate in countywide events.
- (5) The Permittees shall make a minimum of 5 million impressions per year to the general public related to storm water quality, with a minimum of 2.5 million impressions via newspaper, local TV access, local radio and/ or internet access.

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- (6) The Principal Permittee, in cooperation with the Permittees, shall provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution. Alternatively, a Permittee may submit a plan to the Regional Water Board Executive Officer for consideration no later than (90 days after adoption of the Order), to provide outreach in lieu of the school curriculum. Pursuant to Water Code section 13383.6, the Permittees, in lieu of providing educational materials/ funding to School Districts in the County, may opt to provide an equivalent amount of funds or fraction thereof to the Environmental Education Account established within the State Treasury.
- (7) Each Permittee shall provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee and contact information changes no later than 30 days after a change occurs.
- (8) The Permittees shall develop and implement a behavioral change assessment strategy no later than (365 days after Order adoption date), in order to determine whether the PIPP is demonstrably effective in changing the behavior of the public. The strategy shall be developed based on current sociological data and studies.

(d) Pollutant-Specific Outreach

The Principal Permittee, in cooperation with the Permittees, shall coordinate to develop outreach programs that focus on metals, urban pesticides, bacteria and nutrients as the pollutants of concern no later than (365 days after Order adoption date). Metals may be appropriately addressed through the Industrial/ Commercial Facilities Program (e.g. the distribution of educational materials on appropriate BMPs for metal fabrication and recycling facilities that have been identified as a potential source). Region-wide pollutants may be included in the Principal Permittee's mass media outreach program.

3. Businesses Program

(a) Corporate Outreach

- (1) The Permittees shall work with other regional or statewide agencies and, associations such as the California Storm Water Quality Association (CASQA), to develop and implement a Corporate Outreach program to educate and inform corporate franchise operators and/or local facility managers about storm water regulations and BMPs. Once developed, the program shall target a minimum of four Retail Gasoline Outlets (RGO) franchisers and cover a minimum of 80% of RGO franchisees in the county, four retail automotive parts franchisers, two home improvement center franchisers and six restaurant franchisers. Corporate outreach for all target facilities shall be conducted not less than twice during the term of this

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Order, with the first outreach contact to begin no later than two years after Order adoption date. At a minimum, this program shall include:

- (A) Confer with franchise operators and/or local facility managers to explain storm water regulations.
- (B) Distribution and discussion of educational material regarding storm water pollution and BMPs, and provide managers with recommendations to facilitate employee and facility compliance with storm water regulations.

(b) Business Assistance Program

- (1) The Permittees shall implement a Business Assistance Program to provide technical information to small businesses to facilitate their efforts to reduce the discharge of pollutants in storm water. The Program shall include:
  - (A) On-site, telephone or e-mail consultation regarding the responsibilities of businesses to reduce the discharge of pollutants, procedural requirements, and available guidance documents.
  - (B) Distribution of storm water pollution prevention education materials to operators of auto repair shops, car wash facilities (including mobile car detailing), mobile carpet cleaning services, commercial pesticide applicator services and restaurants.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures, unless precluded by local ordinances, at industrial and commercial facilities, with the objective of reducing pollutants in storm water. Except where specified otherwise in this Order, pollutant reduction and control measures may be used alone or in combination, and may include Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollutant generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program shall include requirements to:

- (a) Track
  - (b) Inspect
  - (c) Ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water
1. Inventory of Critical Sources
- (a) Each Permittee shall maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of storm water pollution. Critical Sources to be tracked are summarized below, and specified in Attachment "D":
    - (1) Commercial Facilities
      - (A) Restaurants
      - (B) Automotive service facilities
      - (C) RGOs and automotive dealerships
      - (D) Nurseries and nursery centers

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- (2) U.S. EPA Phase I, II Facilities
- (3) Other Federally-mandated Facilities [as specified in 40 CFR122.26(d)(2)(iv)(C)]
  - (A) Municipal landfills
  - (B) Hazardous waste treatment, disposal, and recovery facilities
  - (C) Facilities subject to SARA Title III (also known as the Emergency Planning and Community Right-to-Know Act (EPCRA))
- (b) Each Permittee shall include the following minimum fields of information for each critical source industrial and commercial facility
  - (1) Name of facility and name of owner/ operator.
  - (2) Address of facility
  - (3) Coverage under the IASGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
  - (4) A narrative description including Standard Industrial Classification (SIC) System/ North American Industry Classification System (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
- (c) The Regional Water Board recommends that Permittees include additional fields of information, such as material usage and/ or industrial output, and discrepancies between SIC System/ NAICS Code designations (as reported by facility operators) and identify the actual type of industrial activity that has the potential to pollute storm water. In addition, the Regional Water Board recommends the use of an automated database system, such as a Geographical Information System (GIS) or Internet-based system.
- (d) Each Permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available inter and intra-agency informational databases (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, and similar information).

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2. Inspect Critical Sources

- (a) Commercial Facilities
 

Permittee shall inspect all facilities identified in subpart 5.D.2. twice during the 5-year term of the Order, provided that the first inspection occurs no later than (2 years after Order adoption date). A minimum interval of 6 months between the first and the second mandatory compliance inspection is required. In addition, each Permittee shall implement the activities outlined in the following subparts. At each facility, inspectors shall verify that the operator is implementing the source control BMPs. The Permittees may require implementation of additional BMPs where storm water flows from the MS4 discharge to an environmentally sensitive area (ESA, see part 7 for definition) or a CWA § 303(d) listed waterbody (see subpart 3(b) below).

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(1) Restaurants-

Level of inspections: Each Permittee, in cooperation with its appropriate department (such as health or public works), shall inspect all restaurants within its jurisdiction to confirm that storm water BMPs are being effectively implemented in compliance with State law, County and municipal ordinances. BMPs in Table 2 (BMPs at Restaurants) shall be implemented, unless the pollutant generating activity does not occur.

Table 2 - BMPs at Restaurants

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Waste/ Hazardous Materials Storage, Handling and Disposal	Implementation of effective storage, handling and disposal procedures for hazardous materials.	By Municipality
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

(2) Automotive Service Facilities-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 3 (BMPs at Automotive Service Facilities) are being implemented, unless the pollutant generating activity does not occur.

Table 3 - BMPs at Automotive Service Facilities

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling.	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning.	Implementation of effective equipment/ vehicle cleaning practices and appropriate wash water management practices	SC-21
Vehicle/ Equipment Repair	Implementation of effective vehicle/ equipment repair practices and source control devices.	SC-22
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance Practices	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

(3) Retail Gasoline Outlets and Automotive Dealerships-

Level of Inspections: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 4 (BMPs at Retail Gasoline Outlets) are being implemented, unless the pollutant generating activity does not occur.

Table 4 - BMPs at Retail Gasoline Outlets

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning	Implementation of effective wash water control devices.	SC-21
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43

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- (4) Commercial Nurseries and Nursery Centers (Merchant Wholesalers, Nondurable Goods, and Retail Trade)-  
 Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 5 (BMPs at Nurseries) are being implemented, unless the pollutant generating activity does not occur.

Table 5 - BMPs at Nurseries

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Outdoor Loading/ Unloading	Implementation of effective outdoor loading/ unloading practices.	SC-30

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices.	SC-32
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41

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(b) Industrial Facilities

Each Permittee shall conduct compliance inspections as specified below.

(1) **Frequency of Inspection**

- (A) Each Permittee shall perform an initial inspection at all industrial facilities identified by the U.S. EPA in 40 CFR 122.26(c) no later than 2 years after Order adoption date. After the initial inspection, all facilities determined as having exposure of industrial activities to storm water are subject to a second mandatory compliance inspection. A minimum interval of 6 months between the first and the second compliance inspection is required.
- (B) Following the first mandatory compliance inspection, a Permittee shall perform a second mandatory compliance inspection yearly at a minimum of 20% of the facilities determined not to have exposure of industrial activities to storm water. The purpose of this inspection is to verify the continuity of the no exposure status. Facilities determined as having exposure will be notified that they must obtain coverage under the IASGP. A facility need not be inspected more than twice during the term of the Order unless subject to an enforcement action. A minimum interval of 6 months in between the first and the second compliance inspection is required.
- (C) Applicable to all facilities: A Permittee need not inspect facilities that have been inspected by the Regional Water Board within the previous 24 month interval. However, if the Regional Water Board performed only one inspection, the Permittee shall conduct the second required mandatory compliance inspection.

(2) **Level of Inspection:** Each Permittee shall confirm that each operator:

- (A) Has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity,

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and that a Storm Water Pollution Prevention Plan (SWPPP) is available on-site.

- (B) Is effectively implementing BMPs in compliance with County and municipal ordinances. Facilities must implement the source control BMPs identified in subpart 5.D.3. and Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*. The Permittees shall require implementation of additional BMPs where the storm water from the MS4 discharges to a CWA § 303(d) listed waterbody; or
- (C) Has applied and has a current No Exposure Certification (and WDID number) for facilities subject to this requirement.

3. Ensure Compliance of Critical Sources

- (a) **BMP Implementation:** Facilities must implement the source control BMPs identified in Part 5. D. 3. and, as applicable, Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*. In the event that a Permittee determines that a BMP is infeasible at any site, the Permittee shall require implementation of similar BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not protective of water quality standards, Permittees may require additional site-specific controls.
- (b) **Environmentally Sensitive Areas (ESAs) and Impaired Waters:** For critical sources that discharge to MS4s that directly discharge to ESAs or to CWA § 303(d) listed impaired waterbodies, the Permittees shall require operators to implement additional pollutant specific controls to reduce pollutants in storm water runoff that are causing or contributing to exceedances of water quality objectives. A Regional Board approved TMDL Implementation Plan for the receiving water will substitute for this requirement.
- (c) **Progressive Enforcement:** Each Permittee shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable time period as specified below.
  - (1) In the event that a Permittee determines, based on an inspection conducted, that an operator has failed to adequately implement all necessary BMPs, that Permittee shall take progressive enforcement actions which, at a minimum, shall include a follow-up inspection within 4 weeks from the date of the initial inspection.
  - (2) In the event that a Permittee determines that an operator has failed to adequately implement BMPs after a follow-up inspection, that Permittee shall take further enforcement action as established through authority in its municipal code and ordinances or through the judicial system.
  - (3) Each Permittee shall maintain records and make them available on request to the Regional Water Board, including inspection reports, warning letters,

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notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

4. Interagency Coordination

(a) **Referral of Violations of the Municipal Storm Water Ordinances and California Water Code § 13260:** A Permittee may refer a violation(s) of § 13260 by Industrial and Commercial facilities to the Regional Water Board provided that under its municipal storm water ordinance the Permittee has made a good faith effort of progressive enforcement. At a minimum, a Permittee's good faith effort must be documented with:

- (1) Two follow-up inspections
- (2) Two warning letters or notices of violation

(b) **Referral of Violations of the Industrial Activities Storm Water General Permit (IASGP), including Requirements to File a Notice of Intent or No Exposure Certification:** For those facilities in violation of the municipal storm water ordinance and subject to the IASGP, Permittees may escalate referral of such violations to the Regional Water Board (electronically on a quarterly basis to the Regional Water Board's Storm Water Site at MS4stormwaterrb4@waterboards.ca.gov) after one inspection and one written notice (copied to the Regional Water Board) to the operator regarding the violation. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Name of the facility
- (2) Operator of the facility
- (3) Owner of the facility
- (4) WDID Number (if applicable)
- (5) Industrial activity being conducted at the facility that is subject to the IASGP
- (6) Records of communication with the facility operator regarding the violation, which shall include at least an inspection report
- (7) The written notice of the violation copied to the Regional Water Board

(c) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:** Each Permittee shall initiate, within one business day,<sup>1</sup> investigation of complaints of non-storm water discharges to the MS4 from facilities within its jurisdiction (other than non-storm water discharges). The initial investigation shall include, at a minimum, a limited inspection of the facility to confirm the complaint to determine if the facility is effectively complying with the municipal storm water urban runoff ordinances, and, if necessary, to oversee corrective action.

<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to "initiate" the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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- (d) **Assistance of Regional Water Board Enforcement Actions:** As directed by the Regional Water Board Executive Officer, Permittees shall assist Regional Water Board enforcement actions by: helping in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Water Board inspectors; appearing as witnesses in Regional Water Board enforcement hearings; and providing copies of inspection reports and other progressive enforcement documentation.
- (e) **Participation in a Task Force:** The Permittees shall participate with the Regional Water Board, and other public agencies on an enforcement task force such as the Storm Water Task Force, to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

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**E. Planning and Land Development Program**

**I. Purpose**

- 1. The Permittees shall implement a Planning and Land Development Program pursuant to part 5.E. for all New Development and Redevelopment projects subject to this Order to:
  - (a) Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of waterbodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100).
  - (b) Minimize the percentage of impervious surfaces on land developments to mimic predevelopment water balance through infiltration, evapotranspiration and reuse.
  - (c) Minimize pollutant loadings from impervious surfaces such as roof-tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), Low Impact Development Strategies, and Treatment Control BMPs.
  - (d) Properly select, design and maintain Treatment Control BMPs and Hydromodification Control BMPs to address pollutants that are likely to be generated, assure long-term function, and to avoid the breeding of vectors.<sup>1</sup>
  - (e) Prioritize the selection of BMPs suites to remove storm water pollutants, reduce storm water runoff volume, and beneficially reuse storm water to support an integrated approach to protecting water quality and managing water resources in the following order of preference:
    - (1) Infiltration BMPs
    - (2) BMPs that store and reuse storm water runoff.
    - (3) BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses

<sup>1</sup> Treatment BMPs when designed to drain within 48 hours of the end of rainfall minimize the potential for the breeding of vectors.

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- (4) BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly
- (5) Approved modular/ proprietary treatment control BMPs that are based on LID concepts and that meet pollution removal goals

**II. Applicability**

1. New Development Projects.

- (a) Development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:
  - (1) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area
  - (2) Industrial park 10,000 square feet or more of impervious surface area
  - (3) Commercial strip mall 10,000 square feet or more of impervious surface area
  - (4) Retail gasoline outlet 5,000 square feet or more of impervious surface area
  - (5) Restaurant (SIC 5812) 5,000 square feet or more of impervious surface area
  - (6) Parking lot 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
  - (7) Streets, roads, highways, and freeway construction of 10,000 square feet or more of impervious surface area shall incorporate USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets to the maximum extent practicable.
  - (8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of impervious surface area]
  - (9) Redevelopment projects in subject categories that meet Redevelopment thresholds (identified in subpart E.II.2 below)
  - (10) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - (A) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
    - (B) Create 2,500 square feet or more of impervious surface area
  - (11) Single-family hillside homes. To the extent that a Permittee may lawfully impose conditions, mitigation measures or other requirements on the development or construction of a single-family home in a hillside area as defined in the applicable Permittee's Code and Ordinances, each Permittee shall require that during the construction of a single-family hillside home, the following measures to be implemented:
    - (A) Conserve natural areas
    - (B) Protect slopes and channels
    - (C) Provide storm drain system stenciling and signage

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- (D) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability
- (E) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability

2. Redevelopment Projects

- (a) Redevelopment projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:
  - (1) Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on development categories identified in subpart 5.E.II.1.
  - (2) Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, the entire project must be mitigated.
  - (3) Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.
- (b) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.
- (c) Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

- 3. Effective Date –The New Development and Redevelopment requirements contained in Section E of the Order shall begin 90 calendar days after Regional Board Executive Officer approval of the changes to the Technical Guidance Manual needed to comply with this permit. After that date all discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals must comply with the requirements in Section E. Projects that have been deemed complete prior to the update of the technical design manual are not subject to this section. For Permittee’s projects the effective date shall be the date the governing body approves authorization to advertize to bid the project.

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**III. New Development/ Redevelopment Performance Criteria**

- 1. Integrated Water Quality/ Flow Reduction/ Resources Management Criterion
  - (a) Permittees shall establish standards for all New Development and Redevelopment projects identified in subpart 5.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through percolation, infiltration, storage, or evapo-transpiration, by reducing the percentage of Effective Impervious Area (EIA). The standards shall be based on the type of development, site conditions (including soils and groundwater), community constraints, and shall consider USEPA's "Managing Wet Weather with Green Infrastructure, Action Strategy, 2008".
  - (b) The goal of the New Development and Redevelopment standards shall be to reduce the effective impervious area (EIA) to 5% or less. This goal may be implemented through use of site features, a Redevelopment Project Area Master Plan (RPAMP), payment of an in-lieu fee, or use of stormwater mitigation credits as described in this section. For development projects in undeveloped areas, the project shall comply with the goal of 5% EIA or less. For redevelopment projects, or development projects that can be demonstrated that the 5% EIA goal is infeasible, the project shall comply with the surface discharge requirements of 5.E.III.4
  - (c) All features structured constructed to render impervious surfaces "ineffective" as described in provision (b), above, shall be properly sized to infiltrate or store for beneficial reuse at least the volume of water that meets the criteria in subpart 5.E.III.3.
  - (d) Impervious surfaces may be rendered "ineffective" if the storm water runoff is:
    - (1) Drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; or
    - (2) Collected and stored for beneficial use such as irrigation, or other reuse purpose; or
    - (3) Discharged into an infiltration trench
  - (e) Any excess surface discharge of the storm water runoff shall be mitigated in accordance with subpart 5.E.III.3
- 2. Hydromodification (Flow/ Volume/ Duration) Control Criteria
  - (a) Each Permittee shall require all New Development and Redevelopment projects identified in subpart 5.E.II to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and

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duration. This shall be achieved by maintaining the project's pre-project storm water runoff flow rates and durations.

(1) Description

- (A) Hydromodification control in natural drainage systems shall be achieved by maintaining the Erosion Potential ( $E_p$ ) in streams at a value of 1, unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat (see Attachment "E" - Determination of Erosion Potential)
- (B) Hydromodification control may include one, or a combination of on-site, regional subregional hydromodification control BMPs, LID strategies, or stream restoration measures, with preference given to LID strategies and hydromodification control BMPs. Any in-stream restoration measure shall not adversely affect the beneficial uses of the natural drainage systems
- (C) Natural drainage systems, which include unlined or unimproved (not engineered) creeks, streams, rivers and their tributaries, are located in the following watersheds:
  - (i) Ventura River
  - (ii) Santa Clara River
  - (iii) Calleguas Creek
  - (iv) Miscellaneous Ventura Coastal
- (D) The Southern California Storm Water Monitoring Coalition (SMC) is developing a regional methodology to eliminate or mitigate the adverse impacts of hydromodification as a result of urbanization, including hydromodification assessment and management tools.
  - (i) The SMC has identified the following objectives for the Hydromodification Control Study (HCS):
    - (I) Establishment of a stream classification for Southern California streams
    - (II) Development of a deterministic or predictive relationship between changes in watershed impervious cover and stream-bed/ stream bank enlargement
    - (III) Development of a numeric model to predict stream-bed/ stream bank enlargement and evaluate the effectiveness of mitigation strategies
- (E) The Permittees shall participate in the SMC HCS to develop:
  - (i) A regional stream classification system
  - (ii) A numerical model to predict the hydrological changes resulting from new development
  - (iii) A numerical model to identify effective mitigation strategies

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- (F) Until the completion of the SMC HCS, Permittees shall implement the Interim Hydromodification Control Criteria, described in subpart 5.E.III.3(a)(2) below, to control the potential adverse impacts of changes in hydrology that may result from new development and redevelopment projects identified in subpart 5.E.II
  - (G) Existing single-family structures are exempt from the Hydromodification control requirements unless such projects disturb one acre or more of land or create, add, or replace 10,000 square feet or more of impervious surface area
- (2) Exemptions to Hydromodification Controls. Permittees may exempt the following New Development and Redevelopment projects from implementation of Hydromodification controls where assessments of downstream channel conditions and proposed discharge hydrology indicate that adverse Hydromodification effects to present and future beneficial uses of Natural Drainage Systems are unlikely:
- (A) All projects that disturb less than one acre.
  - (B) Projects that are replacement, maintenance or repair of a Permittee's existing flood control facility, storm drain, or transportation network.
  - (C) Redevelopment Projects in the Urban Core that do not increase the effective impervious area or decrease the infiltration capacity of pervious areas compared to the pre-project conditions.
  - (D) Projects that have any increased discharge go directly or via a storm drain to a sump, lake, area under tidal influence, into a waterway that has a 100-year peak flow (Q100) of 25,000 cfs or more, or other receiving water that is not susceptible to Hydromodification impacts;
  - (E) Projects that discharge directly or via a storm drain into concrete or improved (not natural) channels (e.g., rip rap, sackcrete, etc.), which, in turn, discharge into receiving water that is not susceptible to Hydromodification impacts (as in D above).
- (3) Interim Hydromodification Control Criteria
- (A) The Interim Hydromodification Control Criteria to protect natural drainage systems until Permittees complete Hydromodification Control Plans (HCPs), described in subpart 5.E.III.3(a)(3) below, are as follows:
    - (i) **Projects disturbing land area of less than fifty acres** will be subject to LID and/or source or treatment BMPs as addressed in this permit. The combined effects of LID and the

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treatment BMPs are considered adequate for Hydromodification control for projects that disturb less than 50 acres.

(ii) **Projects disturbing land areas of fifty acres or greater**

Projects in this category shall develop and implement a Hydromodification Analysis Study (HAS) that demonstrates that post development conditions are expected to approximate the pre-project erosive effect of sediment transporting flows in receiving waters. The HAS must lead to the incorporation into the project design features intended to approximate, to the extent feasible, an Erosion Potential value of 1 or any alternative value that can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage systems, or

- (4) Alternatively, project proponents in this category may elect to develop, in partnership with Permittees, an equivalent implementation method based on flow duration control in the form of nomographs relating planned impervious area and local soil type (infiltration rates) to determine hydromodification control BMP volume and land area requirements for the proposed project. The nomographs shall be derived from continuous simulation modeling using Ventura County specific rain gauge records and soil types, and calibrated using data from a local undeveloped watershed with similar conditions; or
- (5) Alternatively, the Co-Permittees may revise the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures to address projects that disturb more than 50 acres.

(4) Final Criteria

(A) The Permittees shall develop and implement watershed specific HCPs no later than 180 days after the completion of the SMC HCS.

(i) The HCP shall identify:

- (I) Stream classifications
- (II) Flow rate and duration control methods
- (III) Sub-watershed mitigation strategies
- (IV) Stream restoration measures, which will maintain the stream and tributary Erosion Potential at 1 unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage system tributaries

(B) The HCP shall contain the following elements:

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- (i) Hydromodification Management Standards
- (ii) Natural Drainage Areas and Hydromodification Management Control Areas
- (iii) New Development and Redevelopment Projects subject to the HCP
- (iv) Description of authorized Hydromodification Management Control BMPs
- (v) Hydromodification Management Control BMP Design Criteria.
- (vi) For flow duration control methods, the range of flows to control for, and goodness of fit criteria
- (vii) Allowable low critical flow,  $Q_c$ , which initiates sediment transport
- (viii) Description of the approved Hydromodification Model.
- (ix) Any alternate Hydromodification Management Model and Design
- (x) Stream Restoration Measures Design Criteria
- (xi) Monitoring and Effectiveness Assessment
- (xii) Record Keeping

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3. Water Quality Mitigation Criteria

(a) Each Permittee shall require all New Development and Redevelopment projects identified in subpart 5.E.II to implement post-construction storm water treatment BMPs and control measures to mitigate storm water pollution as follows:

(1) Projects disturbing land areas less than 50 acres

(A) Volumetric Treatment Control BMP

- (i) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998)*; or
- (ii) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or
- (iii) The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system;<sup>1</sup> and/ or

(B) Flow Based Treatment Control BMP

- (i) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

<sup>1</sup> This option is available only for construction projects that disturb land area less than 5 acres.



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- (ii) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records; or
  - (iii) Eight percent of the 50-year storm design flow rate as determined from the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions)
- (2) Projects disturbing land area of 50 acres or greater
- (A) Eighty percent of the average runoff volume using an appropriate public domain continuous flow model (such as Storm Water Management Model (SWMM) or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF), using the local rainfall record and relevant BMP Performance data.

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**IV. Implementation**

1. Maintenance Agreement and Transfer

- (a) Prior to issuing approval for final occupancy each Permittee shall require that all new development and redevelopment projects subject to post-construction BMP requirements provide an operation and maintenance plan and verification of ongoing maintenance provisions for LID practices, Treatment Control BMPs, and Hydromodification Control BMPs including but not limited to: final map conditions, legal agreements, covenants, conditions or restrictions, CEQA mitigation requirements, conditional use permits, and/ or other legally binding maintenance agreements.
  - (1) Verification at a minimum shall include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either
    - (A) A signed statement from the public entity assuming responsibility for BMP maintenance; or
    - (B) Written conditions in the sales or lease agreement, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or
    - (C) Written text in project covenants, conditions, and restrictions (CCRs) for residential properties assigning BMP maintenance responsibilities to the Home Owners Association (HOA); or
    - (D) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of BMPs.
- (b) Each Permittee shall require all development projects subject to post-construction BMP requirements to provide a plan for the operation and maintenance of all structural and treatment controls. The Operation and Maintenance plan shall follow the Technical Guidance Manual Appendix D

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“Maintenance Plan Guidance” (or subsequent guidance manual) for each BMP component. The plan shall be submitted for examination of relevance to keeping the BMPs in proper working order. Where BMPs are transferred to Permittee for ownership and maintenance, the plan shall also include all relevant costs for upkeep of BMPs in the transfer. Operation and Maintenance plans for private BMPs shall be kept on site for periodic review by Permittee inspectors.

2. Tracking, Inspection, and Enforcement of Post-Construction BMPs

(a) Each Permittee shall implement a tracking system, and an inspection and enforcement program for new development and redevelopment post-construction storm water BMPs as set forth in part 5.E no later than (365 days after Order adoption date).

(1) Implement a GIS or other electronic system for tracking projects that have been conditioned for post-construction BMPs. The electronic system, at a minimum, should contain the following information:

- (A) Municipal Project ID
- (B) State WDID No
- (C) Project Acreage
- (D) BMP Type and Description
- (E) BMP Location (coordinates)
- (F) Date of Acceptance
- (G) Date of Maintenance Agreement
- (H) Maintenance Records
- (I) Inspection Date and Summary
- (J) Corrective Action
- (K) Date Certificate of Occupancy Issued
- (L) Replacement or Repair Date

(b) Inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and Hydromodification control BMPs. The inspection may be combined with other inspections provided it is conducted by trained personnel.

(c) Verify proper maintenance and operation of post-construction BMPs previously approved for new development and redevelopment and operated by the Permittees. The post construction BMP maintenance inspection program shall incorporate the following elements:

- (1) Post-construction BMP Maintenance Inspection checklist.
- (2) Inspection at least once every 2 years, beginning (365 days after Order adoption date), of post-construction BMPs to assess operation conditions with particular attention to:
- (3) Criteria and procedures for post construction Treatment Control and Hydromodification Control BMP repair, replacement, or re-vegetation.

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- (d) For post construction BMPs operated and maintained by parties other than the Permittees the Permittees shall require annual reports by the other parties demonstrating proper maintenance and operations.
- (e) Undertake enforcement as appropriate based on the results of the inspection.

3. Alternative Post Construction Storm Water Mitigation Programs

- (a) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within the Redevelopment Project Areas, in consideration of exceptional site constraints that inhibit site-by-site or project-by-project implementation of post-construction requirements.
- (b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:
  - (1) Result in equivalent or superior reduction of storm water pollutant loads in comparison to individual projects regulated by this permit.
  - (2) Satisfy, on a Redevelopment Project Area-wide basis, the hydromodification criteria of this section.
  - (3) Reduce the percentage of Effective Impervious Area (EIA) to a target of less than 5 percent of the Redevelopment Project Area, using properly sized storm water treatment/collection features, as described in this Section.
  - (4) Be fiscally sustainable and have secure funding; and
  - (5) Be completed in four years of the adoption date of this permit.
- (c) The RPAMP should prioritize the implementation of LID storm water mitigation measures, as described in this section.
- (d) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) that takes into consideration the balancing of water quality protection with the needs for adequate housing, population growth, public transportation and management, land recycling, and urban revitalization.
- (e) For the RPAMP to be considered, a technical panel of the Local Government Commission or an equivalent state or regional planning agency must have reviewed and approved the proposed RPAMP, prior to its submittal to the Regional Water Board. The Regional Water Board Executive Officer may then consider the RPAMP for approval, or elect to submit it to the Regional Water Board for consideration.
- (f) The RPAMP, on approval, may substitute in part or wholly for post-construction requirements.
- (g) Redevelopment Project Areas include the following:
  - (1) City Center areas
  - (2) Historic District areas
  - (3) Brownfield areas
  - (4) Infill Development areas
  - (5) Urban Transit Villages

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- (6) Any other redevelopment area so designated by the Regional Water Board
- (h) Nothing in these provisions shall be construed as to delay the implementation of post-construction control requirements, as approved in this Order.

4. Mitigation Funding

- (a) The Principal Permittee or a coalition of Permittees shall create a management framework to fund regional or subregional solutions to storm water pollution, where any of the following situations occur:
  - (1) A waiver for impracticability is granted
  - (2) Funds become available
  - (3) Off-site mitigation is required because of loss of environmental habitat; or
  - (4) An approved watershed management plan, or an integrated water resources management plan, or a regional storm water mitigation plan, or a wetlands recovery plan exists that incorporates an equivalent or improved strategy for storm water pollution mitigation

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5. Developer Technical Guidance and Information

- (a) The Permittees shall update the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures to include, at a minimum, the following:
  - (1) Hydromodification Control criteria described in this Order, including numerical criteria.
  - (2) Expected BMP pollutant removal performance including effluent quality (ASCE/ U.S. EPA International BMP Database, CASQA New Development BMP Handbook, technical reports, local data on BMP performance, and the scientific literature appropriate for southern California geography and climate).
  - (3) Selection of appropriate BMPs for storm water pollutants of concern.
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs.
  - (5) BMP Maintenance and Cost Considerations.
  - (6) Guiding principles to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits.
  - (7) LID principles and specifications, including the objectives and specifications for integration of LID strategies in the areas of:
    - (A) Site Assessment.
    - (B) Site Planning and Layout.
    - (C) Vegetative Protection, Revegetation, and Maintenance.
    - (D) Techniques to Minimize Land Disturbance.
    - (E) Techniques to Implement LID Measures at Various Scales
    - (F) Integrated Water Resources Management Practices.
    - (G) LID Design and Flow Modeling Guidance.

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(H) Hydrologic Analysis.

(I) LID Credits.

- (b) Permittees shall update the Technical Guidance Manual within 365 days of the adoption of this Order.
- (c) The Permittees shall facilitate implementation of LID by providing key industry, regulatory, and other stakeholders with information regarding LID objectives and specifications contained in the LID Technical Guidance Section through a training program. The LID training program will include the following:
  - (1) LID targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders
  - (2) A combination of awareness on national efforts and local experience gained through LID pilot projects and demonstration projects
  - (3) Materials and data from LID pilot projects and demonstration projects including case studies
  - (4) Guidance on how to integrate LID requirements into the local regulatory program(s) and requirements
  - (5) Availability of the LID Technical Guidance regarding integration of LID measures at various project scales
  - (6) Guidance on the relationship among LID strategies, Source Control BMPs, Treatment Control BMPs, and Hydromodification Control requirements

6. Project Coordination

- (a) Each Permittee shall facilitate a process for effective approval of post-construction storm water control measures. The process shall include:
  - (1) Detailed BMP review including BMP sizing calculations, BMP pollutant removal performance, and municipal approval; and
  - (2) An established structure for communication and delineated authority between and among municipal departments that have jurisdiction over project review, plan approval, and project construction through memoranda of understanding (MOU) or an equivalent agreement.

V. State Statute Conformity

1. California Environmental Quality Act (CEQA) Document Update

- (a) Each Permittee shall incorporate into its CEQA process no later than (6 months from Order adoption date), those additional procedures necessary for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents.
  - (1) The procedures shall require consideration of the following:
    - (A) Potential impact of project construction on storm water runoff.
    - (B) Potential impact of project post-construction activity on storm water runoff.

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- (C) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- (D) Potential for discharge of storm water to impair the beneficial uses of the receiving waters.
- (E) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and waterbodies.
- (F) Potential for significant changes in the flow velocity or volume of storm water runoff to cause harm to or impair the beneficial uses of natural drainage systems.
- (G) Potential for significant increases in erosion at the project site or surrounding areas.

2. General Plan Update

- (a) Each Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended:
  - (1) Land Use
  - (2) Housing
  - (3) Conservation
  - (4) Open Space
- (b) Each Permittee shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq.*

**F. Development Construction Program**

- I. Each Permittee shall implement a construction program that prevents illicit construction-related discharges of pollutants into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.
  - 1. BMP Implementation - Construction Sites Less Than One Acre

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- (a) Each Permittee shall require the implementation of an effective combination of erosion and sediment control BMPs from Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes.<sup>1</sup>

Table 6 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Sand Bag Barrier	SE-8	SC-8
Stabilized Construction Site Entrance/Exit	TC-1	TC-1
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>2</sup>	NS-2	NS-2
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

2. BMP Implementation - Construction Sites One Acre but Less than 5 acres.

- (a) Each Permittee shall require the implementation of an effective combination of appropriate erosion and sediment control BMPs from Table 7 in addition to the ones identified in Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 7 - BMPs at Construction sites 1acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8

<sup>1</sup> The BMPs are taken from the *California BMP Handbook, Construction, January 2003* and the *Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March 2003*, and addenda.

<sup>2</sup> Ponedged storm water may be discharged at a concentration of Total Suspended Solids (TSS) of 100mg/L or less.

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<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

3. BMP Implementation - Construction Sites 5 acres and Greater

- (a) Each Permittee shall require the implementation of an effective combination of the following BMPs in Table 8 (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) and Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes. Erosion control BMPs shall be preferred to sediment control BMPs.

Table 8 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
<b>Sediment Controls</b>		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
<b>Tracking Control BMPs</b>		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

4. Enhanced Construction BMP Implementation.

- (a) Each Permittee shall implement, or require implementation of, enhanced practices that preclude impacts to water quality posed by all construction sites on hillsides as defined in this Order and construction sites that directly discharge to a waterbody listed on the CWA § 303 (d) list for siltation or sediment, or that occur within or directly adjacent to an Environmentally Sensitive Area (ESAs).

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Construction sites located on hillsides, adjacent to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to ESAs are termed "High risk sites."  
 (b) Each Permittee shall require implementation of enhanced practices for high risk sites which shall include increased BMP inspection and maintenance requirements.

- (1) Each Permittee shall require that high risk sites shall be inspected by the project proponent's Qualified SWPPP Developer or Qualified SWPPP Practitioner or personnel or consultants who are Certified Professionals in Erosion and Sediment Control (CPESC) at the time of BMP installation, at least weekly during the wet season, and at least once each 24 hour period during a storm event that generates runoff from the site, to identify BMPs that need maintenance to operate effectively, that have failed or could fail to operate as intended.
- (2) During the wet season, the area of disturbance shall be limited to the area that can be controlled with an effective combination of erosion and sediment control BMPs. Enhanced sediment controls should be used in combination with erosion controls and should target portions of the site that cannot be effectively controlled by standard erosion controls described above. Effective sediment and erosion control BMPs proposed by the proponent shall include the BMPs listed in Table 9 below. The project proponents are responsible to implement the BMPs below unless shown unnecessary. The Permittee shall require that the project proponent retain records of the inspection and a determination and rationale of the BMPs selected to control runoff.

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**Table 9** Enhanced Construction BMP Implementation.

<b>Construction Site BMPs</b>	<b>CASQA Handbook17</b>	<b>Caltrans Handbook18</b>
<b><u>Erosion Controls</u></b>		
<u>Scheduling</u>	<u>EC-1</u>	<u>SS-1</u>
<u>Preservation of Existing Vegetation</u>	<u>EC-2</u>	<u>SS-2</u>
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
<u>Slope Drains</u>	<u>EC-11</u>	<u>SS-11</u>
<b><u>Sediment Controls</u></b>		
<u>Silt Fence</u>	<u>SE-1</u>	<u>SC-1</u>
Fiber Rolls	SE-5	SC-5

17 BMPs of equivalent effectiveness may also be utilized.  
 18 BMPs of equivalent effectiveness may also be utilized.

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<b>Construction Site BMPs</b>	<b>CASQA Handbook17</b>	<b>Caltrans Handbook18</b>
<u>Sediment Basin</u>	<u>SE-2</u>	<u>SC-2</u>
<u>Check Dam</u>	<u>SE-4</u>	<u>SC-4</u>
<u>Gravel Bag Berm</u>	<u>SE-6</u>	<u>SC-6</u>
<u>Street Sweeping and/or Vacuum</u>	<u>SE-7</u>	<u>SC-7</u>
<u>Sand Bag Barrier</u>	<u>SE-8</u>	<u>SC-8</u>
<u>Storm Drain Inlet Protection</u>	<u>SE-10</u>	<u>SC-10</u>
<b><u>Additional Controls</u></b>		
<u>Wind Erosion Controls</u>	<u>WE-1</u>	<u>WE-1</u>
<u>Stabilized Construction Entrance/Exit</u>	<u>TC-1</u>	<u>TC-1</u>
<u>Stabilized Construction Roadway</u>	<u>TC-2</u>	<u>TC-2</u>
<u>Entrance/Exit Tire Wash</u>	<u>TC-3</u>	<u>TC-3</u>
<u>Advanced Treatment Systems<sup>1</sup></u>		
<b><u>Non-Storm Water Management</u></b>		
<u>Water Conservation Practices</u>	<u>NS-1</u>	<u>NS-1</u>
<u>Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004).19</u>	<u>NS-2</u>	<u>NS-2</u>
<u>Vehicle and Equipment Washing</u>	<u>NS-8</u>	<u>NS-8</u>
<u>Vehicle and Equipment Fueling</u>	<u>NS-9</u>	<u>NS-9</u>
<u>Vehicle and Equipment Maintenance</u>	<u>NS-10</u>	<u>NS-10</u>
<b><u>Waste Management</u></b>		
<u>Material Delivery and Storage</u>	<u>WM-1</u>	<u>WM-1</u>
<u>Stockpile Management</u>	<u>WM-3</u>	<u>WM-2</u>
<u>Spill Prevention and Control</u>	<u>WM-4</u>	<u>WM-4</u>
<u>Solid Waste Management</u>	<u>WM-5</u>	<u>WM-5</u>
<u>Concrete Waste Management</u>	<u>WM-8</u>	<u>WM-8</u>
<u>Sanitary/Septic Waste Management</u>	<u>WM-9</u>	<u>WM-9</u>

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(c) The Permittees shall require the project proponent to collect representative samples during wet weather events in accordance with the SWRCB general construction permit or equivalent monitoring program as developed by the Permittees on approval by the Executive Officer.

5. Local Agency Requirements

(a) Each Permittee shall require for all construction sites 1 acre or greater, compliance with all conditions identified in the preceding subparts F.1, - F.5, and the following requirements:

(1) Local Storm Water Pollution Prevention Plan (Local SWPPP),

(A) Each Permittee shall require the preparation and submittal of a Local SWPPP, for the Permittee's review and written approval prior to issuance of a grading or construction permit for construction or

<sup>1</sup> If appropriate given natural background stormwater runoff and receiving water quality conditions.

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demolition projects. The Permittees' approval signature shall be contained within the first pages of the Local SWPPP

- (i) The Permittee shall not approve any Local SWPPP unless it contains appropriate site-specific construction site BMPs, specific locations, and maintenance schedules.
- (ii) The Local SWPPP must include the rationale used for selecting or rejecting BMPs for various construction phases and weather conditions. The project architect, or engineer of record, or authorized qualified designee, must sign a statement on the Local SWPPP to the effect:

(I) *"As the architect/ engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project's construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity."*

(2) Certification Statement

(A) Each Permittee shall require that each landowner or the landowner's agent sign a statement on the Local SWPPP to the effect:

- (i) *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/ or adequately implement the Local SWPPP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

- (ii) The Local SWPPP certification shall be signed by the property owner or owner's representative/designee. If the Local SWPPP or SWPPP is being prepared by the local agency then the appropriate authority of the local agency shall sign the document.

6. Roadway Paving or Repaving Operations (For Private or Public Projects)

- (a) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.

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- (b) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
- (c) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat
- (d) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses
- (e) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt
- (f) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
- (g) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly
- (h) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly
- (i) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm
- (j) Cover loads with tarp before haul-off to a storage site, and do not overload trucks
- (k) Minimize airborne dust by using water spray during grinding
- (l) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses
- (m) Protect stockpiles with a cover or sediment barriers during a rain

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7. Electronic Site Tracking System

- (a) Each Permittee shall use an electronic system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.

8. Inspections

- (a) Each Permittee shall inspect all construction sites for the implementation of storm water quality controls a minimum of once during the wet season. Concurrently, each Permittee shall ensure that:
  - (1) The Local SWPPP is reviewed for compliance with local codes, ordinances, and permits.
  - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Local SWPPP.
- (b) Each Permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
- (c) Each Permittee can refer sites to the Regional Water Board for further joint enforcement actions for violation of municipal storm water ordinances and the

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Construction Activities Storm Water General Permit (CASGP), or Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), after conducting a minimum of 2 site inspections and issuing a minimum of 2 written notices to the operator regarding the violation (copied to the Regional Water Board). In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Name of the site
- (2) WDID number
- (3) Site developer
- (4) Site owner
- (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report
- (6) Written notice of the violation copied to the Regional Water Board
- (d) Prior to approving and/ or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each Permittee shall inspect the constructed site design, source control and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. The initial/ acceptance BMP verification inspection does not constitute a maintenance and operation inspection, as required in the preceding subpart E.IV.2(c).

9. State Conformity Requirements

- (a) Each Permittee shall ensure that no grading permit, encroachment permit, demolition permit, building permit, electrical permit, or construction permit (or any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) is issued for any project requiring coverage under the CASGP or Small LUP General Permit<sup>1</sup> unless:
  - (1) Proof of filing a Notice of Intent for coverage under a State NPDES permit is demonstrated).
  - (2) Demonstration or Certification that a SWPPP has been prepared by the project developer.
  - (3) Proof of Change of Information form (COI) and a copy of the modified SWPPP(s) at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

10. Interagency Coordination

- (a) **Referral of Violations:**

<sup>1</sup> NPDES Permit No. CAS000005, Waste Discharge Requirements For Discharges of Storm Water Runoff Associated with Small Linear Underground/ Overhead Construction Projects (Small LUP General Permit) for any linear land disturbing activity or activities (cumulatively) that will cause one acre or more of land disturbance but not more than 5 acres.

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A Permittee may refer a violator of the municipal storm water ordinance and CWC § 13260 to the Regional Water Board provided that the Permittee has made a good faith effort at progressive enforcement consistent with the preceding subpart F.8(c). At a minimum, the Permittee's good faith effort shall be documented with:

- (1) A minimum of 2 follow-up inspection reports (inspections completed within 3 months).
- (2) A minimum of two warning letters or NOV's.

**(b) Referral of Non-filers under the CASGP or the Small LUP General Permit:**

Each Permittee shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) under the CASGP or Small LUP General Permit, to the Regional Water Board, no later than 15 days after making a determination of failure to file. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Project location address
- (2) Project description
- (3) Developer or owners name with complete mailing address
- (4) Project size
- (5) Records of communication with the developer or owner regarding filing requirements

**(c) Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:**

- (1) Each Permittee shall initiate, within one business day,<sup>1</sup> an initial investigation of complaint(s) (other than non-storm water discharges) on the construction site(s) within its jurisdiction.
  - (A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water/ urban runoff ordinances, and to oversee corrective action.

**(d) Support of Regional Water Board Enforcement Actions – As directed by the Regional Water Board Executive Officer:**

- (1) Each Permittee shall support Regional Water Board enforcement actions by:
  - (A) Assisting in identification of current owners, operators, and lessees of properties and sites.
  - (B) Providing staff, when available, for joint inspections with Regional Water Board inspectors.
  - (C) Appearing to testify as witnesses in Regional Water Board enforcement hearings.
  - (D) Providing copies of inspection reports and other progressive enforcement documentation.

<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to "initiate" the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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**G. Public Agency Activities Program**

- I. Each Permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:
  - i. Public Construction Activities Management.
  - ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
  - iii. Vehicle and Equipment Wash Areas
  - iv. Landscape and Recreational Facilities Management
  - v. Storm Drain Operation and Management
  - vi. Streets and Roads Maintenance
  - vii. Public Industrial Activities Management
  - viii. Emergency Procedures
  - ix. Employee Training
  - x. Infrastructure Maintenance
  
- 1. Public Construction Activities Management
  - (a) Each Permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. of this Order at Permittee owned or operated public construction projects for project types identified in part 5.E of this Order.
  - (b) Each Permittee shall implement and comply with the appropriate Development Construction Program requirements in part 5.F. of this Order at Permittee owned or operated construction projects as applicable.
  - (c) For public projects including those under a Capital Improvement Project Plan that disturb less than one acre of soil the Permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Tables 5, 9 and 10.
  
- 2. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Long Term Maintenance Programs
  - (a) Each Permittee shall implement the activity specific BMPs<sup>1</sup> listed in Table 9 when such activities occur at Permittee owned/leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Tables. Additionally, for any activity or area

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<sup>1</sup> These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda. Other BMPs may be substituted upon approval by the Executive Officer.

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described in the footnote below,<sup>1</sup> each Permittee shall also implement the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 10 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards).

Table 10 - BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards

From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide	Appendix B
<b>Activity Specific BMPs</b>	<b>Page</b>
<b>General BMPs</b>	B-4
<b>Flexible Pavement</b>	B-9
Asphalt Cement Crack and Joint Grinding/ Sealing	B-9
Asphalt Paving	B-10
Structural Pavement Failure (Digouts) Pavement Grinding and Paving	B-11
Emergency Pothole Repairs	B-13
Sealing Operations	B-14
<b>Rigid Pavement</b>	B-15
Portland Cement Crack and Joint Sealing	B-15
Mudjacking and Drilling	B-16
Concrete Slab and Spall Repair	B-17
<b>Slope/ Drains/ Vegetation</b>	B-19
Shoulder Grading	B-19
Nonlandscaped Chemical Vegetation Control	B-21
Nonlandscaped Mechanical Vegetation Control/ Mowing	B-23
Nonlandscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-24
Fence Repair	B-25
Drainage Ditch and Channel Maintenance	B-26
Drain and Culvert Maintenance	B-28
Curb and Sidewalk Repair	B-30
<b>Litter/ Debris/ Graffiti</b>	B-32
Sweeping Operations	B-32
Litter and Debris Removal	B-33
Emergency Response and Cleanup Practices	B-34
Graffiti Removal	B-36
<b>Landscaping</b>	B-37
Chemical Vegetation Control	B-37
Manual Vegetation Control	B-39
Landscaped Mechanical Vegetation Control/ Mowing	B-40
Landscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-41
Irrigation Line Repairs	B-42
Irrigation (Watering), Potable and Nonpotable	B-43
<b>Environmental</b>	B-44

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<sup>1</sup> Scheduling and Planning; Spill Prevention and Control; Sanitary/ Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/ Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill / Discharge Control and Maintenance Facility Housekeeping Practices.



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Activity Specific BMPs	Page
Storm Drain Stenciling	B-44
Roadside Slope Inspection	B-45
Roadside Stabilization	B-46
Storm Water Treatment Devices	B-48
Traction Sand Trap Devices	B-49
<b>Public Facilities</b>	B-50
Public Facilities	B-50
<b>Bridges</b>	B-52
Welding and Grinding	B-52
Sandblasting, Wet Blast with Sand Injection and Hydroblasting	B-54
Painting	B-56
Bridge Repairs	B-57
<b>Other Structures</b>	B-59
Pump Station Cleaning	B-59
Tube and Tunnel Maintenance and Repair	B-61
Tow Truck Operations	B-63
Toll Booth Lane Scrubbing Operations	B-64
<b>Electrical</b>	B-65
Sawcutting for Loop Installation	B-65
<b>Traffic Guidance</b>	B-67
Thermoplastic Striping and Marking	B-67
Paint Striping and Marking	B-68
Raised/ Recessed Pavement Marker Application and Removal	B-70
Sign Repair and Maintenance	B-71
Median Barrier and Guard Rail Repair	B-73
Emergency Vehicle Energy Attenuation Repair	B-75
<b>Snow and Ice Control</b>	B-76
Snow Removal	B-76
Ice Control	B-77
<b>Storm Maintenance</b>	B-78
Minor Slides and Slipouts Cleanup/ Repair	B-78
<b>Management and Support</b>	B-80
Building and Grounds Maintenance	B-80
Storage of Hazardous Materials (Working Stock)	B-82
Material Storage Control (Hazardous Waste)	B-84
Outdoor Storage of Raw Materials	B-85
Vehicle and Equipment Fueling	B-86
Vehicle and Equipment Cleaning	B-87
Vehicle and Equipment Maintenance and Repair	B-88
Aboveground and Underground Tank Leak and Spill Control	B-90

3. Vehicle and Equipment Wash Areas
- (a) Each Permittee shall eliminate discharges of wash waters from vehicle and equipment washing no later than (365 days after Order adoption date) by

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implementing any of the following measures at existing facilities with vehicle or equipment wash areas:

- (1) Self-contain, and haul off for disposal
  - (2) Equip with a clarifier
  - (3) Equip with an alternative pre-treatment device; or
  - (4) Plumb to the sanitary sewer
- (b) Each Permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced has all vehicle and equipment wash areas plumbed to the sanitary sewer or be self contained and all wastewater/ washwater hauled for legal disposal.

4. Landscape, Park, and Recreational Facilities Management

(a) Integrated Pest Management (IPM)

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each Permittee shall implement an IPM program that includes the following:

- (1) Pesticides are used only if, after monitoring indicates they are needed according to established guidelines.
  - (2) Treatments are made with the goal of removing only the target organism.
  - (3) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.
  - (4) Its use of pesticides, including Organophosphates and Pyrethroids do not threaten water quality.
  - (5) Partner with other agencies and organizations to encourage the use of IPM.
  - (6) Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the Permittees' overall operations and on municipal property.
  - (7) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
    - (A) Quantify pesticide use by its staff and hired contractors.
    - (B) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - (C) Demonstrate reductions in pesticide use.
- (b) Each Permittee shall implement the following requirements no later than (180 days after Order adoption date):
- (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers.

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- (2) Ensure no application of pesticides or fertilizers are applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area.
- (3) Ensure that no banned or unregistered pesticides are stored or applied.
- (4) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.
- (5) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs; and
- (6) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment.
  - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills.
  - (B) Regularly inspect storage areas.
- (7) Comply with the provisions and the monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2004-0008-DWQ).

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5. Storm Drain Operation and Management

(a) Catch Basin Cleaning

- (1) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:
  - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash.
  - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash.
  - Priority C: Catch basins that are designated as generating low volumes of trash.

Within one year of Order adoption, Permittees shall submit a map or list of Catch Basins with their GPS coordinates and their designations. The map or list shall contain the rationale or data to support designations.
- (2) Each Permittee shall inspect catch basins according to the following schedule:
  - Priority A: A minimum of 3 times during the wet season and once during the dry season every year.
  - Priority B: A minimum of once during the wet season and once during the dry season every year.
  - Priority C: A minimum of once per year.

Catch basins shall be cleaned as necessary on the basis of inspections. Permittees shall maintain inspection records for Regional Board review.
- (3) In addition to the preceding schedule, Permittees shall ensure that any catch basin that is determined to be at least 25% full of trash shall be cleaned out.

(b) Trash Management at Public Events

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- (1) Each Permittee shall require for any event in the public right of way or wherever it is foreseeable that substantial quantities of trash and litter may be generated, the following measures:
  - (A) Proper management of trash and litter generated; and
  - (B) Arrangement for temporary screens to be placed on catch basins; or
  - (C) Provide clean out of catch basins, trash receptacles, and grounds in the event area within 24 hours subsequent to the event.
- (c) Trash Receptacles
  - (1) Each Permittee shall install trash receptacles, or equivalent trash capturing devices in areas subject to high trash generation within its jurisdiction no later than (one year after Order adoption date).
  - (2) Each Permittee shall ensure that all trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.
- (d) Catch Basin Labels
  - (1) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest each catch basin and inlet before the rainy season begins.
  - (2) Each Permittee shall record and re-stencil or re-label within 15 days of inspection, catch basins with illegible stencils.
- (e) Additional Trash Management Practices
  - (1) Each Permittee shall install trash excluders, or equivalent devices on or in catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water no later than two years after Order adoption date in areas defined as Priority A (Provision 1a(2)) except in sites where the application of such BMP(s) alone will cause flooding. Lack of maintenance that causes flooding is not an acceptable exception to the requirement to install BMPs. Alternatively the Permittee may implement alternative or enhanced BMPs beyond the provisions of this permit (such as but not limited to increased street sweeping, adding trash cans near trash generation sites, prompt enforcement of trash accumulation, increased trash collection on public property, increased litter prevention messages or trash nets within the MS4) that provide substantially equivalent removal of trash. Permittees shall demonstrate that BMPs, which substituted for trash excluders provide equivalent trash removal performance as excluders. When outfall trash capture is provided, revision of the schedule for inspection and cleanout of catch basins in task (a) may be proposed by the Permittee for approval by the Executive Officer.
- (f) Storm Drain Maintenance
  - (1) Each Permittee shall implement a program for Storm Drain Maintenance no later than (180 days after Order adoption date) that includes the following:
    - (A) Visual monitoring of Permittee-owned open channels and other drainage structures for debris at least annually.
    - (B) Remove trash and debris from open channel storm drains a minimum of once per year before the storm season.

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- (C) Eliminate the discharge of contaminants during MS4 maintenance and clean outs.
- (D) Quantify the amount of materials removed using techniques appropriate for quantifying solid waste and ensure the materials are properly disposed of.
- (g) Spill Response Plan
  - (1) Each Permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response Plan shall clearly identify agencies responsible and telephone numbers and e-mail address for contact and shall contain at a minimum the following:
    - (A) Investigation of all complaints received within 24 hours of the incident report.
    - (B) Response within 2 hours to spills for containment upon notification, except where such overflows occur on private property, in which case the response should be within 2 hours of gaining legal access to the property.
    - (C) Notification to appropriate public health agencies and the Office of Emergency Services (OES).
- (h) Permittee Owned Treatment Control BMPs
  - (1) Each Permittee shall implement an inspection and maintenance program for all Permittee owned treatment control BMPs, including post-construction treatment control BMPs.
  - (2) Each Permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
  - (3) Any residual water produced by a treatment control BMP and not being internal to the BMP performance when being maintained shall be:
    - (A) Hauled away and legally disposed of; or
    - (B) Applied to the land without runoff; or
    - (C) Discharged to the sanitary sewer system (with permits or authorization); or
    - (D) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 11 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

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Table 11 - Discharge Limitations for Dewatering Treatment BMPs<sup>1</sup>

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

<sup>1</sup> Technology based effluent limits.

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6. Streets and Roads Maintenance

(a) Maintenance

- (1) Each Permittee shall perform street sweeping of curbed streets in commercial areas and areas subject to high trash generation to control trash and debris at least two times per month.

(b) Road Reconstruction

- (1) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.
  - (A) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall<sup>1</sup> unless required by emergency conditions.
  - (B) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
  - (C) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses.
  - (D) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
  - (E) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
  - (F) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
  - (G) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
  - (H) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
  - (I) Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
  - (J) Minimize airborne dust by using water spray during grinding.
  - (K) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses.
  - (L) Protect stockpiles with a cover or sediment barriers during a rain.

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7. Emergency Procedures

- (a) Each Permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.

- (1) Where the self-waiver has been invoked, the Permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of

<sup>1</sup> A probability of precipitation (POP) of 50% is required.

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the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.

- (2) Minor repairs of essential public service systems and infrastructure in emergency situations (can be completed in less than one day) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

8. Municipal Employee and Municipal Contractor Training

- (a) Each Permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors in targeted positions (whose interactions, jobs, and activities affect storm water quality) on the requirements of the overall storm water management program to:
  - (1) Promote a clear understanding of the potential for activities to pollute storm water.
  - (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
- (b) Each Permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training programs shall address:
  - (1) The potential for pesticide-related surface water toxicity.
  - (2) Proper use, handling, and disposal of pesticides.
  - (3) Least toxic methods of pest prevention and control, including IPM.
  - (4) Reduction of pesticide use.
- (c) Each Permittee shall, no later than (12 months after Order adoption date) and annually thereafter before June 30, train all of their employees and contractors who are responsible for illicit connections and illicit/ illegal discharges. Training programs shall address:
  - (1) Identification
  - (2) Investigation
  - (3) Termination
  - (4) Cleanup
  - (5) Reporting of Incidents
  - (6) Documentation of Incidents

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**H. Illicit Connections and Illicit Discharges Elimination Program**

- I. Each Permittee shall implement an Illicit Connections and Illicit Discharges (IC/ IDs) program to eliminate IC/IDs to the storm drain system, and shall document, track, and report all such cases in accordance with the elements and performance measures specified in the following subsections.
  - 1. General

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- (a) Implementation - Each Permittee shall implement an IC/ ID Program. The IC/ ID procedures shall be documented and made available for public review.
- (b) Tracking - All Permittees shall, no later than (3 years after Order adoption date), map at a scale and in a format specified by the Principal Permittee all known connections to their storm drain system. All Permittees shall map at a scale and in a format specified by the Principal Permittee incidents of illicit connections and discharges since January 2009 on their baseline maps, and shall transmit this information to the Principal Permittee no later than (3 years after Order adoption date). Permittees shall use this information to identify priority areas for further investigation and elimination of IC/ ID.

2. Public Reporting

- (a) Permittees shall establish and maintain a phone hotline and internet site to receive all reports of IC/ ID complaints.
- (b) Permittees shall document the location of the reported IC/ ID and the actions undertaken in response to all IC/ ID complaints.

3. Illicit Connections

(a) Screening for Illicit Connections

- (1) Each Permittee shall submit to the Principal Permittee:
  - (A) A map at a scale and in a format specified by the Principal Permittee showing the location and length of underground pipes 18 inches and greater in diameter, and channels within their permitted area and operated by the Permittee in accordance with the following schedule:
    - (i) All channeled portions of the storm drain system no later than (365 days after Order adoption date).
    - (ii) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, (no later than 3 years after Order adoption date).
    - (iii) All portions of the storm drain system consisting of storm drain pipes 18 inches in diameter or greater, (no later than 5 years after Order adoption date).
  - (B) The status of suspected, confirmed, and terminated illicit connections.
- (2) Permittees shall conduct field screening of their storm drain systems in accordance with screening procedures described in the Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments (2004)<sup>1</sup>. Permittees shall conduct field screening of their storm drain system that has not been previously screened and reported to the Regional Board, for illicit connections in accordance with the following schedule:

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<sup>1</sup> *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*. The Center for Watershed Protection, Pitt R., October 2004. Chapter 13, 13.1,13.2, 13.3, 13.4



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- (A) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, no later than (3 years after Order adoption date).
- (B) High priority areas identified during the mapping of illicit connections and discharges, no later than (3 years after Order adoption date).
- (C) All portions of storm drain systems 50 years or older in age, no later than (3 years after Order adoption date).
- (3) Each Permittee shall maintain a list containing all connections under investigation for possible illicit connection and their status.
- (b) Response to Illicit Connections
  - (1) Investigation -  
Each Permittee, upon discovery or upon receiving a report of a suspected illicit connection, shall complete an investigation within 21 days, to determine the following:
    - (A) Source of the connection.
    - (B) Nature and volume of discharge through the connection.
    - (C) Responsible party for the connection.
  - (2) Termination -  
Each Permittee, upon confirmation of an illicit storm drain connection, shall ensure the following:
    - (A) Termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection.
  - (3) Documentation -  
Each Permittee shall keep records of all illicit connection investigations and the formal enforcement taken to eliminate all illicit connections.

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4. Illicit Discharges

- (a) Investigation -  
Each Permittee shall investigate an illicit/ illegal discharge during or immediately following containment and cleanup activities, and shall take appropriate enforcement action to eliminate the illegal discharge.
- (b) Abatement and Cleanup -  
Each Permittee shall respond, within 1 business day of discovery or a report of a suspected illicit/ illegal discharge, with actions to abate, contain, and/or clean up all illegal discharges, including hazardous waste.
- (c) Documentation -  
Each Permittee shall maintain records of all illicit/ illegal discharge discoveries, reports of suspected illicit/ illegal discharges, their response to the illicit/ illegal discharges and suspected illicit/ illegal discharges, and the formal enforcement taken to eliminate all illicit/ illegal discharges.

I. REPORTING PROGRAM

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1. The Principal Permittee in consultation with the Permittees and Regional Water Board staff shall convene an adhoc working group to develop an Electronic Reporting Program, the basis of which shall be the requirements in this Order. The Committee shall no later than (12 months after Order adoption date) submit the electronic reporting form in each subsequent year.
2. Each Permittee shall submit information required in the Reporting Program in a method as appropriate to the format approved by the Regional Water Board Executive Officer.
3. The Principal Permittee shall submit by December 15<sup>th</sup> of each year, an Annual Report to the Regional Water Board Executive Officer in the form one hard copy and three compact disk (CD) copies (or an electronic equivalent).
4. The Annual Report shall document the status of the Municipal Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1- Monitoring Report.
  - (b) The requirements described under Part 2- Program Report.
5. Plans shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
6. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
7. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).

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**PART 6 - TOTAL MAXIMUM DAILY LOAD PROVISIONS**

- I. Part 6 of this Order incorporates provisions to assure that Ventura County MS4 permittees comply with WLAs and other requirements of TMDLs covering impaired waters impacted by the permittees' discharges.
- II. Each permittee shall attain the storm water WLAs incorporated into this Order by implementing BMPs in accordance with the MS4 effluent quality workplan and source identification approved by the Executive Officer.
- III. TMDLs in effect and covered in this Order are the following:

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1. TMDL for Nitrogen Compounds for the Santa Clara River - (Effective date: March 23, 2004).
  2. TMDL for Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon - (Effective date: March 24, 2006).
  3. TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon - (Effective date: March 24, 2006).
  4. TMDL for Bacteria in Malibu Creek and Lagoon - (Effective date: January 24, 2006).
  5. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 26, 2007)
  6. TMDL for Trash in Revolon Slough and Beardsley Wash (Effective date: March 6, 2008).
  7. TMDL for Trash in the Ventura River Estuary (Effective date: March 6, 2008).
  8. TMDL for Bacteria in Harbor Beaches of Ventura County (Effective date: September 23, 2008).
- IV. TMDL Interim WLAs incorporated into this Order due to compliance dates which exceed the term of this Order are the following:
1. Final Wet Weather Bacteria WLAs for Malibu Creek and Lagoon - (Compliance date: January 24, 2016).
  2. Final Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon - (Compliance date: March 24, 2026).
  3. Final Metals and Selenium WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 26, 2022)
- V. TMDL WLAs and Other TMDL Provisions Incorporated into this Order are as follows:
1. TMDL for Nitrogen Compounds in the Santa Clara River
    - (a) Waste Load Allocations:
      - (1) The Ventura County MS4 permittees discharging to the Santa Clara River (the cities of Fillmore and Santa Paula) ("Santa Clara MS4 permittees") shall implement BMPs to achieve the following MS4 wasteload allocations applicable to River Reach 3:
 

Ammonia nitrogen 30-day average	2.0 mg/L
Ammonia nitrogen 1-hour average	4.2 mg/L
Nitrate + Nitrite nitrogen 30-day average	8.1 mg/L
    - (b) Compliance Monitoring:
      - (1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.

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- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.
- (c) Actions and Special Studies required of Santa Clara MS4 permittees:
  - (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.
- 2. TMDL for Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon.
  - (a) Waste Load Allocations:
    - (1) MS4 permittees discharging to Calleguas Creek, its tributaries and Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the following MS4 WLAs:
 

Toxicity WLA	1.0 TUc
Chlorpyrifos WLA	0.014 ug/L
Diazinon WLA	0.10 ug/L
    - (2) Pursuant to the TMDL, the final storm water WLAs for Toxicity, Chlorpyrifos and Diazinon, listed above, are receiving water concentrations measured in-stream at the base of each subwatershed within the Calleguas Creek watershed.
  - (b) Compliance Monitoring:
    - (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
    - (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.
    - (3) If as a result of compliance monitoring and subsequent investigations it is determined that a Calleguas MS4 permittee is responsible for exceedance of the in-stream Toxicity WLA, that permittee shall initiate the TRE/TIE process as outlined in U.S. EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000) or the approved Toxicity TMDL monitoring plan, and take appropriate action to eliminate the identified source of the toxicity.
  - (c) Actions and Special Studies required of Calleguas MS4 permittees:

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- (1) Special Study #1. Together with Calleguas POTW permittees, investigate the pesticides that will replace diazinon and chlorpyrifos in the urban environment, their potential impact on receiving waters and potential control measures. Special Study #1 was completed by March 24, 2008.
  - (2) Special Study #2. Together with Calleguas Agricultural Dischargers, consider results of monitoring of sediment concentrations by source/land use type through the special study required in the Calleguas OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.
  - (3) Pesticide Collection Program. Together with Calleguas POTW permittees, develop and implement a collection program for diazinon and chlorpyrifos and an educational program. Collection and education could occur through existing programs such as household hazardous waste collection events. The Pesticide Collection Program is to be implemented by March 24, 2009.
  - (4) Special Study #3. Together with Calleguas Agricultural Dischargers, consider the findings of transport rates developed through the OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.
3. TMDL for Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in the Calleguas Creek, its Tributaries and Mugu Lagoon.
- (a) Waste Load Allocations:
- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, and Simi Valley) ("Calleguas MS4 permittees") shall implement BMPs to achieve the interim WLAs listed in Table 11.

Table 12. Interim Sediment Concentration WLAs (ng/g)

Constituent	Subwatershed					
	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Chlordane	25	17	48	3.3	3.3	3.4
4,4-DDD	69	66	400	290	140	5.3
4,4-DDE	300	470	1600	950	170	20
4,4-DDT	39	110	690	670	25	2
Dieldrin	19	3	5.7	1.1	1.1	3
PCBs	180	3800	7600	25700	25700	3800
Toxaphene	22900	260	790	230	230	260

- (2) Pursuant to the TMDL, the interim storm water WLAs for OC Pesticides, PCBs and Siltation, listed above, are annual average, sediment-based

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concentrations measured in surface waters at the base of each subwatershed within the Calleguas Creek watershed.

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds; in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.

(c) Actions and Special Studies required of Calleguas MS4 permittees:

- (1) Pesticide Collection Program. Together with Calleguas POTW permittees, implement a collection program and source control measures pursuant to a work plan approved by the Executive Officer. The Pesticide Collection Program is to be implemented by March 24, 2011.
- (2) Special Study #1. Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, submit a work plan to quantify sedimentation in the Calleguas Creek Watershed, evaluate management methods to control siltation and contaminated sediment transport to Calleguas Creek, identify appropriate BMPs to reduce sediment loadings and evaluate the effect of sediment on habitat preservation in Mugu Lagoon for approval by the Executive Officer. This special study is also to evaluate the concentration of OC pesticides and PCBs in sediments from various sources/land use types. Special Study #1 is to be completed by March 24, 2014.
- (3) Special Study #2. Together with Calleguas Agricultural Dischargers, identify areas of high OC concentrations and evaluate the effects of watershed protection and land use practices on water quality. Such practices include but are not limited to management of sediment reduction practices and structures, streambank stabilization, and other projects related to stormwater conveyance and flood control improvements in the Calleguas Creek watershed. Special Study #2 is to be completed based on the schedule provided in the workplan, submitted in March, 2007
- (4) Special Study #3 – Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, evaluate natural attenuation rates and evaluate methods to accelerate organochlorine pesticide and polychlorinated biphenyl attenuation and examine the attainability of wasteload and load allocations in the Calleguas Creek Watershed. Special Study #3 is to be completed by March 24, 2016.

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4. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the interim WLAs listed in Table 12 and Table 13.

Table 13. Interim WLAs for Copper, Nickel and Selenium (ug/L)

Constituent	Calleguas and Conejo Creek (a)			Revolon Slough		
	Dry Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)	Dry Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)
Copper	23	19	204	23	19	204
Nickel	15	13	(a)	15	13	(a)
Selenium	(b)	(b)	(b)	14(c)	13(c)	(a)

- (A) The current loads do not exceed the TMDL under wet conditions, interim limits are not required
- (B) Selenium allocations have not been developed for this reach as it is not on the 303(d) list
- (C) Attainment of interim limits will be evaluated in consideration of background loading data, if available
- (2) Pursuant to the TMDL, the interim storm water WLAs for copper, nickel, and selenium are receiving water concentrations measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.

Table 14. Mass-based WLAs for copper, nickel and selenium

Annual Cumulative Flow (million gallons per year)	Calleguas Creek (lbs/yr)	Revolon Slough (lbs/yr)
0-15,000	3.3	1.7
15,000-25,000	10.5	4
Above 25,000	64.6	10.2

- (3) Pursuant to the TMDL, the interim storm water WLAs for mercury are suspended sediment loads measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.
- (4) Determination of the applicable interim WLA will be determined by calculating the total annual flow (October 1-September 30) in the Calleguas Creek watershed as measured by the flow gage at CSUCI.

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(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality and total suspended solids (TSS) at the base of Calleguas Creek, Revolon Slough and in Mugu Lagoon, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.

(c) Actions and Special Studies required of Calleguas MS4 permittees:

- (1) Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium. Complete by March 26, 2009.
- (2) Implement the UWQMP within one year of approval by Executive Officer.
- (3) In cooperation with agricultural dischargers, evaluate the results of the OCs TMDL special study on sediment transport rates for applicability to the metals and selenium TMDL. Complete within 6 months of completion of the OCs TMDL special study #1.
- (4) In cooperation with agricultural dischargers, include monitoring for copper, mercury, nickel and selenium in the OC pesticides TMDL special study – Monitoring of Sediment by Source and Land Use Type. The special study is to be completed by March 26, 2014.
- (5) Evaluate the results of the OC Pesticides TMDL Special Study – Effects of BMPs on Sediment and Siltation, to determine the impacts on metals and selenium. Complete within 6 months of completion of the OC Pesticides special study #1.
- (6) Evaluate the effectiveness of BMPs implemented under the UWQMP in controlling metals and selenium discharges. This is to be completed by March 26, 2013.
- (7) Re-evaluate agricultural and urban waste load allocations for copper, mercury, nickel and selenium based on the evaluation of BMP effectiveness. By March 26, 2012, urban dischargers will have a required 25% reduction in the difference between the loadings at the time of the TMDL preparation and the final WLAs effective in 2022.
- (8) In cooperation with POTW permittees and agricultural dischargers, conduct a study to identify selenium contaminated groundwater sources. Special Study is to be completed within one year of the approval of the workplan.
- (9) In cooperation with agricultural dischargers, conduct a study to investigate metals “hot spots” and natural soils concentrations. This special study is to be completed within 2 years of the approval of the workplan.

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- 5. TMDL for Bacteria in Malibu Creek and Lagoon
  - (a) Waste Load Allocations:
    - (1) MS4 permittees discharging to Malibu Creek or its tributaries (Ventura County Watershed Protection District, County of Ventura and the cities of Thousand Oaks and Simi Valley) ("Malibu MS4 permittees") shall achieve the WLAs identified in Resolution 2004-19. . These WLAs are expressed as the number of daily or weekly sample days that may exceed the single sample limits or 30-day geometric mean bacteria targets in Resolution 2004-19.

Table 15 - Bacteria Targets

Parameters	Unit	Fresh Water Targets	
		Geometric Mean	Single Sample
E. coli	mg	126/ 100	235/ 100
Fecal coliform	mg	200/ 100	400/ 100

- (2) The wasteload allocations are to be achieved no later than January 26, 2012.
  - (b) Compliance Monitoring:
    - (1) Achievement of the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Monica Bacteria TMDL Compliance Monitoring Program approved by the Executive Officer.
    - (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.
  - (c) Actions and Special Studies required of Malibu MS4 permittees:
    - (1) If TMDL compliance monitoring indicates that the Malibu MS4 permittees are causing or contributing to an exceedance of the WLAs in the receiving waters, the permittees shall conduct a source identification study and implement additional controls sufficient to achieve the WLAs in the receiving waters.

- 6. TMDL for Trash in Revolon Slough and Beardsley Wash
  - (a) Wasteload Allocations
    - (1) MS4 permittees discharging to Revolon Slough and Beardsley Wash (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo and Oxnard) shall implement BMPs to achieve the WLAs of zero trash.
  - (b) Compliance Monitoring
    - (1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Revolon Slough and Beardsley Wash and/or within

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responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.

- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.
- (c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees
  - (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.

7. TMDL for Trash in the Ventura River Estuary

- (a) Wasteload Allocations
  - (1) MS4 permittees discharging to the Ventura River Estuary (Ventura County Watershed Protection District, County of Ventura and the City of Ventura) shall implement BMPs to achieve the WLAs of zero trash.
- (b) Compliance Monitoring
  - (1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in the Ventura River Estuary and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.
  - (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.
- (c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees
  - (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.

8. TMDL for Bacteria in Harbor Beaches of Ventura County

- (a) Waste Load Allocations
  - (1) MS4 permittees discharging to the Channel Islands Harbor Beaches (the County of Ventura, the Ventura County Watershed Protection District (VCWPD) and associated Municipal Separate Storm Sewer System (MS4) permittees in the Channel Islands Harbor subwatershed, and the City of

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Oxnard shall implement BMPs to achieve the interim WLAs listed in Table 15. All WLAs for summer dry-weather single sample bacteria densities at the Harbor Beaches of Ventura County are zero (0) days of allowable exceedances; winter dry weather and wet weather final WLAs are listed in Table 17 below.

The Basin Plan objectives that serve as the numeric targets for this TMDL are (single sample limits):

- a. Total coliform density shall not exceed 10,000/100 ml.
- b. Fecal coliform density shall not exceed 400/100 ml.
- c. Enterococcus density shall not exceed 104/100 ml.
- d. Total coliform density shall not exceed 1,000/100ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Table 16. Interim WLAs for Single Sample Exceedance Days

Location	Summer Dry Weather		Winter Dry Weather		Wet Weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Kiddie Beach	54	8	23	4	32	5
Hobie Beach	40	6	25	4	38	6

Table 17. Final Allowable Exceedance Days by Location

Location	Summer Dry-weather		Winter Dry-weather		Wet-weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Hobie Beach	0	0	3	1	17	3
Kiddie Beach	0	0	3	1	17	3

- (2) Pursuant to the TMDL, the interim storm water WLAs for bacteria are from samples taken at existing monitoring sites in ankle to knee- high depths.
- (b) Compliance Monitoring
  - (1) Compliance and monitoring for Harbor Beaches of Ventura County is based on existing monitoring protocols and locations. Monitoring shall continue at sampling locations (VCEHD 36000 and VCEHD37000) and at the current weekly monitoring frequency, consistent with AB411 compliance monitoring. Monitoring shall be conducted on a year-round basis at the current monitoring locations including the summer months (i.e., April to October) and winter months (i.e., November to March).

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Bacteria sampling shall be conducted in ankle- to knee-high water, consistent with AB411. However, if additional monitoring stations are added or if changes are made to the sampling frequencies or existing monitoring locations, then submittal of a monitoring plan is required for Executive Officer approval.

- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.
- (c) Actions and Special Studies required of Harbor Beaches of Ventura County MS4 permittees
  - (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through structural and non-structural BMPs or implementation of other measures to attain the required source control.
  - (2) Special studies are not required for implementation of the TMDL though conducting special studies is within the discretion of the responsible parties.

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**PART 7 - DEFINITIONS**

The following are definitions for terms in this Order:

**Adverse Impact** - means a detrimental effect upon water quality or beneficial uses caused by a discharge or loading of a pollutant or pollutants.

**Agriculture** - means the science, art, and business of cultivating the soil, producing crops, and raising livestock.

**Antidegradation Policies** - means policies which protect surface and ground waters from degradation, and federal policies, which protect high quality surface waters. In particular, this policy protects waterbodies where existing quality is higher than that necessary for the protection of beneficial uses including the protection of fish and wildlife propagation and recreation on and in the water (*Statement of Policy with Respect to Maintaining High Quality Water in California*, State Board Resolution No. 68-16; 40 CRF 131.12).

**Applicable Standards and Limitations** - means all State, interstate, and Federal standards and limitations to which a "discharge" or a related activity is subject under the CWA, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, and pretreatment standards under § 301, § 302, § 303, § 304, § 306, § 307, § 308, § 403, and § 404 of CWA.

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**Areas of Special Biological Significance (ASBS)** - means all those areas of this state listed as ASBS, listed specifically within the California Ocean Plan or so designated by the State Board which, among other areas, includes the area from Mugu Lagoon to Latigo Point: Oceanwater within a line originating from Laguna Point at 34° 5' 40" north, 119° 6' 30" west, thence southeasterly following the mean high tideline to a point at Latigo Point defined by the intersection of the mean high tide line and a line extending due south of Benchmark 24; thence due south to a distance of 1000 feet offshore or to the 100 foot isobath, whichever distance is greater; thence northwesterly following the 100 foot isobath or maintaining a 1,000-foot distance from shore, whichever maintains the greater distance from shore, to a point lying due south of Laguna Point, thence due north to Laguna Point.

**Authorized Discharge** - means any discharge that is authorized pursuant to an NPDES permit, waste discharge requirement, conditional waiver from waste discharge requirements, or meets the conditions set forth in this Order.

**Automotive Repair Shop** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

**Automotive Service Facilities** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to storm water.

SIC Code	Corresponding NAICS Code
5013	425120, 441310, 425110, & 423120
5014	425120, 425110, 423130, & 441320
5511	441110
5541	447110, & 447190
7532	811121
7533	811112
7534	326212, & 811198
7536	811122
7537	811113
7538	811111
7539	811198, & 811118

**Bacteria Total Maximum Daily Load (TMDL) Dry Weather** - defined in the Bacteria TMDLs as those days with less than 0.1 inch of rainfall and those days occurring more than 3 days after a rain.

**Bacteria Total Maximum Daily Load (TMDL) Wet Weather** - defined in the Bacteria TMDLs as a day with 0.1 inch or more of rain and 3 days following the rain event.

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**Basin Plan** - means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments.

**Beneficial Uses** - means the existing or potential uses of receiving waters in the permit area as designated by the Regional Water Board in the Basin Plan.

**Best Management Practices (BMPs)** - means methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

**California Environmental Quality Act (CEQA)** - means a California statute that requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible (Reference: California Public Resources Code § 21000 et seq.)

**Channel** - means an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two waterbodies.

**Chronic Toxicity** - means a measurement of a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.

**Commercial Area(s)** - means any geographic area of the Permittees' jurisdiction that is not heavy industrial or residential. A commercial area includes, but is not limited to areas surrounding: commercial activity, hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Commercial Development** - means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Construction** - Construction activity includes any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain original line and grade,

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hydraulic capacity, or original purpose of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage is required if more than one acre is disturbed or the activities are part of a larger plan.

**Construction Activities Storm Water General Permit (CASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from construction activities under certain conditions.

**Control** - means to minimize, reduce, eliminate, or prohibit by technological, legal, contractual or other means, the discharge of pollutants from an activity or activities.

**Critical Sources** - means commercial facilities and businesses that have a potential to contribute pollutants to stormwater runoff if effective BMPs are not implemented. Attachment "D" specifies the commercial facilities and businesses that have been identified as Critical Sources.

**Dechlorinated/ Debrominated Swimming Pool Discharge** - means any swimming pool discharge with a residual chlorine or bromine level of 0.1mg/L or less; and does not contain any detergents, wastes, algaecides, or cyanuric acid in excess of 50 ppm, or any other chemicals including salts from pools commonly referred to as "salt water pools". The term does not include swimming pool filter backwash or swimming pool water containing bacteria.

**Development** - means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and any other non-residential projects, including public agency projects; or mass grading for future construction.

**Directly Adjacent** - means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area.

**Directly Discharging** - means outflow from a drainage conveyance system that is composed entirely or predominately of flows from the subject, property, development, subdivision, or industrial facility and not commingled with the flows from adjacent lands.

**Discharge** - means when used without qualification the "discharge of a pollutant."

**Discharging Directly** - means outflow from a drainage conveyance system that is composed entirely or predominantly of flows from the subject, property, development, subdivision, or industrial facility, and not commingled with the flows from adjacent lands.

**Discharge of a Pollutant** - means any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or, any addition of any pollutant or

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combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft, which is being used as a means of transportation. The term discharge includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**Disturbed Area** - means any area that is altered as a result of land disturbance. Examples include but are not limited to: clearing, grading, grubbing, stockpiling and/ or excavation, etc...

**Dry Day** - means a non-wet day for Malibu Creek and Lagoon Bacteria TMDL WLA. A wet day is defined as a day with a 0.1 inch or more of rain and 3 days following the rain event is a non-wet day for Bacteria TMDL WLA.

**Effect Concentration (EC)** is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g., Probit Model). EC<sub>25</sub> is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

**Effective Impervious Surface** - means that portion of the surface area that is hydrologically connected via sheet flow over a hardened conveyance or impervious surface without any intervening medium to mitigate flow volume.

**Effluent limitation** - means any restriction imposed by the Permitting Authority (PA) on quantities, discharge rates, concentrations, and/ or mass loadings of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

**Emergency** - means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. (Reference: California Public Resources Code § 21060.3. Emergency).

**End-of-Pipe** - means the end of the major outfall as defined in 40 CFR122.26 (b)(5) and 40 CFR122.26 (b)(6).

**Endpoint** - means a biological measurement used to quantify the results obtained from analytical methods such as whole effluent toxicity testing [e.g., lethal concentration (LC<sub>50</sub>); inhibition concentration (IC<sub>25</sub>); and no observed effect concentration (NOEC)]. Such endpoints are quantitative measurements of the responses of test organisms (e.g., survival, growth, mobility,

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reproduction, and weight gain or loss) in response to exposure to a serial dilution of effluent.

**Environment** - means the physical conditions, which exist within the area and which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

**Environmentally Sensitive Area (ESA)** - means an area "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments" (Reference: California Public Resources Code § 30107.5). ESAs will include Clean Water Act 303d Listed Water Bodies in all reaches that are unimproved, all California Coastal Commission's Environmentally Sensitive Habitat Areas as delineated on maps in Local Coastal Plans and Regional Water Quality Control Board's Basin Plan Rare, Threatened or Endangered Species (RARE) and Preservation of Biological Habitats (BIOL) designated waterbodies. The California Department of Fish and Game's Significant Natural Areas map will be considered for inclusion as the department field verifies the designated locations. Watershed restoration projects will be considered for inclusion as the department field verifies the designated locations.

**Erosivity Factor** - The Erosivity Factor is a criterion that to assess the risk of erosion on disturbed land. It is described in "Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE), Agricultural Handbook 703, USDA-ARS, U.S. Government Printing Office, Washington, D.C., 1997 by Renard, K.C., G.R. Foster, G.A. Weesies, D.K. McCool, and D.C. Yoder.

**Federal Clean Water Act (CWA)** - means (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92—500, as amended by Public Law 95—217, Public Law 95—576, Public Law 96—483 and Public Law 77—117, codified at 33 U.S.C. 1251 et seq.

**First Storm Event** - means the first storm event of the wet season that produces at least 0.25 inches of rain.

**Forest Land** - means land at least 10 percent stocked with live trees, or land that had this minimum tree stocking in the past and is not currently developed for nonforest use. The minimum area recognized is 1 acre.

**Groundwater Dewatering** - means the active practice of removing standing water from soil excavations using a pump(s) or other means.

**Hillside** - means property located in an area with known erosive soil conditions, where the

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development will result in grading on any slope that is 20% or greater or an area designated by the Municipality under a General Plan or ordinance as a "hillside area".

**Horse Stables** - means a property where at least one horse is stabled at least part of the year.

**Hydromodification** - means the alteration away from a natural state of stream flows or the beds or banks of rivers, streams, or creeks, including ephemeral washes, which results in hydrogeomorphic changes.

**Illegal Discharge** - means any discharge to the municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illegal discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to an NPDES permit, discharges that are identified in part 1, "Discharge Prohibitions" of this order, or discharges authorized by the Regional Water Board Executive Officer.

**Illicit Connection** - means any engineered conveyance that is connected to the storm drain system without a permit or municipal authorization. It also means any engineered conveyance through which discharges of pollutants to the separate storm drainage systems, which are not composed entirely of storm water or are not authorized by an NPDES permit, may occur.

**Illicit Discharge** - means any discharge to a municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges that are identified in part 1, "Discharge Prohibitions" of this order, or authorized by the Regional Water Board Executive Officer.

**Illicit Disposal** - means any disposal, either intentionally or unintentionally, of material(s) or waste(s) that can pollute storm water.

**Industrial/ Commercial Facility** - means any facility involved and/ or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/ or commodities, and any facility involved and/ or used in providing professional and non-professional services. This category of facilities includes, but is not limited to, any facility defined by either the Standard Industrial Classifications (SIC) or the North American Industry Classification System (NAICS). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition.

**Industrial Activities Storm Water General Permit (IASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from certain industrial activities under certain conditions.

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**Industrial Park** - means a land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry.

**Inhibition Concentration (IC)** - means a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). IC25 is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

**Inspection** - means entry and the conduct of an on-site review of a facility and its operations, at reasonable times, to determine compliance with specific municipal or other legal requirements. The steps involved in performing an inspection, include, but are not limited to:

1. Pre-inspection documentation research
2. Request for entry
3. Interview of facility personnel
4. Facility walk-through
5. Visual observation of the condition of facility premises
6. Examination and copying of records as required
7. Sample collection (if necessary or required)
8. Exit conference (to discuss preliminary evaluation)
9. Report preparation, and if appropriate, recommendations for coming into compliance

**Integrated Pest Management (IPM)** - means a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health, and environmental risks.

**Large Municipal Separate Storm Sewer System (MS4)** - means all MS4s that serve a population greater than 250,000 (1990 Census) as defined in 40 CFR122.26 (b)(4). The Regional Water Board designated Ventura County as a large MS4 in 1990, based on: (i) the U.S. Census Bureau 1990 population count of 669,016 thousand, and (ii) the interconnectivity of the MS4s in the incorporated and unincorporated areas within the County.

**Local SWPPP** - means the Local Storm Water Pollution Prevention Plan (LSWPPP) required by the local agency for a project that disturbs one or more acres of land. Shall mean a plan identifying potential pollutant sources from a construction site and describing proposed design, placement and implementation of BMPs, to effectively prevent non-storm water discharges and reduce pollutants in storm water discharges to the storm drain system, during construction activities. Also referred as a Storm Water Pollution Control Plan (SWPCP).

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**Low Impact Development (LID)** – means a design strategy with the goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable (mature) trees, flood plains, woodlands, and highly permeable soils.

**Major Municipal Separate Storm Sewer Outfall (“or major outfall”)** - means a major municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more), as defined in 40 CFR 122.26 (b)(5).

**Major Outfall** - means a major municipal separate storm sewer outfall, as defined in 40 CFR 122.26 (b)(6).

**Maximum Extent Practicable (MEP)** – The technology-based permit requirement established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based requirements, including MEP, establish a level of pollutant control that is derived from available technology or other controls. MEP requires municipal dischargers to perform at maximum level that is practicable. Compliance with MEP may be achieved by emphasizing pollution prevention and source control BMPs in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving and advancing concept, which considers technical and economic feasibility.

**Method Detection Limit (MDL)** - means the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR 136, Appendix "G" of this Order.

**Minimum Level (ML)** - means the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed. The ML value represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific

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analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique.

**Minimum Significant Difference (MSD)** - means a measure of test sensitivity that establishes the minimum difference required between a control and a test treatment in order for that difference to be considered statistically significant.

**Municipal Action Levels (MALs)** – means an action level that is derived from a statistical analysis of relevant data that is utilized to identify areas and subwatersheds that require additional or improved BMPs to reduce the discharge of pollutants to the maximum extent practicable. MALs may be revised as additional data are obtained so that MALs can continue to be used to effectively prioritize BMP implementation as the storm water program progresses. MALs are one measure of the effectiveness of the storm water program. MALs are not effluent limitations as defined by this Order, and/or as defined by Water code section 13385.1(c).

**Municipal Separate Storm Sewer System (MS4)** - means a conveyance or system of conveyances (including roads w/ drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR122.26(b)(8):

1. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the Federal Clean Water Act (CWA) that discharges into waters of the United States
2. Designed or used for collecting or conveying storm water
3. Which is not a combined sewer
4. Which is not part of a Publicly Owned Treatment Works (POTW), as defined in 40 CFR122.2

**NAICS** - means North American Industry Classification System.

**National Pollutant Discharge Elimination System (NPDES)** - means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA § 307, 402, 318, and 405.

**Natural Drainage Systems** - means unlined or unimproved (not engineered) creeks, streams, rivers or similar waterways.

**New Development** - means land disturbing activities; structural development, including construction or installation of a building or structure, creation and replacement of impervious surfaces; and land subdivision.

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**Non-Storm Water Discharge** - means any discharge to a storm drain that is not composed entirely of storm water.

**No Observed Effect Concentration (NOEC)** - means the highest tested concentration of an effluent or toxicant that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically different from the controls).

**Nuisance** - means anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.; (3) occurs during, or as a result of, the treatment or disposal of wastes.

**Nursery** - means NAICS classification to describe nursery operations and determine the type of operations covered under this Order and those covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Conditional Waiver).

1. There are 3 broad NAICS sectors available to classify nurseries:

- (1) 111xxx - Crop Production - Agriculture
- (a) 424xxx - Merchant Wholesalers, Nondurable Goods
- (b) 44xxxx - Retail Trade

(1) **Nursery (Agricultural Facilities - Crop Production)** - means Nursery and Floriculture Production under NAICS Code 11142x. These operations are subject to the **Conditional Waiver**. This industry comprises establishments primarily engaged in (1) growing nursery and floriculture products (e.g., nursery stock, shrubbery, cut flowers, flower seeds, foliage plants, sod) under cover or in open fields and/ or (2) growing short rotation woody trees with a growing and harvesting cycle of 10 years or less for pulp or tree stock (e.g., cut Christmas trees, cottonwoods).

(2) **Nursery (Commercial Facilities - Merchant Wholesalers, Nondurable Goods, and Retail Trade)** - means industries Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers under NAICS Code 424930; and Nursery, Garden Center, and Farm Supply Stores under NAICS Code 444220. This Order covers these types of operations. The industry in NAICS Code 424930 comprises establishments primarily engaged in the merchant wholesale distribution of flowers, florists' supplies, and/ or nursery stock (except plant seeds and plant bulbs). The industry in NAICS Code 444220 comprises establishments primarily engaged in retailing nursery and garden products, such as trees, shrubs, plants, seeds, bulbs, floriculture products and sod, which are predominantly grown elsewhere. These establishments may sell a limited amount of a product they grow themselves.

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**Open Channel** - means a storm drainage channel that is not a natural water course.

**Parking Lot** - means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use.

**Percent Minimum Significant Difference (PMSD)** - means the minimum significant difference divided by the control mean, expressed as a percent (see minimum significant difference).

**Permit** - means an authorization, license, or equivalent control document issued by U.S. EPA or an "approved State" to implement the requirements of 40 CFR Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (§ 122.28). Permit does not include any permit, which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

**Permittee(s)** - means co-permittee(s) and any agency named in this Order as being responsible for permit conditions within its jurisdiction, as defined by Federal Regulation. Permittees to this Order include the Ventura Water Protection District, Ventura County, and the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley and Thousand Oaks.

**Point Source** - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

**Point Zero** - means in the context of the TMDLs, the point at which water from the storm drain or creek initially mixes with water. Point zero has been selected as the compliance point for the TMDL numeric target because access to these drains is, on the whole, not restricted.

**Pollutants** - means those "pollutants" defined in CWA § 502(6) (33.U.S.C.§ 1362(6)), and incorporated by reference into California Water Code § 13373.

**Pollutants of Concern** - means constituents that have exceeded Basin Plan Objectives, and CTR- Chronic or Acute Objectives during monitoring at Mass Emission, Receiving Water, and Land Use stations.

**Potable Water Sources** - means the potable water system for the treatment, distribution, and provision of water for residential, commercial, industrial, or institutional use that meets all California safe drinking water regulatory standards for human consumption.

**Pre-Developed Condition** - means native vegetation and soils that existed at a site prior to first development. The pre-developed condition may be assumed to be an area with the typical

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vegetation, soil, and storm water runoff characteristics of open space areas in coastal Southern California unless reasonable historic information is provided that the area was atypical.

**Priority Pollutants** - means those constituents referred to in 40 CFR401.15 and listed in the U.S. EPA NPDES Application Form 2C, pp. V-3 through V-9.

**Project** - means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Reference: California Public Resources Code § 21065).

**Qualified SWPPP Developer or Qualified SWPPP Practitioner** – refer to State of California General Construction Stormwater Permit for definition.

**Rare, Threatened, or Endangered Species (RARE)** - means a beneficial use for waterbodies in the Los Angeles Region, as designated in the Basin Plan (Table 2-1), that supports habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

**Redevelopment** - means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

**Regional Administrator** - means the Regional Administrator of the Regional Office of the U.S. EPA or the authorized representative of the Regional Administrator.

**Report of Waste Discharge (ROWD)** - means an application for renewal of the NPDES Permit for Waste Discharge Requirements for Municipal Separate Storm Sewer Discharges Within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein.

**Restaurant** - means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812).

**Restoration** - means the reestablishment of predisturbance aquatic functions and related physical, chemical and biological characteristics (Reference: National Research Council. 1992. Restoration of Aquatic Ecosystems: Science, Technology and Public Policy. National Academy Press, Washington, D.C.).

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**Retail Gasoline Outlet (RGO)** - means any facility engaged in selling gasoline and lubricating oils- SIC 5541 and NAICS 447110 & 447190.

1. RGOs: 447190 Other Gasoline Stations:

This industry comprises establishments known as gasoline stations (except those with convenience stores) primarily engaged in one of the following: (1) retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) or (2) retailing these fuels in combination with activities, such as providing repair services; selling automotive oils, replacement parts, and accessories; and/ or providing food services.

2. RGOs: 447110 Gasoline Stations with Convenience Stores:

Retailing automotive fuels in combination with a convenience store or food mart.

**Routine Maintenance** -Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines\* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new\*\* lines or facilities resulting from compliance with applicable codes, standards and regulations.

\* Update existing lines includes replacing existing lines with new materials or pipes.

\*\* New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

**Screening** - means using proactive methods to identify illicit connections through a continuously narrowing process. The methods may include: performing baseline monitoring of open channels, conducting special investigations using a prioritization approach, analyzing maintenance records for catch basin and storm drain cleaning and operation, and verifying all permitted connections into the storm drains. Special investigation techniques may include: dye testing, visual inspection, smoke testing, flow monitoring, infrared, aerial and thermal photography, and remote control camera operation.

**Sidewalk Rinsing** - means only sidewalk rinsing using high pressure and low volume of water with no additives and at an average usage of 0.006 gallons per square foot of surface area to be rinsed. Any waste generated from the activity must be collected and properly and legally disposed of. It does not mean hosing of any sidewalk or street with a garden hose with a pressure nozzle.

**Site** - means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

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**Small Construction** - means any soil disturbing activities less than 5 acres.

**Source Control BMP** - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

**Southern California Stormwater Monitoring Coalition (SMC)** - means the Stormwater Monitoring Coalition, which is a collaborative research/ monitoring partnership of the Southern California Water Boards, Municipal Storm Water Agencies, and municipalities to develop the methodologies and assessment tools to more effectively understand urban storm water and non-storm water (anthropogenic) impacts to receiving waters and to conduct research/ monitoring through Subsequent Research Implementation Agreements. The first original cooperative agreement was entered into on February 8, 2001.

**Stream** - means a body of flowing water; natural water course containing water at least part of the year. In hydrology, it is generally applied to the water flowing in a natural channel as distinct from a canal (Reference: US Geological Survey).

**Strip Mall** - means a commercial development that is a shopping center where the stores are arranged in a row, with a sidewalk in front. Strip malls are typically developed as a unit and have large parking lots in front. They face major traffic arterials and tend to be self-contained with few pedestrian connections to surrounding neighborhoods. It is also called a plaza.

**Storm Event Monitoring**- means a rainfall event that produces more than 0.25 inch of precipitation and is separated from the previous storm event by at least 1 week of dry weather, for the purpose of monitoring.

**Storm Water** - means storm water runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR122.26(b)(13).

**Storm Water Discharge Associated with Industrial Activity** - means industrial discharge, as defined in 40 CFR122.26(b)(14).

**Storm Water Quality Management Program** - means the Ventura Countywide Storm Water Quality Management Plan, which includes descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time.

**Structural BMP** - means any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

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**Summer Dry Weather** - means dry weather days occurring from April 1 through October 31 of each year.

**t-Test** (formally Student's t-test) - means a statistical analysis comparing two sets of replicate observations, in the case of WET, only two test concentrations (e.g., a control and 100% effluent). The purpose of this test is to determine if the means of the two sets of observations are different [e.g., if the 100% effluent concentration differs from the control (i.e., the test pass or fails)].

**Targeted Employees** - means management and staff who perform or direct activities that directly or indirectly have an effect of storm water quality. The employees generally are employed in the following areas: department of public works, engineering, sanitation, storm water maintenance, drainage and flood control, transportation, streets and roads, parks and recreation, public landscaping and corporation yards, planning or community development, code enforcement, building and safety, harbor or port departments, airports, or general services and fleet services.

**Total Maximum Daily Load (TMDL)** - means the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background.

**Toxicity Identification Evaluation (TIE)** - means a set of procedures to identify the specific chemical(s) responsible for toxicity through a process of chemical/ physical manipulations of samples followed by toxicity tests. These procedures are performed in 3 phases (Phase I- Toxicity Characterization Procedure, Phase II- Toxicity Identification Procedure, and Phase III- Toxicity Confirmation Procedure) using aquatic organism toxicity tests.

**Toxicity Reduction Evaluation (TRE)** - means a study conducted in a step-wise process to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity.

**Toxicity Test** - means a procedure using living organisms to determine whether a chemical or an effluent is toxic. A toxicity test measures the degree of the effect of a specific chemical or effluent on exposed test organisms.

**Toxic Unit (TU)** - means a measure of toxicity in an effluent as determined by the acute toxicity units (TUa) or chronic toxicity units (TUc) measured. The larger the TU, the greater the toxicity.

**Toxic Unit - Chronic (TUc)** - means 100 times the reciprocal of the effluent concentration that causes no observable effect on the test organisms in a chronic toxicity test ( $TUc = 100/NOEC$  or  $100/EC25$ ) (see NOEC).

**Treatment** - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to,

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filtration, gravity settling, media absorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

**Treatment Control BMP** - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Urbanization** - means the process of changing of land use and land patterns from rural characteristics to urban (city-like) characteristics. These changes include (i) the replacement of pervious surfaces with impervious surfaces such as rooftops and buildings, and impervious materials such as asphalt and concrete; and (ii) the conversion of rural land to house new residents, support new businesses, and facilitate vehicular traffic flow.

**U.S. EPA Phase I Facilities** - means facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR122.26(c). These categories include:

1. Facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N)
2. Manufacturing facilities
3. Oil and gas/ mining facilities
4. Hazardous waste treatment, storage, or disposal facilities
5. Landfills, land application sites, and open dumps
6. Recycling facilities
7. Steam electric power generating facilities
8. Transportation facilities
9. Sewage of wastewater treatment works
10. Light manufacturing facilities

**Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards** - means any Permittee owned or operated facility or portion thereof that:

1. Conducts industrial activity, operates or stores equipment or materials, and provides services similar to Federal Phase I facilities;
2. Performs fleet vehicle service/ maintenance including repair, maintenance, washing, or fueling;
3. Performs maintenance and/ or repair of machinery/ equipment; or
4. Stores chemicals, raw materials, or waste materials.

**Waste Load Allocations (WLAs)** - means a portion of a receiving water's Total Maximum Daily Pollutant Load (TMDL) that is allocated to one of its existing or future point sources of pollution (Reference: 40 CFR130.2(h)).

**Water Quality Objectives** - means water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or

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federally approved surface water quality plans. Such plans are used by the Regional Water Board to regulate all discharges, including storm water discharges.

**Water Quality Standards** - means the State Water Quality Standards, which are comprised of beneficial uses, water quality objectives and the State's Antidegradation Policy.

**Waters of the State** - means any surface water or groundwater, including saline waters, within boundaries of the state (Reference: California Water Code § 13050).

**Waters of the United States or Waters of the US** - means:

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate "wetlands";
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used for industrial purposes by industries in interstate commerce
4. All impoundment's of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in the preceding paragraph (1) through (4) of this definition;
6. The territorial sea; and
7. "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in the preceding paragraph (1) through (6) of this definition.  
(Reference: 33 CFR328)

**Watercourse** - means any natural or artificial channel for passage of water, including the VCFCD jurisdictional channels included in the List of Channels within the Comprehensive Plan of the VCFCD, as approved by the Board of Supervisors of the VCFCD on October 4, 1993, and any amendments thereto.

**Watershed Management** - means approach for water resources protection. It is a strategy for integrating and managing resources, both human and fiscal that focuses on regulation of point sources, to a more regional approach that acknowledges environmental impacts from other activities.

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**Watershed Management Areas (WMA)** - means the geographically-defined watershed areas where the Regional Water Board will implement the watershed approach. These generally involve a single large watershed within which exists smaller subwatersheds but in some cases may be an area that does not meet the strict hydrologic definition of a watershed e.g., several small Ventura coastal waterbodies in the region are grouped together into one WMA.

**Wet Season** - means the calendar period beginning October 1 through April 15.

**Winter Dry Weather** - means dry weather days occurring from November 1 - March 31 of each year.

**Whole Effluent Toxicity** - means the aggregate toxic effect of an effluent measured directly by a toxicity test.

**PART 8 - STANDARD PROVISIONS**

**A. General Requirements**

- 1. The Permittee shall comply with all provisions and requirements of this Order.
- 2. Should the Permittee discover that it failed to submit any relevant facts or that it submitted incorrect information in a report it shall promptly submit the missing or correct information.
- 3. The Permittee shall report all instances of non-compliance not otherwise reported at the time monitoring reports are submitted.
- 4. This Order includes Attachment "H", the Reporting Program, which is a part of this Order and must be complied with.

**B. Regional Water Board Review**

- 1. The Regional Water Board may review any formal determinate or approval made by the Regional Water Board Executive Officer pursuant to the provisions of this Order.
  - (a) Permittee(s) or a member of the public may request such review upon petition within 30 day of the effective date of the notification of such decision to the Permittee(s) and interested parties on file at the Regional Water Board.

**C. Public Review**

- 1. All documents submitted to the Regional Water Board in compliance with the terms and conditions of this Order shall be made available to members of the public

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pursuant to the Freedom of Information Act (5 U.S.C. § 552), as amended, and the Public Records Act (California Government Code § 6250 et seq.).

- 2. All documents submitted to the Regional Water Board Executive Officer for approval shall be made available to the public for a 30-day period to allow for public comment.

**D. Duty to Comply [40 CFR122.41(a)]**

- 1. Each Permittee must comply with all of the terms, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for reissuance, or a combination thereof [40 CFR122.41(a), CAL. WATER CODE § 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].
- 2. A copy of these waste discharge specifications shall be maintained by each Permittee so as to be available during normal business hours to Permittee employees and members of the public.
- 3. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

**E. Duty to Mitigate [40 CFR122.41 (d)]**

- 1. Each Permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

**F. Inspection and Entry; Investigations; Responsibilities [40 CFR122.41(i), Cal. Water Code § 13225 and § 13267]**

- 1. The Regional Water Board, U.S. EPA, and other authorized representatives shall be allowed:
  - (a) Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;
  - (b) Access to copy any records, at reasonable times that are kept under the conditions of this Order;
  - (c) To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order;
  - (d) To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA and the CAL. WATER CODE;

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- (e) To review any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement to investigate the quality of any waters of the state within its region; and,
- (f) To require as necessary any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.

**G. Proper Operation and Maintenance [40 CFR122.41 (e), Cal. Water Code § 13263(f)]**

- 1. The Permittees shall at all times properly operate and maintain all facilities and systems of treatment (and related appurtenances) that are installed or used by the Permittees to achieve compliance with this Order. Proper operation and maintenance includes:
  - (a) adequate laboratory controls; and
  - (b) appropriate quality assurance procedures.
- 2. This provision requires the operation of backup or auxiliary facilities or similar system that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order.

**H. Signatory Requirements [40 CFR122.41(k) & 122.22]**

- 1. Except as otherwise provided in this Order, all applications, reports, or information submitted to the Regional Water Board shall be signed by the City Manager or Mayor, or authorized designee and certified as set forth in 40 CFR122.22.

**I. Reopener and Modification [40 CFR122.41(f) & 122.62]**

- 1. This Order may only be modified, revoked, or reissued, prior to the expiration date, by the Regional Water Board, in accordance with the procedural requirements of the CAL. WATER CODE and CCR Title 23 for the issuance of waste discharge requirements, 40 CFR122.62, and upon prior notice and hearing, to:
  - (a) Address changed conditions identified in the required reports or other sources deemed significant by the Regional Water Board;
  - (b) Incorporate applicable requirements or statewide water quality control plans adopted by the State Board or amendments to the Basin Plan, including TMDLs;
  - (c) Comply with any applicable requirements, guidelines, and/ or regulations issued or approved pursuant to CWA § 402(p); and/ or,
  - (d) Consider any other federal, or state laws or regulations that became effective after adoption of this Order.
- 2. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
  - (a) Violation of any term or condition contained in this Order;

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- (b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;  
or,
  - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
3. The filing of a request by the Principal Permittee or Permittees for a modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
  4. This Order may be modified to make corrections or allowances for changes in the permitted activity listed in this section, following the procedures at 40 CFR122.63, if processed as a minor modification. Minor modifications may only:
    - (a) Correct typographical errors; or
    - (b) Require more frequent monitoring or reporting by the Permittee.

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**J. Severability**

1. The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected.

**K. Duty to Provide Information [40 CFR122.41(h)]**

1. The Permittees shall furnish, within a reasonable time, any information the Regional Water Board or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order.
2. The Permittees shall also furnish to the Regional Water Board, upon request, copies of records required to be kept by this Order.

**L. Twenty-Four Hour Reporting [40 CFR122.41(l)(6)]<sup>1</sup>**

1. The Permittees shall report to the Regional Water Board any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time any Permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is

<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

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expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

- 2. The Regional Water Board may waive the required written report on a case-by-case basis.

**M. Bypass [40 CFR122.41(m)]<sup>1</sup>**

- 1. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Water Board may take enforcement action against Permittees for bypass unless:
  - (a) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);
  - (b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance;
  - (c) The Permittee submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or,
  - (d) Permittees may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The Permittee shall submit notice of an unanticipated bypass as required.

**N. Upset [40 CFR122.41(n)]<sup>2</sup>**

- 1. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

<sup>1</sup> This provision applies to the operation and maintenance of storm water controls and BMPs as provided in this Order or in the Ventura County SMP.

<sup>2</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

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- 2. A Permittee that wishes to establish the affirmative defense of an upset in an action brought for non compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (a) An upset occurred and that the Permittee can identify the cause(s) of the upset;
  - (b) The permitted facility was being properly operated by the time of the upset;
  - (c) The Permittee submitted notice of the upset as required; and,
  - (d) The Permittee complied with any remedial measures required.
- 3. No determination made before an action for noncompliance, such as during administrative review of claims that non-compliance was caused by an upset, is final administrative action subject to judicial review.
- 4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

**O. Property Rights [40 CFR122.41(g)]**

- 1. This Order does not convey any property rights of any sort, or any exclusive privilege.

**P. Enforcement**

- 1. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The CWA provides the following:
  - (a) Criminal Penalties for:
    - (1) Negligent Violations [CWA 309 (c)(1)(B)]:  
The CWA provides that any person who negligently violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$2,500 nor more than \$25,000 per day for each violation, or by imprisonment for not more than 1 year, or both.
    - (2) Knowing Violations [CWA 309 (c)(2)(B)]:  
The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
    - (3) Knowing Endangerment [CWA 309 (c)(3)(A)]:  
The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 307, 308, 318, or 405 and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

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(4) False Statement [CWA 309 (c)(4)]:

The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.

(b) Civil Penalties [[CWA 309 (d)]

The CWA provides that any person who violates a permit condition implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a civil penalty not to exceed \$27,500 per day for each violation.

2. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The Cal Water Code § 13885 provides the following:

(a) Any person who violates any of the following shall be liable civilly in accordance with this section:

- (1) Section 13375 or 13376.
- (2) Any waste discharge requirements or dredged or fillmaterial permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.
- (3) Any requirements established pursuant to Section 13383.
- (4) Any order or prohibition issued pursuant to Section 13243 or Article 1 (commencing with Section 13300) of Chapter 5, if the activity subject to the order or prohibition is subject to regulation under this chapter.
- (5) Any requirements of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the Clean Water Act, as amended.
- (6) Any requirement imposed in a pretreatment program approved pursuant to waste discharge requirements issued under Section 13377 or approved pursuant to a permit issued by the administrator.

**Q. Need to Halt or Reduce Activity not a Defense [40 CFR122.41(c)]**

1. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

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**R. Termination~~Rescission~~ of Board Order**

- 1. Regional Water Board Order No. 00-108 is hereby terminated~~rescinded~~.

**S. Board Order Expiration Date**

- 1. This Order expires on ~~XX~~May 7, 2014. The Permittees must submit a Report of Waste Discharge (ROWD) and a proposed Storm Water Quality Management Program in accordance with CCR Title 23 as application for reissuance of waste discharge requirements no later than 180 days in advance of such date.

**T. MS4 Annual Reporting Program [40 CFR122.42(c)]**

- 1. The Annual Program Reporting shall include the following information:
  - (a) *Municipal separate storm sewer systems.*  
 The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:
    - (1) The status of implementing the components of the storm water management program that are established as permit conditions;
    - (2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with 40 CFR122.26(d)(2)(iii) of this part;
    - (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR122.26(d)(2)(iv) and (d)(2)(v) of this part;
    - (4) A summary of data, including monitoring data that is accumulated throughout the reporting year;
    - (5) Annual expenditures and budget for year following each annual report;
    - (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
    - (7) Identification of water quality improvements or degradation.

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NPDES No. CAS004002

Order No. 09-xxx

Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on mm dd, 2009.

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Tracy J. Egoscue  
Executive Officer

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STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

REPORTING PROGRAM - No. CI 7388  
FOR  
ORDER 09-xxxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009



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February 24, 2009 - Tentative

E000129

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**Reporting Program Requirements**

The Principal Permittee shall submit by December 15<sup>th</sup> of each year, beginning the year of 2007, an Annual Report to the Regional Water Board Executive Officer in the form of one hard copy and three compact disks (CD) (or equivalent electronic format).

1. The Annual Report shall document the status of the General Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1-Monitoring Report; and
  - (b) The requirements described under Part 2- Program Report.
2. Plans shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a compact disk (CD), submit 1 hard copy and 3 CD copies.
3. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.
4. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.

**PART 1 - MONITORING REPORT****A. The following shall be included in the Annual Report:**

1. Mass Emissions
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the mass emission station annual monitoring results highlighting exceedences (POC) with corresponding sampling.
2. Major Outfalls
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the major outfalls station annual monitoring results highlighting exceedences (POC) with corresponding sampling dates.
  - (d) Outfall(s) name and ID number (if applicable).

3. Aquatic Toxicity Monitoring
    - (a) An analysis of the mass emission station and major outfall station samples for aquatic toxicity.
    - (b) A report on the development, implementation, and results for each TRE Corrective Action Plan in the Annual Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
    - (c) Report on the development, implementation, and results for each TRE Corrective Action Plan, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
    - (d) All constituents (POCs) that caused toxicity or exceeded any applicable water quality objectives at the associated mass emission and/ or major outfall station the previous year shall be listed.
    - (e) A summary of the mass emission station and major outfall station annual monitoring results with corresponding sampling dates and Tox output.
  
  4. TMDL Compliance Monitoring
    - (a) A summary of the annual monitoring results for each TMDL.
      - (1) Corresponding sampling dates and Tox output (if applicable).
  
  5. Bioassessment
    - (a) Assess the effects of MS4 discharges on the biological integrity of the waterbody.
    - (b) Permittees shall conduct bioassessment, [using Southern California Regional Bioassessment protocol], at one fixed site in each of the watersheds below on an annual basis:
      - (1) Ventura River
      - (2) Santa Clara River
      - (3) Calleguas Creek
- B. The following shall be submitted to the Regional Water Board Executive Officer:**
1. Aquatic Toxicity Monitoring
    - (a) A TRE Corrective Action Plan within 30 days after the source of toxicity and appropriate BMPs are identified.
  
  2. Pyrethroid Insecticides Study
    - (a) Pyrethroid insecticides study final report, no later than 8 months after completion of the study.
  
  3. Hydromodification Control Study
    - (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
  
  4. Non-Compliance

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- (a) When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted:
  - (1) Statement of situation.
  - (2) Explanation of circumstance(s) with documentation.
  - (3) Statement of corrective action for the future.

5. Low Impact Development

- (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.

6. Volunteer Monitoring Program

- (a) Results as obtained by volunteer monitoring programs in the Ventura watersheds including, but not limited to, the following:
  - (1) Ventura River - (Ventura Stream Team)
  - (2) Santa Clara River - (Santa Clara River Stream Team)
  - (3) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program)
  - (4) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program)

**C. Submitted electronically to the Regional Water Board, the following shall be:**

1. Mass Emissions

- (a) Monitoring results no later than 45 days from sample collection date.

2. Major Outfalls

- (a) Monitoring results no later than 45 days from sample collection date.

3. Aquatic Toxicity Monitoring

- (a) Monitoring results no later than 45 days from sample collection date.

3. TMDL Compliance Monitoring

- (a) Monitoring results no later than 45 days from sample collection date.

4. Non-Compliance

- (a) When the Order 's monitoring requirements can not be performed due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted to the Regional Water Board Executive Officer:
  - (1) Statement of situation.
  - (2) Explanation of circumstance(s) with documentation.
  - (3) Statement of corrective action for the future.

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5. Data transmitted shall be in the SMCs Standardized Data Transfer Formats (SDTFs) and all updates are to be adhered to.<sup>1</sup>
  - (a) Regional Water Board's Storm Water E-mail Address:  
[MS4stormwaterrb4@waterboards.ca.gov](mailto:MS4stormwaterrb4@waterboards.ca.gov)
6. Beach Water Monitoring
  - (a) Assess bacteriological levels at various beaches in Ventura County, ensuring compliance with beach water quality standards.
  - (b) Reports of beach monitoring shall be submitted to the Regional Board electronically within one business day of completion of analysis..

## PART 2 - PROGRAM REPORT

On an annual basis the Permittees shall complete an Annual Monitoring Program Report that responds adequately to the evaluative questions below which correspond to the Order.

### DISCHARGE PROHIBITIONS

- (a) Have you effectively prohibited all non-storm discharges into the MS4 and watercourses?
- (b) If there are any exceptions in the municipal code, list the exceptions to the municipal code. In other words, which non-storm water discharges does your municipality allow? Under what conditions are they allowed (with BMPs)? List which BMPs are required prior to discharge.
- (c) Do you have a procedure to assure that any project within your jurisdiction which may undertake ground water dewatering obtain a permit from the Regional Water Board?
- (d) How many projects are permitted to dewater in your jurisdiction?
- (e) How many are permanent dewatering to continue after construction is completed?
- (f) Do you have a permitting/ permission system for the discharge of dechlorinated/ debrominated swimming pool discharges? Explain it.
- (g) If yes, how many swimming pools are drained with the agency's permit/ permission?
- (h) How do you ensure that discharge limits for chlorine, bromine, etc are not exceeded?
- (i) Do you allow the discharge of "salt water" swimming pool discharges? If yes
- (j) Do you have a permitting/ permission system for the discharge of "salt water" swimming pool discharges? Explain it.

<sup>1</sup> The SMC developed a SDTFs for use by member agencies for electronic recording and transfer of storm water monitoring data. Southern California Coastal Water Research Project, Technical Report 421 (August, 2004).

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**RECEIVING WATER LIMITATIONS**

1. At any time, has the discharge from the MS4 caused or contributed to the violation of water quality objectives or water quality standards?
2. At any time, has the discharge from the MS4 for which a Permittee is at least partially responsible, caused or contributed to a condition of nuisance?
3. At any time, has the discharge of pollutant(s) from the MS4 exceeded the MS4 Waste Load Allocation(s) for Wet Weather Discharges?
4. For pollutant(s) which continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, what has the Permittee implemented to eliminate future water quality impairments?

**PART 3 - STORM WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION**

**A. General Requirements**

**B. Legal Authority**

1. Does your municipal agency possess all the necessary legal authority to implement and enforce each requirement of this Order?
2. If the answer is no, explain why not.
3. By what date certain will the municipal agency have all the necessary legal authority?
4. Attach a copy of the new or updated statement by its legal counsel that the Permittee has obtained all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.
5. After submitting the Statement from your legal counsel, was your city's municipal code (or other legal authority) changed (Any section that applies to or affects storm water permitting or requirements)? On what date(s) was it changed? Provide the changes.

**C. Fiscal Resources**

1. Provide a detailed Annual Budget Summary of the Permittee's allocation of funds expended to implement the activities required to comply with the conditions of this Order.
2. Indicate the source(s) of funding (whether general funds; and/ or Benefit Assessment Program funds; plan review fees; permit fees; industrial/ commercial user fee; revenue bonds; grants; or other funding mechanism. Each Permittee's Annual Budget Summary shall separately include:
3. Annual Budget Summary of expenditures applied to the storm water management program and also identify the storm water budget for the following year, using

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estimated percentages and written explanations where necessary, for the specific categories noted below:

- (a) Program Overall Management Activities;
  - (1) Administrative costs
- (b) Program Required Activities Implementation;
 

Provide an estimated percent breakdown of expenditures for the categories below:

  - (1) Illicit connection/ illicit discharge
  - (2) Development planning
  - (3) Development construction
  - (4) Construction inspection activities
  - (5) Industrial/ Commercial inspection activities
  - (6) Public Agency Activities
  - (7) Maintenance of Structural BMPs and Treatment Control BMPs
    - (A) Municipal Street Sweeping for Commercial/ Industrial landuse only;
    - (B) Catch basin clean-outs (including dumping fees);
    - (C) Storm drain clean-outs (including dumping fees); and
    - (D) Other costs (describe).
  - (8) Public Information and Participation;
  - (9) Monitoring Program; and
  - (10) Miscellaneous Expenditures (describe).

#### **D. Designation and Responsibilities of the Principal Permittee**

The Principal Permittee shall submit within the Annual Program Report information on the implementation of the following:

1. Coordination and facilitation of activities to comply with the requirements of this Order;
2. Evaluation, assessment, and summary of the results of the monitoring program and the effectiveness of the implementation of BMPs and any recommended change.

#### **E. Responsibilities of the Permittees**

Each Permittee shall include within the Annual Program Report information on the implementation of the following:

1. A statement under penalty of perjury that the Permittee is or is not in compliance with the requirements of this Order and any subsequent modifications thereto.
2. A summary of how coordination occurs among its internal departments and agencies to ensure the implementation of the requirements of this Order.
3. Description of the intra-agency coordination by Agency departments (e.g. Community Development (Planning), Public Works, Sanitation, Engineering, Fire Department, Building and Safety, Code Enforcement, Public Health, Water and/ or Power Department, etc.) to ensure the successful implementation of the provisions of this Order.

4. In addition to the Budget Summary, identify any supplemental dedicated budgets for the storm water categories listed.
5. Identify the staff which participated at all committee or subcommittee meetings and when.

**PART 4 - SPECIAL PROVISIONS**

**A. General Requirements**

1. Best Management Practice Substitution
  - (a) Did the Regional Water Board Executive Officer approve any site-specific BMP substitution for your agency?
  - (b) If so, describe implementation of that/ those BMP(s).

**B. Watershed Initiative Participation**

1. Describe your participation (Principal Permittee) and present data results in the following:
  - (a) Southern California Stormwater Monitoring Coalitions' (SMC) Regional Monitoring program for the Southern California Regional Bioassessment.

**C. Public Information and Participation Program (PIPP)**

1. Describe the Permittee successes in:
  - Measurably increasing the knowledge of the target audiences regarding the MS4, the impacts of storm water pollution on receiving waters and potential solutions to mitigate the problems caused;
  - Measurably changing the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions;
  - Involving and engaging communities in Ventura County to participate in mitigating the impacts of storm water pollution.
2. Residential Program
  - (a) Did the Permittee label each storm drain inlet that they own with a legible "no dumping" message.
  - (b) How many inlets were labeled this year?
  - (c) How many inlets were labeled cumulatively?
  - (d) Did the Permittee install signs with prohibitive language discouraging illegal dumping at designated public access points to creeks, other relevant water bodies, and channels?
  - (e) How many?

Public Reporting

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- (a) Identify the staff person(s) who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/ dumping, faded or lack of catch basin stencils, and general storm water management information.
- (b) Did the Permittee update this information by July 1 of this year?
- (c) The Principal Permittee shall compile a list of the general public reporting contacts from all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request.

#### Outreach and Education

- (1) Provide documentation to show that the Permittees implemented the following activities:
  - Storm Water pollution prevention advertising campaign.
  - Storm Water pollution prevention public service announcements.
  - Distribution of storm water pollution prevention public education materials to auto parts stores, home improvement centers and pet shops/ feed stores in regards to information on the proper storage and disposal of household waste materials, construction waste materials and vehicle waste fluids, the proper use of fertilizers and pesticides and the proper disposal of animal wastes.
  - Organization of watershed Citizen Advisory Groups/ Committees to develop/ implement effective methods to educate the public about storm water pollution.
  - Organization of events for residents and population subgroups.
  - Maintenance of the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), including educational materials.
- (2) Provide documentation to show that the Principal Permittee implemented the strategy to educate ethnic communities through culturally acceptable and effective methods.
- (3) Did each Permittee implement outreach efforts to residents and school children related to the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices?
- (4) Did the Permittees make demonstrable positive effects on the general public related to storm water quality?
- (5) On 4 above, explain how so.
- (6) Did the Principal Permittee, in cooperation with the Permittees, provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution?
- (8) Provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee and changes to contact information no later than 30 days after a change occurs.

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- (9) Provide the assessment of the strategy to measure the effectiveness of in-school educational programs.

Businesses Program

- (a) Corporate Outreach  
(b) Provide a progress update on the Corporate Outreach program.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in storm water runoff. Except as specified in other sections of this Order, pollutant reduction and control measures may be used alone or in combination, and may include Structural Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollution generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program Report shall include requirements to: (1) track, (2) inspect, and (3) ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water runoff.

1. Inventory of Critical Sources

- (a) Describe how the critical sources are inventoried. (whether via a watershed-based inventory or database or GIS. Provide a sample.  
(b) Each Permittee shall include the following minimum fields of information for each critical sources industrial and commercial facility.  
(1) Name of facility and owner/ operator.  
(2) Address of facility.  
(3) Coverage under the ISWGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.  
(4) A narrative description including SIC (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.  
(c) Did each Permittee update its inventory of critical sources annually?  
(d) Critical Source Inventory Database

Did you (individually or jointly) update the Database for Critical Sources Inventory?	Yes <input type="checkbox"/>
	No <input type="checkbox"/>

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Comments/ Explanation/ Conclusion:

2. Inspection Program

(a) The Permittee shall verify the following for each inspection:

- (1) The facility has a current Waste Discharge Identification (WDID) number or a current No Exposure Certification for discharging storm water associated with industrial activity?
- (2) A Storm Water Pollution Prevention Plan available on-site?
- (3) The facility is effectively implementing BMPs in compliance with County and municipal ordinances including the source control BMPs outlined in Part 4.D. of this Order
- (4) The facility needs to implement additional treatment control BMPs where the storm water from the MS4 discharges to a CWA §303(d) listed water body?

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Provide the reporting data as suggested in the following table.

Category	Initial Number of Facilities at the start of cycle proposed for inspection by categories (after the initial year, the updated number based on the new data)	Number of facilities inspected in the current reporting year	% Completed at the time of this report for present cycle (from the initial value, and from the updated value after first cycle)	Total number since permit adoption
Landfills				
TSDF				
Comments/ Explanation/ Conclusion:				

- Did each Permittee perform an initial inspection at all facilities in the categories listed no later than (two years after the adoption of the Order)?
- All facilities determined as having exposure of industrial activities to storm water are subject to a second compliance inspection. Were all inspections completed?
- Was there a minimum interval of six months between the first and the second compliance inspection per site as required?

Tentative Ventura County Municipal Separate Storm Sewer System Permit  
Attachment H - Reporting Program No. CI 7388

T E N T A T I V E

BMPs Implementation

Provide the reporting data as suggested in the following table.

Category	Number of facilities inspected by category this reporting year	Number of facilities identified as adequately implementing BMPs as specified in this reporting year	Percent adequately implementing out of total in this reporting year	Number of facilities required to implement or upgrade in this reporting year	Number of facilities inspected by category in this reporting cycle	Number of facilities identified as adequately implementing BMPs as specified in this reporting cycle	Percent adequately implementing in this reporting cycle	Number of facilities required to implement or upgrade in this reporting cycle	Total Number during this permit adequately implementing	Total Number during this permit required to implement or upgrade
Landfills										
etc...										

Comments/ Explanation/ Conclusion:

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Enforcement Activities

Provide the reporting data as suggested in the following tables.

Enforcement Actions by categories (e.g. Warning letter, NOV, referral to D.A., etc.)	Number of facilities issued enforcement actions in the current reporting year	Number of facilities issued enforcement actions in the current reporting cycle	Number of facilities (re)inspected due to enforcement actions in current reporting year	Number of facilities (re)inspected to enforcement actions in current reporting cycle	Number of facilities brought into compliance in the current reporting year	Number of facilities brought into compliance in current reporting cycle	Total number of enforcement actions since permit adoption (by category)
NOVs							
Etc...							

Facilities by category	Number of Warning letters	Number of NOVs	Number of Referrals	Number of Other(Explain)
Landfill				
Etc...				
Comments/ Explanation/ Conclusion:				

Nurseries and nursery centers

- (a) At nurseries subject to the agricultural waiver issued by the Regional Water Board, provide a spreadsheet with the following information:
  - How many operators have enrolled under the waiver?
  - What is their identification number?
  - How many nonfilers did you notify to apply under the agricultural waiver?
- (b) Did you submit electronically semiannually to the Regional Water Board a list with the names of facilities notified to apply for the waiver?

Ensuring Compliance of Critical Sources

- (a) On how many sites did you determine that a BMP is infeasible, and require implementation of other BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges?
- (b) For critical sources that discharge to ESAs or that are tributary to CWA § 303(d) impaired water bodies, does the Permittee require operators to implement additional controls to reduce pollutants in storm water runoff that are causing or contributing to exceedences of Water Quality Standards?

Investigation of Complaints Regarding Facilities – Transmitted by the RB Staff

- (a) How many investigations were conducted as a result of USEPA or Regional Water Board staff referrals of violators to the Permittee?
- (b) Was the investigation initiated within one business day of being contacted?
- (c) What were the results of each investigation?

**E. Planning and Land Development Program**

1. Low Impact Development

- (a) Did all new development and redevelopment projects integrate Low Impact Development (LID) principles into project design?
- (b) How many did?
- (c) How many did not?
- (d) If not, Why not?

Numeric Hydromodification Mitigation Criteria

1. Hydrologic (Flow/ Volume/ Duration) Control

- (a) Did the Permittees require all new developments and redevelopment projects to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems?
- (b) How many did?
- (c) How many did not?
- (d) Why not?

2. Post Construction Storm Water BMP Program

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- (a) For each project, did each Permittee require that during the construction of a single-family hillside home, actions be taken to:
    - (1) Conserve natural areas?
    - (2) Protect slopes and channels?
    - (3) Provide storm drain system stenciling and signage?
    - (4) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability? and
    - (5) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability?
  - (b) Did each Permittee require that all development projects equal to 1 acre or greater be subject to conditioning and approval of post-construction BMPs as approved by the Regional Water Board in Board Resolution No. R 00-02?
  - (c) Did each Permittee require that the following development projects be subject to conditioning and approval of post-construction BMPs?
    - (1) Retail gasoline outlets 5,000 square feet or more of surface area; How many sites?
    - (2) Restaurants (SIC 5812) 5,000 square feet or more of surface area; How many sites?
    - (3) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces; How many sites?
    - (4) Automotive service facilities (SIC 5013,5014,5541,7532-7534 and 7536-7539) [5,000 square feet or more of surface area]; How many sites? and
    - (5) Redevelopment projects in subject categories that meet Redevelopment thresholds. How many sites?
  - (d) Did each Permittee require that post construction BMPs be subject to conditioning and approval for development projects located in or directly adjacent to or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - (1) Discharge storm water and urban runoff that is likely to impact a sensitive biological species or habitat.
    - (2) Create 2,500 square feet or more of impervious surface area.
3. Numeric Water Quality Design Criteria

**Projects disturbing land areas less than 50 acres**

- (a) How many did the Permittee require that post-construction Treatment Control BMPs incorporate, at a minimum, a volumetric and/ or hydrologic (flow based) treatment control design standard, as identified below to mitigate (infiltrate, filter or treat) storm water runoff as specified below?
- (b) How many sites were exempted from the requirement?
- (c) Why were they exempted?

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**Projects disturbing land area of 50 acres or greater**

For sites 50 acres or greater how many did the Permittee require that post-construction Treatment Control BMPs be,

- (a) Designed using an appropriate public domain hydrodynamic model (such as Storm Water Management Model (SWMM) 5 or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF); and incorporate
- (b) Rainfall intensity based on hourly rainfall records;
- (c) An adjustment factor for within hour rainfall variability; and
- (d) Hydraulics of BMP Performance.
- (e) How many projects did this apply to?
- (f) Were there any sites that were exempted from the requirement?
- (g) How many sites were exempted?
- (h) Why were they exempted?

## 4. Applicability of Numerical Criteria

Did the Permittee require all projects equal to 1 acre or greater and the following additional projects to design and implement post-construction treatment controls to mitigate storm water pollution for the following?:

- (a) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area].
- (b) Retail gasoline outlets [5,000 square feet or more of impervious surface area and with projected Average Daily Traffic (ADT) of 100 or more vehicles].  
Subsurface Treatment Control BMPs which may endanger public safety (i.e., create an explosive environment) are considered not appropriate.
- (c) Restaurants (SIC 5812) [5,000 square feet or more of surface area].
- (d) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces.
- (e) Projects located in, adjacent to or discharging directly to an ESA that meet threshold conditions identified above in 2(d).
- (f) Redevelopment projects in subject categories that meet Redevelopment thresholds.
- (g) How many projects did this apply to?
- (h) Were there any sites that were exempted from the requirement?
- (i) How many sites were exempted?
- (j) Why were they exempted?

## 5. Site Specific Mitigation

- (a) List how many sites did each Permittee require the implementation of a site-specific plan to mitigate post-development storm water for new development and redevelopment not identified in Section XX but which may potentially have

adverse impacts on post-development storm water quality, with one or more of the following project characteristics:

- (1) Vehicle or equipment fueling areas. How many?
- (2) Vehicle or equipment maintenance areas, including washing
- (3) and repair. How many?
- (4) Commercial or industrial waste handling or storage. How many?
- (5) Outdoor handling or storage of hazardous materials. How many?
- (6) Outdoor manufacturing areas. How many?
- (7) Outdoor food handling or processing. How many?
- (8) Outdoor animal care, confinement, or slaughter. How many?
- (9) Outdoor horticulture activities. How many?
- (b) Were there any sites that were exempted from the requirement?
- (c) How many sites were exempted?
- (d) Why were they exempted?

6. Redevelopment Projects

- (a) Did the Permittees apply the post construction BMP requirements, or site specific requirements including post-construction storm water mitigation to all projects that undergo significant Redevelopment in their respective categories?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?

7. Maintenance Agreement and Transfer

- (a) How many developments subject to post construction BMP requirements and site specific plan requirements actually provided verification of maintenance provisions for Structural and Treatment Control BMPs, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits?
- (b) How many of each verification were received?
- (c) The developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred?
- (d) A signed statement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance and that it meets all local agency design standards?
- (e) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (f) Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning maintenance responsibilities to the Home Owners Association for maintenance of the Structural and Treatment Control BMPs?

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- (g) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (h) Another type of legally enforceable agreement that assigns responsibility for the maintenance of post-construction Structural or Treatment Control BMPs?
8. Development Planning Coordination and Enforcement
- (a) Did you inspect each new development and redevelopment project for post construction controls prior to approving and signing off for occupancy?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
9. Regional Storm Water Mitigation Program
- (a) Have you applied to the Regional Water Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements?
10. Inspection and Tracking System for Post Construction Treatment BMPs
- (a) Did you implement the required Geographic Information System (GIS) or other electronic system for tracking projects conditioned for post construction treatment control BMPs?
- (b) Does include the following information? (Answer each separately)
- (1) Municipal Project ID?
- (2) State WDID No.?
- (3) Project Acreage?
- (4) BMP Type and Description?
- (5) BMP Location (GPS coordinates)?
- (6) Date of Acceptance?
- (7) Date of O&M Certification?
- (8) Maintenance Records
- (9) Inspection Date and Summary?
- (10) Corrective Action?
- (11) Replacement or Repair Dates?
- (c) Did you inspect all facilities to verify proper maintenance and operation of Treatment BMPs previously approved?
- (d) Did you accomplish the following?
- (e) BMP acceptance inspection to ensure proper installation?
- (1) Inspection once every two years of high priority post-construction BMPs to ensure treatment effectiveness, hydraulic function, and vector risk minimization?

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11. Developer Technical Guidance and Information

- (a) List dates as to when the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures was last updated to include the following:
- (1) Hydrologic (Peak Flow) Control criteria for volume control described herein and the interim criteria based on hydrograph matching?
  - (2) Expected BMP pollutant removal performance including consistent effluent quality and removal efficiency ranges (International BMP Database, technical reports and the scientific literature?
  - (3) Improved Correlation of BMPs with storm water POC?
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs?
  - (5) BMP Maintenance and Cost considerations?
  - (6) Criteria to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits?

12. Project Review and Inter Department Coordination

- (a) Did you ensure that a detailed BMP review was performed including BMP sizing calculations, BMP pollutant removal appropriateness, for each plan submitted with a signed certification?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
- (f) Did you ensure that a clear structure for communication and delineated authority are established between and among municipal departments which have jurisdiction over project review, plan approval, project construction, and site maintenance?
- (g) Explain how?

13. California Environmental Quality Act (CEQA) Document Update

Did you incorporate into the CEQA process procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents? (Answer each below separately.)

- (a) Potential impact of project construction on storm water runoff?
- (b) Potential impact of project post-construction activity on Storm Water runoff?
- (c) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?
- (d) Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit?

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- (e) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies?
- (f) Potential for significant changes in the flow velocity or volume of Storm Water runoff that can cause environmental harm?
- (g) Potential for significant increases in erosion of the project site or surrounding areas?

15. General Plan Update

- (a) Was your General Plan amended, revised or updated to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended?  
(Answer each separately)
  - (1) Land Use?
  - (2) Housing?
  - (3) Conservation?
  - (4) Open Space?
- (b) Did you provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or the General Plan was noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq*?
- (c) When?

**F. Development Construction Program**

- 1. Did you implement a program to control runoff from construction activity at all construction sites within your jurisdiction to ensure that the following requirements are effectively implemented? (Answer each separately)
  - (a) For construction projects within or adjacent to an environmentally sensitive area (ESAs), did you prohibit grading between October 1 and April 15?
  - (b) For construction projects, which include grading on slopes greater than 5:1, that no grading shall occur between October 1 and April 15?
  - (c) All construction projects, which directly discharge into a sedimentation/ siltation impaired water body and is listed on the CWA §303 (d) list. No grading shall be occurring between October 1 and April 15?
  - (d) If grading operations were not completed before the rainy season began, was grading halted and erosion control measures put in place to minimize erosion until grading resumes after April 15?
- 2. Did you require construction site operators to seek separate coverage from the Regional Water Board wherever ground water dewatering may be necessary, is anticipated, or likely?
  - (a) Small Construction Sites

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- (1) For each construction site did you require and inspect to ensure that at each construction site, the minimum set of BMPs were implemented to minimize erosion and sediment loss, and prevent pollution from construction waste?
3. For each construction site 1 acre and greater:
- (a) Did you review and approve a Local Storm Water Pollution Prevention Plan (Local SWPPP), for approval prior to issuance of a grading permit for construction projects?
  - (b) Did you inspect all construction sites for storm water quality requirements during routine inspections a minimum of once during the wet season?
  - (c) Was the Local SWPPP reviewed for compliance with local codes, ordinances, and permits?
  - (d) For inspected sites that have not adequately implemented their Local SWPPP, a follow-up inspection to ensure compliance shall take place within 2 weeks?
  - (e) If compliance had not been attained, did the Permittee take additional actions to achieve compliance (as specified in municipal codes)?
  - (f) How many?
  - (g) For small construction sites one acre and greater (or part of a larger plan of development or sale), did you require, prior to issuing any grading permit, demolition permit, building permit, or construction permit [or any other municipal authorization to move soil and/ or construct or destruct that involves soil disturbance], for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for coverage under the CASGP and a certification that a SWPPP has been prepared by the project developer?
  - (h) Does your agency accept a Local SWPPP as a substitute for the State SWPPP?
  - (i) Is the Local SWPPP at least as inclusive in controls and BMPs as the State SWPPP?
  - (j) Do you require proof of an NOI and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going?
  - (k) What system do you use to track grading permits issued by your agency?
4. Linear Construction
- (a) Do you require for any linear construction project or projects (cumulatively) that will cause one acre or more of soil disturbance but not more than 5 acres that coverage be obtained under the Small Linear Underground/ Overhead Construction Projects General Permit?
  - (b) Do you require proof of a Waste Discharger Identification Number (WDID) for filing a Notice of Intent (NOI) for coverage under the and a certification that a SWPPP has been prepared by the project developer, prior to issuing a grading permit, demolition permit building permit, or construction permit (or other authorization to move soil and/ or construct or destruct that involves soil disturbance)?

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5. CASGP Violation Referrals
  - (a) Did you make any referral of violations of the new development and redevelopment post construction requirements and municipal storm water ordinances to the Regional Water Board?
  - (b) Did you make any referral for suspected violations of the CASGP or Linear Permit coverage requirements

#### G. Public Agency Activities Program

1. Sewage System Maintenance, Overflow, and Spill Prevention
  - (a) Did you implement a response plan for overflows of the sanitary sewer system within their respective jurisdiction that clearly identifies agencies responsible and telephone numbers and email for any contact?
  - (b) How many overflows did you have?
  - (c) How many did you respond to?
  - (d) Do you own and/ or operate a sanitary sewer system?
  - (e) If so, did you also Identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4?
  - (f) Did you implement procedures and maintenance schedules to prevent sewage spills or leaks from sewage facilities from entering the MS4?
  - (g) If you are a Permittee with septic systems in your jurisdiction, how many do you have?
  - (h) Did you implement the following for flows of septic leachate to surface waters within their respective jurisdiction, which shall consist at a minimum of the following:
    - (1) Investigation of any complaints received?
    - (2) Immediately respond to overflows for containment, upon notification?
    - (3) Notification to appropriate agencies and public health agencies when a septic system fails and flows to the MS4?
2. Public Construction Activities Management
  - (a) Did you comply with all the Development Planning Program requirements in at public construction projects?
  - (b) Did you comply with all the Development Construction Program requirements at Permittee owned or operated construction sites?
  - (c) Did you obtain coverage under the CSWGP for all construction activities for (non linear) capital improvement project(s), or contracts, that individually or cumulatively equals or surpass the 1 acre land disturbance threshold?
  - (d) Did you obtain coverage under the Statewide General Permit for Storm water Discharges Associated with Construction Activity from Small Linear Underground/ Overhead Projects (Small LUP General Permit) for Small Linear

Underground/ Overhead Projects disturbing at least 1 acre, but less than 5 acres  
(including trenching and staging areas)?

3. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management.

- (a) Did you implement the required BMPs for each maintenance yard and activity specified in the tables Permittee shall implement the following BMPs at all Permittee owned, leased facilities including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the tables below. Answer each separately.

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- (b) Are all of your existing facilities that are not plumbed to the sanitary sewer with vehicle and equipment washing areas:
- (1) Self-contained? How many?
  - (2) Equipped with a clarifier? How many?
  - (3) Equipped with an alternative pre-treatment device? How many?
  - (4) To be plumbed to the sanitary sewer? How many? When?
    - (A) Are all new facilities, or during redevelopment of existing facilities (including fire stations), all vehicle and equipment wash areas to be plumbed to the sanitary sewer and be equipped with a pre-treatment device in accordance with requirements of the sewer agency? If not state why.

#### 4. Landscape and Recreational Facilities Management

##### Control Program for Registered Pesticides

- (a) Did you adopt and implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and the use of integrated pest management (IPM) techniques in your operations and on municipal property?
- (b) What was your previous year's pesticide use? Answer in gallons or pounds for each type used.
- (c) Using estimated projections, what is your expected use this coming fiscal year? Answer in gallons or pounds for each type used.
- (d) Do you have commitments to reduce or phase-out, and ultimately eliminate use of pesticides that cause impairment of surface waters? State for each, by when.
- (e) Describe your Integrated Pesticide Management (IPM) program.
- (f) Attach the program elements.
- (g) Did you comply with the following requirements?:
  - (1) Use a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers?
  - (2) Ensure no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?
  - (3) Ensure that no banned or unregistered pesticides are stored or applied?
  - (4) Ensure that all staff applying pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator?
  - (5) Implement procedures to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs?
  - (6) Store fertilizers and pesticides indoors or under cover on paved surfaces or use secondary containment?
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills?
    - (B) Regularly inspect storage areas to ensure no environmental harm?

5. Storm Drain Operation and Management

Catch Basin Cleaning

- (a) How many catch basins did you designate as one of the following:
  - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash and/ or debris?
  - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash and/ or debris?
  - Priority C: Catch basins that are designated as generating low volumes of trash and/ or debris?
- (b) Did you clean all catch basins according to the following schedule?:
  - Priority A: A minimum of three times during the wet season and once during the dry season every year? How many?
  - Priority B: A minimum of once during the wet season and once during the dry season every year? How many?
  - Priority C: A minimum of once per year? How many?
- (c) Did you ensure that any catch basin that is at least 25% full of trash and/ or debris was cleaned out? How many?

For each type of catch basin (A, B, or C) state how much trash and debris was collected and state the units (wet tons, dry pounds, etc...)

- (1) Did you require for any special event that they arrange for temporary screens to be placed on catch basins or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain event? How many events did this apply to?
- (2) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Trash Controls

- (a) Did you install trash receptacles at transit stops as required?
- (b) How many?
- (c) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (d) Did you install trash excluders, or similar devices upon catch basins to prevent the discharge of trash to the storm drain system?
- (e) How many?
- (f) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Catch Basin Labels

- (a) Did you inspect the legibility of the catch basin label by all inlets?
- (b) How many?
- (c) Were catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within 180 days of inspection?
- (d) How many were recorded?
- (e) How many were relabeled?

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Storm Drain Maintenance

- (a) Did you inspect all Permittee-owned open channels and other drainage structures for debris and identify and prioritize problem areas of illicit discharge for regular inspection?
- (b) Do your maintenance activities assure that appropriate storm water BMPs are being utilized to protect water quality?
- (c) Did you remove trash and debris from open channel storm drains before the storm season?
- (d) Did you minimize the discharge of contaminants during MS4 maintenance and clean outs?
- (e) How?
- (f) Did you properly dispose of material removed?
- (g) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (h) Have you obtained coverage under the CASGP for Long-term maintenance programs for flood control channels (such as vegetation removal) if one or more acres of soil are disturbed by grading, clearing or excavation activities for an individual project or as part of several projects part of the Permittee's long-term maintenance plan?
- (i) How many projects?
- (j) Which projects?
- (k) Were all municipally owned treatment control BMPs as maintained as necessary to ensure optimal pollutant reduction?
- (l) Was any pooled water shall be discharged to the sanitary sewer system?
- (m) Was any of the pooled water treated to remove pollutants and discharged to the storm drain?
- (n) Was every discharge monitored to ensure compliance?
6. Streets and Roads Maintenance
- (a) Did you conduct street sweeping of curbed streets in commercial areas to control trash and debris at least 2 times per month?
- (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (c) Did you obtain coverage under the CASGP for long-term maintenance programs for roadside maintenance (such as: vegetation removal ) if 1 or more acres of soil are disturbed including: grading, clearing or excavation activities that disturb 1 or more acres of land either for an individual project or as part of a long-term maintenance plan?
7. Parking Facilities Management
- (a) Were all Permittee-owned parking lots exposed to storm water cleaned to be kept clear of debris and excessive oil buildup and cleaned no less that 2 times per month?
- (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)

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- 8. Public Industrial Activities Management
  - (a) Did you obtain separate coverage under the IASGP for any municipal activity subject to it for the discharge of storm water associated with industrial activity?
  - (b) For how many facilities?
  - (c) Which facilities?
  
- 9. Municipal Drinking Water System Discharges
  - (a) From your municipal drinking system did you maintain the system by flushing hydrants or other fixtures?
  - (b) How many gallons total were discharged in the year?
  - (c) If the discharges in an annual period were less than 100,000 gallons for the entire city did you implement a BMP or suite of BMPs to ensure that the chlorine level of the discharge is 0.1mg/L or less?
  - (d) Did you sample or take a test every time to ensure dechlorination of the water to 0.1mg/L or less?
  - (e) Did you ensure that the BMP or suite of BMPs were implemented so that no erosion is caused by the discharge of the potable water?
  - (f) What BMPs were implemented?
  
- 10. Emergency Procedures
  - (a) Were there any emergencies that caused the Permittee to invoke this section? Explain the situation.
  
- 11. Municipal Employee (and municipal contractor) Training
  - (a) Did you train all of your employees in targeted positions regarding the requirements of the overall storm water management program?
  - (b) Did you promote a clear understanding of the potential for activities to pollute storm water?
  - (c) Did they learn to identify opportunities to require, implement, and maintain appropriate BMPs in their work?
  - (d) Did they learn the appropriate ways of identification, investigation, termination, cleanup, and reporting of illicit connections and discharges?
  - (e) Will they ensure that the requirements of this Order are met?
  - (f) For those employees or contractors who use or have the potential to use pesticides (whether or not they normally apply pesticides as part of their work), which includes pesticides available over the counter, did you address the potential for pesticide-related surface water toxicity?
  - (g) Proper use, handling, and disposal of pesticides?
  - (h) Least toxic methods of pest prevention and control?
  - (i) Encourage the use of IPM?
  - (j) Require the quantifiable reduction of pesticide use?
  - (k) Training - All Permittees shall train all targeted employees who are responsible for on an annual basis. In public agency?

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## H. Illicit Connections/ Illegal Discharge Program

1. IC/ ID Program
  - (a) Did you implement an IC/ ID Program?
  - (b) The IC/ ID Program must be documented and available for review.
  - (c) Did you map all permitted connections to the storm drain system?
  - (d) Did you map all illicit connections and discharges on baseline maps?
  - (e) Did you transmit this information to the Principal Permittee?
  - (f) Did you use this mapping information to identify priority areas for further investigation?
  - (g) Did you eliminate all known illicit connections and illicit discharges?
  
2. Public Reporting
  - (a) Did you establish and maintain a phone hotline to receive illicit discharge/ connection complaints?
  - (b) Did you establish and maintain an internet homepage to receive illicit discharge/connection complaints?
  - (c) For all complaints received, did you document the location of the illicit discharge/ connection?
  - (d) Have you documented the actions undertaken in response to all illicit discharge/ connection complaints?
  
3. Illicit Connections
  - Screening for Illicit Connections
    - (a) Did you conduct field screening of your storm drain system for illicit connections?
    - (b) For those portions of the storm drain system consisting of storm drain pipes 36 inches in diameter of greater, how many miles did you field screen this year?
    - (c) Out of how many miles total?
    - (d) Did you conduct field screening for high priority areas identified during the mapping of illicit connections and discharges?
    - (e) How many miles were completed this year?
    - (f) Out of how many miles total?
    - (g) How much of the storm drain system that is 50 years or older in age did you field screen?
    - (h) Out of how many miles total?
    - (i) Did you submit to the Principal Permittee a GIS layer showing the location and length of underground pipes greater than 18" in diameter and channels within their jurisdiction?
    - (j) Did you also include the status of suspected, confirmed, and terminated illicit connections?
    - (k) Did you maintain a list containing all connections under investigation for possible illicit connection and their status?

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(l) Did you attach that list to this Annual Report?

Response to Illicit Connections

- (a) Did you complete an investigation within 21 days of notice of a suspected illicit connection?
- (b) Did you determine the Source of each connection?
- (c) Did you determine the nature and volume of discharge through the connection?
- (d) Did you identify the responsible party of the connection?
- (e) How many suspected illicit connections were there this year?
- (f) Upon confirmation of the illicit nature of a storm drain connection did you terminate the connection within 180 days of completion of the investigation?
- (g) Did you document all illicit connection discoveries and your response to each?

4. Illicit Discharges

(a) Abatement and Cleanup

- (1) Did you respond and cleanup within 1 business day of discovery or of receiving a report of a suspected illicit discharge?
- (2) Did you keep records of all illicit discharge discoveries, reports of suspected illicit discharges and their response to the illicit discharges and suspected illicit discharges?
- (3) How many did you receive?
- (4) How many did you respond to?

(b) Investigation

- (1) Did you investigate illicit discharges during or immediately following containment and cleanup activities, and take enforcement action as appropriate?

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STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

MONITORING PROGRAM - No. CI 7388

FOR

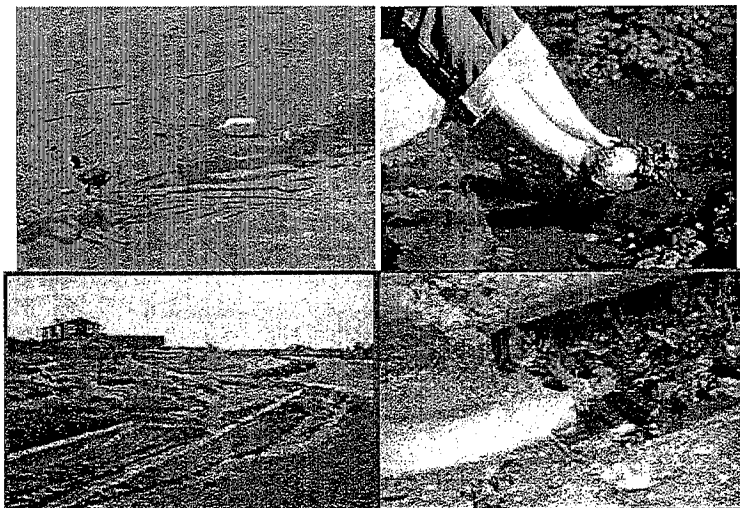
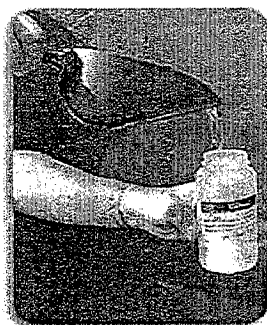
ORDER 09-xxxx

NPDES PERMIT NO. CAS004002

WASTE DISCHARGE REQUIREMENTS

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009



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February 24, 2009 - Tentative

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**MONITORING PROGRAM**

1. The primary objectives of the Monitoring Program include, but are not limited to:
  - (a) Assessing the chemical, physical, and biological impacts of municipal storm water sewer system discharges on receiving waters.
  - (b) Assessing the overall health and evaluating long-term trends in receiving water quality.
  - (c) Assessing compliance with TMDL targets and water quality objectives.
  - (d) Characterization of the quality of storm water discharges.
  - (e) Identifying sources of pollutants.
  - (f) Measuring and improving the effectiveness of measures implemented under this Order.
  
2. The results of the monitoring requirements outlined below shall be used to refine BMPs for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in Ventura County.
  
3. The Permittees shall implement the Monitoring Program as follows:

**CORE MONITORING**

**A. Mass Emissions**

- I. The Principal Permittee shall monitor mass emissions to accomplish the following objectives:
  - i. Estimate the mass emissions from the MS4 to the watershed.
  - ii. Assess trends in the mass emissions over time.
  - iii. Determine if the MS4 is contributing to exceedances of water quality objectives by comparing results to applicable water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan) and the California Toxics Rule (CTR).
  
1. The Principal Permittee shall monitor mass emissions from the following 3 mass emission stations:
  - (a) ME-VR2 for Ventura River
  - (b) ME-SCR for Santa Clara River
  - (c) ME-CC for Calleguas Creek

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2. The Principal Permittee shall monitor the 3 mass emission stations on an annual basis as per A.3. below.
3. The Principal Permittee shall monitor each mass emission station each year as follows:
  - (a) The first storm event of the wet season that produces a 20% or greater increase in base stream flow, and 2 additional storm events; all storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rainfall) from the previously measurable storm event (0.25 inches of rain).
  - (b) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) per mass emission station.
4. Samples for mass emission monitoring may be taken with the same type of automatic sampler used under Order 00-108. . Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
5. Samplers shall be set to monitor storms that produce a 20% or greater increase in base stream flow.
6. Samples shall be flow-weighted composites, collected during the first 24 hours or for the duration of the storm if it is less than 24 hours.
7. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 and 0.24 inches of rain.
8. The flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours, with each aliquot being separated by a minimum of 15 minutes within each hour of discharge, unless the Regional Water Board Executive Officer approves an alternate protocol.
9. Flow may be estimated using U.S. EPA methods at sites where flow measurement devices are not in place.
10. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>) and pH, temperature, and DO.
11. Each mass emission shall analyze for all of the Pollutants of Concern (POC) in its specific watershed listed in Attachment "B" (Calleguas Creek Watershed,

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Santa Clara River Watershed, and Ventura River Watershed Pollutants of Concern).

12. Each mass emission station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels), during the first storm event of the wet season for each year sampled. If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the California Toxics Rule (CTR) for acute criteria. If a constituent is detected exceeding a Basin Plan objective, and/ or CTR criteria then the constituent shall be analyzed for the remainder of the Order, at the mass emission station where it was detected.
13. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests.
14. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within two working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation.
  - (b) Explanation of circumstance(s) with documentation.
  - (c) Statement of corrective action for the future.
15. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "J".
16. Results of monitoring from each mass emission station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date, highlighting exceedances (Pollutants of Concern, POC) to the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per mass emission station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).

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- 17. A summary of the annual mass emission monitoring results highlighting exceedances (POC) of the Basin Plan objectives and the CTR for acute criteria, with corresponding sampling dates per mass emission station, shall be included with the Annual Storm Water Report.

**B. Major Outfalls**

- I. The Principal Permittee shall monitor major storm drain outfalls to accomplish the following objectives:
  - i. Estimate the annual pollutant load of the cumulative discharges to waters of the State.
  - ii. Estimate the event mean concentration of the cumulative discharges to waters of the State.
  - iii. Assess trends in the major outfalls over time.
  - iv. Estimate the annual pollutant load of discharges to Waters of the U.S.
  - v. Estimate the event mean concentration of discharges to Waters of the U.S.
  - vi. Assess trends in the major outfalls over time.
  - vii. Determine if the MS4 is contributing to exceedances of MALs, and water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan), and the California Toxics Rule (CTR).

- 1. The Principal Permittee shall monitor:
  - (a) End-of-pipe of major outfalls, identified in Attachment I, transporting representative discharges from each Permittee's Municipal drainage area to:
    - (1) Major outfalls listed in Attachment "P" (Storm Water Monitoring Program's Major Outfall Stations).
    - (b) The first storm event of the wet season that produces at least 0.25 inches of rain, and 2 additional storm events per year, all storm events shall be separated by 7 days of dry weather (less than 0.1 inch) from the previously measurable storm event (0.25 inches).
    - (c) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) shall be sampled per identified major outfall.
    - (d) In the first year after permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment H are to be monitored annually according to the schedule above.
- 2. If an identified monitoring site is found to be unworkable due to immitigable factors the sampling location may be relocated upon Executive Officer's approval of another location. Best professional judgment shall be used to balance the site selection rationale and criteria to determine the most appropriate site. Due to limited potential locations of urban outfalls to be monitored, there may be no sites that satisfy all criteria and rationale. Sites will be selected to satisfy the following criteria:

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- (a) Maximize urban runoff contribution;
  - (b) Greater than 60% of catchment shall be Permittee's MS4;
  - (c) Attempt shall be made to avoid outfalls that contain discharge from extra-jurisdictional areas (e.g. agriculture land and other NPDES discharges).
  - (d) Drainage area should contain representative land uses in a ratio of use as similar as reasonably possible to that found in the Permittee's jurisdiction.
  - (e) Drainage areas with a higher percentage of the Permittee's MS4 are preferred;
  - (f) Ability to accurately measure flow
  - (g) Safety of monitoring personnel is the highest priority. Specific location of sampling collection may be upstream of the actual outfall if field safety or accurate flow measurement require it.
3. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 inches and 0.24 inches of rain.
  4. Samples shall be collected during the first 24 hours of storm water discharge or for the entire storm water discharge if it is less than 24 hours.
  5. Samples shall be flow-weighted composites and can be collected automatically or manually (see subparts A.7 and A.8) in accordance with U.S. EPA protocol or other procedure approved by the Executive Officer.
  6. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>) and pH, temperature, and DO.
  7. Major outfall samples taken within a subwatershed shall be analyzed for the biological and chemical parameters listed in the preceding subpart B.6, and for all of the constituents in Attachment "C" (Municipal Action Levels), Tables 1 & 2, as listed below:
    - (a) pH
    - (b) TSS
    - (c) COD
    - (d) Kjeldahl Nitrogen (TKN)
    - (e) Nitrate & Nitrite- Total
    - (f) P- Total
    - (g) Cd- Total
    - (h) Cr- Total
    - (i) Cu- Total
    - (j) Pb- Total
    - (k) Ni- Total
    - (l) Zn- Total
    - (m) Hg- Total

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8. Each major outfall station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels) twice per wet season, per year, (1<sup>st</sup> storm event of the wet season and one other storm event of the wet season). If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the California Toxics Rule (CTR) acute criteria. If a constituent is detected exceeding a Basin Plan objective, and/or acute CTR criteria then the constituent shall be sampled for the remainder of the Order, at the major outfall station where it was detected.
9. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests. Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
10. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within 2 working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
11. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "J".
12. Results of monitoring from each major outfall station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date, highlighting exceedances to the MALs, the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per major outfall station. The sample data transmitted shall be in the most recent update of the Southern California

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## Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).

13. A summary of the annual major outfall monitoring results, highlighting exceedences (pollutants of concern POC) to the MALs, the Basin Plan objectives, and the CTR for acute criteria with corresponding sampling dates per major outfall station, shall be included with the Annual Storm Water Report.

**C. Dry Weather Analytical Monitoring**

- I. The Principal Permittee shall develop and implement a monitoring program to characterize pollutant discharges from representative MS4 outfalls in each municipality and in the unincorporated County area during dry weather. This monitoring program shall be implemented within each jurisdiction and shall begin within the 2010-2011 monitoring year.
1. Dry weather analytical monitoring shall include:
    - (a) Analytical monitoring, field measurements and observations at selected stations.
    - (b) Reports of analytical data in a SWAMP comparable format.
  2. Selection of Dry Weather Analytical Monitoring stations: Based upon a review program data, the storm drain system and land uses, the Co-Permittees shall select dry weather analytical monitoring stations within their jurisdiction. At least 5 dry weather analytical monitoring stations need to be identified per Co-Permittee. The dry weather analytical monitoring stations shall be established using the following guidelines and criteria:
    - (a) Stations should be located downstream of municipal land uses where illegal or illicit activity may occur;
    - (b) Stations shall be located at accessible downstream locations within the storm drain system of each municipality or at major outfalls;
    - (c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
    - (d) Each Co-Permittee shall determine a primary station and at least 4 alternate stations to be sampled in case primary stations do not have flow in dry weather. The dry weather monitoring may utilize the same outfalls as those used for wet weather monitoring, if such outfalls are found to discharge during dry weather.
    - (e) Fact sheets of general information such as site descriptions (i.e., conveyance type, dominant watershed land uses) shall be created.

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3. The Principal and Co-Permittees shall develop and/or update written procedures for dry weather analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:
  - (a) Dry weather analytical monitoring shall be conducted at each identified station at least once between May 1st and September 30th of each year.
  - (b) If flow or ponded runoff is observed at a dry weather analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample.
  - (c) Record general information such as site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
4. At a minimum, collect samples for analytical laboratory analysis of the following constituents:
  - (a) Total Hardness
  - (b) Total Organic Carbon or Oil and Grease
  - (c) Lead (Dissolved)
  - (d) Zinc (Dissolved)
  - (e) Copper (Dissolved)
  - (f) Total Coliform bacteria
  - (g) E. Coli bacteria
5. Other required field observations include:
  - (a) Flow Estimation
  - (b) Temperature
  - (c) pH
  - (d) Odor
  - (e) Color
  - (f) Turbidity
  - (g) Floatables (foam, oil sheen)
  - (h) Staining
  - (i) Algal growth
6. If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
7. Visually assess the presence of trash in receiving waters and urban runoff. Assessments of trash shall provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.

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- 8. Develop and/or update procedures for source identification follow up investigations in the event elevated levels are found. These procedures shall be consistent with procedures required in IC/ID section.

**D. Aquatic Toxicity Monitoring**

- I. The objective of aquatic toxicity monitoring is to evaluate if storm water (wet weather) discharges are causing or contributing to chronic toxic impacts on aquatic life by the following:
  - i. Toxicity testing at mass emission and major outfall stations to assess impacts on the marine and freshwater environments.
- 1. The Principal Permittee shall collect and analyze mass emission and major outfall samples for toxicity to evaluate the extent and causes of toxicity in receiving waters. Permittees shall utilize documents such as: Ventura County's Technical Guidance Manual for Storm Water Quality Control Measures and U.S. EPA's National Management Measures to Control Nonpoint Source Pollution from Urban Areas to implement measures to eliminate or reduce sources of toxicity in storm water.
- 2. Toxicity samples may be flow-weighted composite samples or grab samples for both wet and dry event sampling (see subparts A.7 and A.8).
- 3. Volume of sample shall be determined by specific test methods to be used. At a minimum it is suggested to collect 5 gallons for baseline testing, and an additional 5 gallons for TIE studies. Sufficient sample volume shall be collected to perform the required toxicity tests.
- 4. All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before initial use of a sample.
- 5. When toxicity tests can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then the following shall be submitted to the Regional Water Board Executive Officer within 2 working days:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
- 6. The Principal Permittee shall conduct critical life stage chronic toxicity tests on undiluted samples in accordance with:
  - (a) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to *West Coast Marine and Estuarine*

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Organisms, (EPA/600/R-95/136, 1995) for all mass emission stations, and for major outfalls discharging to marine and estuarine environments, or  
(b) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, October 2002 (EPA/821/R-02/013, 2002) or current version for major outfalls discharging to freshwater environments.

7. The Principal Permittee shall analyze samples for chronic toxicity according to the schedule below:
  - (a) During the first year of the Order, 2 storm events shall be monitored at each mass emission and major outfall station. The first storm event of the wet season that produces at least 0.25 inches of rain, and 1 additional storm event. All storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rain) from the previously measurable storm event.
    - (1) During the first year of the Order, all 3 test species shall be used for their respective chronic toxicity test method for the 2 storm events monitored, to determine the most sensitive test species for each monitoring station (see subparts D.8 and D.9 below).
  - (b) During the next 4 years of the Order, the first storm event of the wet season that produces at least 0.25 inches of rain shall be monitored for each mass emission and major outfall station.
    - (1) During the next 4 years of the Order, the most sensitive test species determined from the first year of testing at each mass emission and major outfall station shall be used for its respective chronic toxicity test method (see subpart D.6).
  
8. Marine and Estuarine Species and Test Methods.
  - (a) Marine and estuarine species and short-term test methods for estimating the chronic toxicity of NPDES effluents shall be used and are found in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) and applicable water quality standards; also see 40 CFR Parts 122.41(j)(4) and 122.44(d)(1)(iv).
    - (1) The Permittee shall conduct:
      - (A) A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01)
      - (B) A static non-renewal toxicity test with the giant kelp *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and
      - (C) A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, (Fertilization Test Method 1008.0)

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*Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

14. The Principal Permittee shall complete chronic Phase I (Toxicity Characterization Procedures) TIEs for all sites showing toxicity. For the purpose of triggering TIE (Toxicity Characterization Procedures), significant toxicity is defined as at least 50% mortality. The 50% mortality threshold is consistent with the approach recommended in guidance published by USEPA for conducting TIEs (USEPA, 1996), which recommends a minimum threshold of 50% mortality because the probability of completing a successful TIE decreases rapidly for samples with less than this level of toxicity.
- (a) The TIE shall be conducted on test species, demonstrating the most sensitive toxicity response at a sampling station. However, a TIE(s) may be conducted on an additional test species with the caveat that once the toxicant(s) has been identified then the most sensitive test species triggering the TIE event needs to be tested additionally to verify that the toxicant has been identified and addressed.
15. A TIE Prioritization Metric may be utilized to rank sites for TIEs.<sup>2</sup>
16. Toxicity Reduction Evaluation (TRE) when toxicity is identified
- (a) When the same pollutant or class of pollutants is identified through 2 consecutive TIE evaluations, a TRE shall be performed for that identified toxic pollutant.
- (b) The TRE development shall be performed by a neutral third party (retained by the Permittees), in consultation with the Regional Water Board staff.
- (c) The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs are identified, the Permittees shall submit the TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At a minimum, the Plan shall include a discussion of the following items:
- (1) The potential sources of pollutant(s) causing toxicity.
  - (2) A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
  - (3) Recommended BMPs to reduce the pollutant(s) causing toxicity.

<sup>2</sup> Appendix 5. SMC Model Monitoring Program.  
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(b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.

9. Freshwater Species and Test Methods.

(a) Species and short-term test methods for estimating the chronic toxicity of NPDES effluent shall be used and are found in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136).

(1) The Permittee shall conduct

- (A) A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0<sup>1</sup>)
- (B) A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0<sup>1</sup>); and
- (C) A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0)

(b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.

10. The test endpoint data is analyzed using a standard t-test approach. Statistical analysis methods shall be consistent with U.S. EPA test method manuals.

11. If significant toxicity is found then according to paragraph 10.2.6.2 of the U.S. EPA freshwater test methods manual, all chronic toxicity test results from the multi-concentration tests required by this Order must be reviewed and reported according to U.S. EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA/821/B-00-004, 2000).

12. Toxic samples shall be immediately subjected to Toxicity Identification Evaluation (TIE) procedures to identify the toxic chemical(s) if toxicity is determined by the standard t-test.

13. A TIE is to be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA test method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic*

<sup>1</sup> Daily observations for mortality make it possible to calculate acute toxicity for desired exposure periods (i.e., 7-day LC50, 96-hour LC50, etc.).

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- (4) Proposed post construction control measures to reduce the pollutant(s) causing toxicity.
  - (5) Follow-up monitoring to demonstrate that toxicity has been removed.
  - (d) The TRE process shall be coordinated with TMDL development and implementation (i.e., If a TMDL for 4,4'-DDD is being implemented when a TRE for 4,4'-DDD is required, the efforts shall be coordinated to avoid overlap).
17. Results of Toxicity monitoring conducted in accordance with the Standard Operating Procedure under Standard Provision 14 of this Attachment shall be sent to the Regional Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date for the initial toxicity test and no more than 30 days from completion of each aspect of the analysis for TIEs/TREs. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
18. The Annual Storm Water Report shall include:
- (a) A full laboratory report for all toxicity testing.
  - (b) A summary of the years' mass emission and major outfall monitoring station's toxicity test results reported according to the test methods manual chapter on report preparation and test review.
  - (c) The dates of sample collection and initiation of each toxicity test.
  - (d) All results for effluent parameters monitored concurrently with the toxicity test(s).
  - (e) TIE Phase testing (Phase I, Phase II, and Phase III) that has been or is in the process of being conducted per monitoring station.
  - (f) The development, implementation, and results for each TRE Corrective Action Plan in the Annual Storm Water Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
19. When the SMC Standardized Toxicity Testing Guidance is completed, the Regional Water Board Executive Officer may direct Permittees to replace the current toxicity program with the standardized guidance procedure.

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**SPECIAL STUDIES**

**E. Pyrethroid Insecticides Study**

- I. The Principal Permittee shall perform a Pyrethroid Insecticides study to accomplish the following objectives:
  - i. Establish baseline data for major watersheds

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- ii. Evaluate whether Pyrethroid Insecticide concentrations are at or approaching levels known to be toxic to sediment-dwelling aquatic organisms.
  - iii. Determine if Pyrethroids discovered are from urban sources.
  - iv. Assess any trends over the permit term.
1. The Permittees shall incorporate monitoring for Pyrethroid Insecticides within the Calleguas Creek, Santa Clara River and Ventura River Watersheds according to the following:
    - (a) No later than the second year of this Order, monitoring shall begin.
    - (b) Quality Assurance Project Plan (QAPP) to be submitted to the Regional Board for approval 12 months prior to beginning monitoring.
    - (c) In selecting sites to conduct monitoring for Pyrethroid Insecticides, Permittees shall review existing monitoring programs in the watersheds by other public and private entities, watershed coalitions, and citizen volunteers, so as to complement and not duplicate efforts.
    - (d) Establish at least 2 stations along the mainstems of each major watershed river that are influenced by urban discharges.
    - (e) The study shall be repeated in the fifth year of the permit term.
  2. The Principal Permittee shall monitor Pyrethroid Insecticides stations according to the following:
    - (a) The Principal Permittee shall monitor 1 sampling event per station per monitoring year.
      - (1) Monitoring shall occur after sediment has settled within the waterbody, and safe access can be assured.
    - (b) Sufficient sediment is to be collected at each station in a pre-cleaned glass jar by skimming the upper 1 cm of the sediment column with a steel scoop, and held on ice until returned to the laboratory.
    - (c) Sediment shall be homogenized in the laboratory by hand mixing, then held at 4 °C (toxicity samples) or -20 °C (chemistry samples).
    - (d) All samples taken shall be analyzed for the following Pyrethroids:
      - (1) bifenthrin
      - (2) cyfluthrin
      - (3) cypermethrin
      - (4) deltamethrin
      - (5) esfenvalerate
      - (6) lambda-cyhalothrin
      - (7) permethrin
      - (8) tralomethrin (if laboratory is capable of analyzing for it)
    - (e) Detection limits for all Pyrethroids shall be as close to 1ng/g (dry weight) as reasonably achievable.
    - (f) Each sediment sample is to measure the following:
      - (1) total organic carbon (TOC).

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- 3. All samples shall be tested for toxicity to 7 to 10 day old *Hyalella azteca* according to standard U.S. EPA testing methods.<sup>3</sup>
  - (a) Use of the approach described in *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*<sup>4</sup> for toxicity testing shall be used.
- 4. Analysis by a laboratory that has performed sediment toxicity testing for Pyrethroid Insecticides is preferred.
- 5. Monitoring results from each station shall be sent electronically to the Regional Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
- 6. If toxicity is attributed to Pyrethroids then consultation with staff at U.S. EPA, the California Department of Pesticide Regulations and the California Stormwater Quality Association's (CASQA) pesticides committee (UP3 Project web site), shall be required to obtain relevant information to use in developing the recommendations to mitigate Pyrethroids in the Final Report.
- 7. Final Report for the Pyrethroid Insecticides study shall contain the following:
  - (a) Executive summary
  - (b) Methods
  - (c) Results (including map depicting monitoring stations)
  - (d) Discussion
  - (e) Recommendations to mitigate Pyrethroids
- 8. The Final Report shall be completed and submitted to the Executive Officer of the Regional Water Board no later than 8 months after completion of the study.

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The Pyrethroid Insecticides Study requirement may be satisfied by another tributary monitoring program within the Watershed performing a sediment Pyrethroid Insecticides Study that is monitoring to assess pyrethroid concentrations and sediment toxicity, so as to complement other ongoing programs.

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<sup>3</sup> U.S. EPA. *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates*; EPA Publication 600/R-99/064; U.S. Environmental Protection Agency: Washington, DC, 2000; 192 pp.

<sup>4</sup> *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*; Weston, D.P.; Holmes, R.W.; You, J.; Lydy, M.J. *Environ. Sci. Technol.*; (Article); 2005; 39(24); 9780 pp.

**F. Hydromodification Control Study**

1. The Principal Permittee shall conduct or participate in special studies to develop tools to predict and mitigate the adverse impacts of Hydromodification, and to comply with hydromodification control criteria. This can be achieved by the following:
  - (a) Develop a mapping and classification system for streams based on their susceptibility to the effects of hydromodification.
  - (b) Establish protocols for ongoing monitoring to assess the effects of hydromodification.
  - (c) Develop dynamic models to assess the effects of hydromodification on stream condition.
  - (d) Develop a series of tools that managers can easily apply to make recommendations or set requirements relative to hydromodification for new development and redevelopment.
2. The Principal Permittee may satisfy this requirement by participating in the 'Development of Tools for Hydromodification Assessment and Management' Project undertaken by the SMC and coordinated by the SCCWRP.
3. The Principal Permittee shall continue to partner with the SMC and collect data or sponsor its collection for the Ventura County sites to reduce statistical uncertainty and/ or improve model predictability.
4. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they will satisfy this requirement, no later than (2 months after Order adoption date).

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**G. Low Impact Development**

1. The Principal Permittee shall conduct or participate in a special study to assess the effectiveness of low impact development techniques in semi-arid climate regimes such as in Southern California.
2. The Principal Permittee may satisfy this requirement by participating in the SMC project titled "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practice in Southern California".
3. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they are satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special study.
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**H. Southern California Bight Project**

- 1. The Principal Permittee and Permittees shall participate with other government organizations regulating discharges in southern California in the collaboration to conduct a regional monitoring survey (Southern California Bight Project (SCBP)), which was started in 2008 and to be continued in successive years. The survey's primary objective is to assess the spatial extent and magnitude of ecological disturbances on the mainland continental shelf of the SCB and to describe relative conditions among different regions of the SCBP.
- 2. The Principal Permittee shall participate on the Steering Committee for the bight-wide monitoring project, and assist with the estuary and nearshore sampling effort requirement of the proposed monitoring project for Ventura County as defined in the SCBP plan.

**I. Bioassessment**

- 1. The Principal Permittee consents to participate in the following regional water quality program for watershed management and planning:
  - (a) SMC Regional Monitoring Program
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six
        - (ii) Integrator sites per watershed
          - (A) Ventura River - One
          - (B) Santa Clara River - One
          - (C) Calleguas Creek - One
    - (b) Ventura County Bioassessment: Permittees shall conduct bioassessment at one fixed site in each of the watersheds above on an annual basis. Southern California Regional Bioassessment protocols shall be used to conduct the Ventura County Bioassessment program.

**J. Volunteer Monitoring Programs**

- 1. The Permittees shall provide limited assistance if requested in the development and implementation of volunteer monitoring programs in the Ventura watersheds. These include, but are not limited to the following:
  - (a) Ventura River - (Ventura Stream Team).
  - (b) Santa Clara River - (Santa Clara River Stream Team).
  - (c) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program).
  - (d) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program).

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**K. Standard Monitoring Provisions**

- I. All monitoring activities shall meet the following requirements.
1. Monitoring and Records [40 CFR 122.41(j)(1)]
    - (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  2. Monitoring and Records [40 CFR 122.41(j)(2)] [CWC §13383(a)]
    - (a) The Principal Permittee and Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge (ROWD) and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.
  3. Monitoring and Records [40 CFR 122.21(j)(3)]
    - (a) Records of monitoring information shall include:
      - (1) The date, time of sampling or measurements; exact place, weather conditions, and rain fall amount.
      - (2) The individual(s) who performed the sampling or measurements.
      - (3) The date(s) analyses were performed.
      - (4) The individual(s) who performed the analyses.
      - (5) The analytical techniques or methods used.
      - (6) The results of such analyses.
      - (7) The data sheets showing toxicity test results.
  4. Monitoring and Records [40 CFR 122.21(j)(4)]
    - (a) All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order. If a particular Minimum Level (ML) is not attainable in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure may be used instead.
  5. Monitoring and Records [40 CFR 122.21(j)(5)]
    - (a) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not

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more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

- 6. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory:
  - (a) Certified for such analyses by an appropriate governmental regulatory agency.
  - (b) Participated in 'Intercalibration Studies' for storm water pollutant analysis conducted by the SMC.<sup>5</sup>
  - (c) Which performs laboratory analyses consistent with the storm water monitoring guidelines as specified in, the *Stormwater Monitoring Coalition Laboratory Guidance Document*, 2nd Edition R. Gossett and K. Schiff (2007), and its revisions.
  
- 7. For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (SIP) shall be used for all analyses, unless otherwise specified. The MLs from the SIP are incorporated into Attachment "G".
  
- 8. The Monitoring Report shall specify the analytical method used, the Method Detection Level (MDL) and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with 1 of the following methods, as appropriate:
  - (a) An actual numerical value for sample results greater than or equal to the ML.
  - (b) "Not-detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.
  - (c) "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
  
- 9. For priority toxic pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used

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<sup>5</sup> The 'Intercalibration Studies' are conducted periodically by the SMC to establish a consensus based approach for achieving minimal levels of comparability among different testing laboratories for storm water samples to minimize analytical procedure bias. Stormwater Monitoring Coalition Laboratory Document, Technical Report 420 (2004) and subsequent revisions and augmentations.

instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to raising the ML for any constituent.

10. Monitoring Reports [40 CFR 122.41(I)(4)(ii)]
  - (a) If the Principal Permittee monitors any pollutant more frequently than required by the Order using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Monitoring Reports.
11. Monitoring Reports [40 CFR 122.41(I)(4)(iii)]
  - (a) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
12. If no flow occurred during the reporting period, then the Monitoring Report shall, so state.
13. The Regional Water Board Executive Officer or the Regional Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:
  - (a) By petition of the Principal Permittee or by petition of interested parties after submittal of the Monitoring Report. Such petition shall be filed not later than 60 days after the Monitoring Report submittal date, or
  - (b) As deemed necessary by the Regional Water Board Executive Officer following notice to the Principal Permittee.
14. The Principal Permittee must provide a copy of the Standard Operation Procedures (SOPs) for the Monitoring Program No. CI 7388 to the Regional Water Board upon request. The SOP will consist of five elements: Title page, Table of Contents, Procedures, Quality Assurance/ Quality Control (QA/ QC), and References. Briefly describe the purpose of the work or process, including any regulatory information or standards that are appropriate to the SOP process, and the scope to indicate what is covered. Denote what sequential procedures should be followed, divided into significant sections; e.g., possible interferences, equipment needed personnel qualifications, and safety considerations. Describe QA/ QC activities, and list any cited or significant references.

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**L. Total Maximum Daily Load (TMDL) Monitoring**

1. TMDL monitoring is to determine compliance with the TMDL Waste Load Allocations (WLAs) and numeric targets for the MS4 Permittees that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA.

February 24, 2009 - Tentative

2. TMDL monitoring is in accordance with approved TMDLs as discussed in part 6 of the permit. TMDL monitoring for specific watersheds is in accordance with the agreed upon monitoring plans submitted by stakeholders, including MS4 Permittees.

**M. Beach Water Quality Monitoring**

If funding from state and federal sources is not available for beach water quality monitoring during the winter season (October 15 – April 15) the Principal Permittee within thirty days of notice shall conduct beach water quality sampling and analysis at a maximum of ten sites in accordance with the procedures and locations used in AB 411 monitoring and listed below:

1. Rincon Beach – 25 yards south of the creek mouth\*
  2. Oil Piers Beach – south of the drain, bottom of the wood staircase
  3. Faria County Park – south of the drain at the north end of the park\*
  4. Solimar Beach – south (end of east gate access road)\*
  5. Emma Wood State Beach – 50 yards south of first drain
  6. Oxnard Beach – at J Street drain
  7. Surfer’s Point at Seaside – end of the access path via wooden gate
  8. Promenade Park – Figueroa Street
  9. Surfer’s Knoll – beach adjacent to the parking lot\*
  10. San Buenaventura Beach – south of drain at San Jon Road
- \* Not associated with MS4 discharges.

Ordered by:

Tracy J. Egoscue  
Executive Officer

Date: May 7, 2009

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### Land Jurisdictions in Ventura County, California

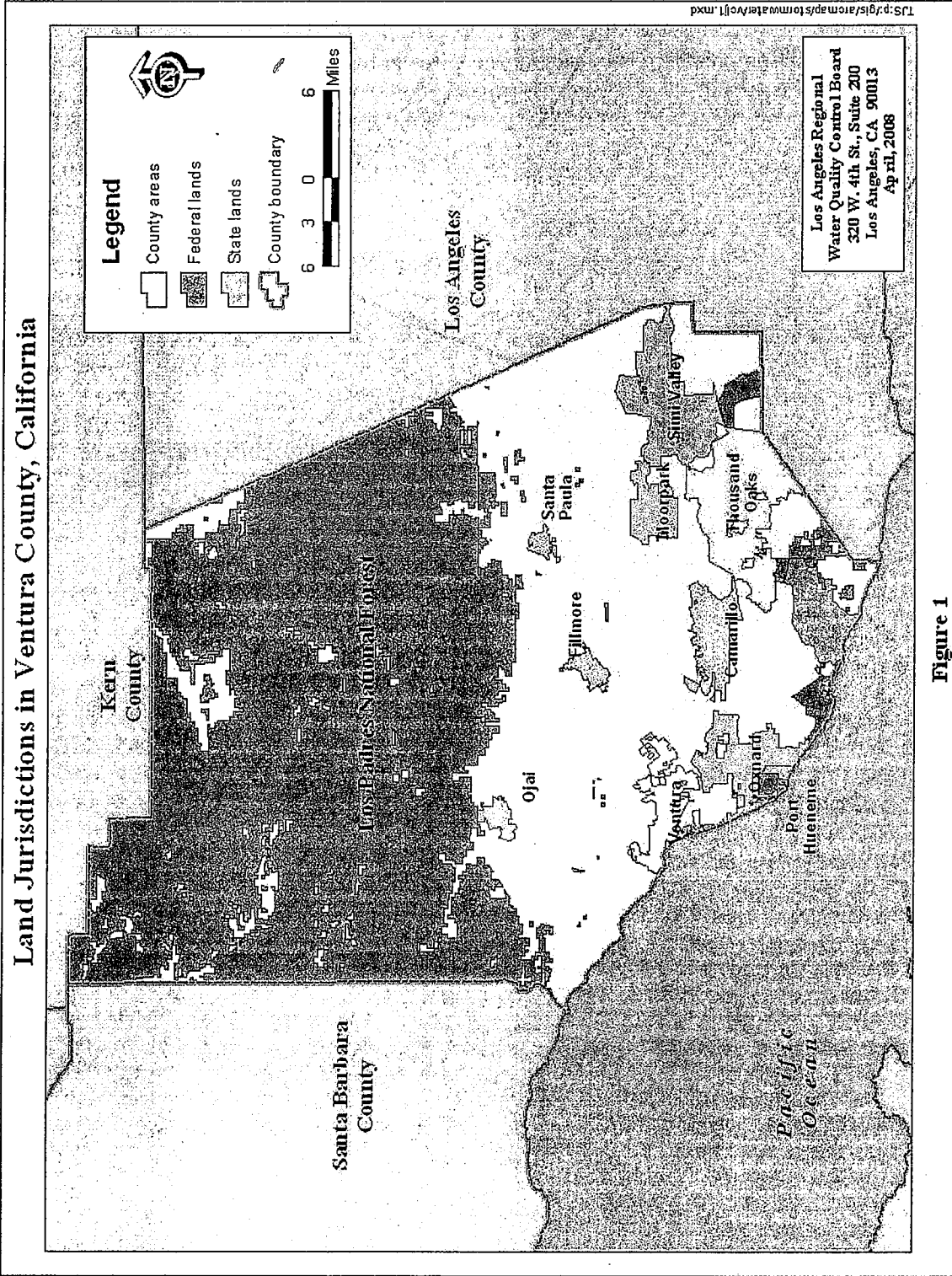


Figure 1

Xxxxxx xx, 2009 - Tentative

T E N T A T I V E



# T E N T A T I V E

Order No. 09-xxxx

NPDES No. CAS004002  
Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

## ATTACHMENT A Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Ventura River	402.10 402.20 402.31 402.32	Ventura River Ventura River Estuary Canada Larga Matilija Creek Matilija Creek Reservoir San Antonio Creek	Algae Coliform (fecal, total) Eutrophic Low DO Nitrogen Trash	City of Ojai City of San Buenaventura Ventura County Watershed Protection District
Santa Clara River	403.11 403.21 403.22 403.31 403.32 403.41 403.42 403.43 403.44 403.51 403.52 403.53 403.54 403.55	Santa Clara River Santa Clara River Estuary Brown Barranca/Long Canyon Elizabeth Lake Hopper Creek Lake Hughes Mint Canyon Creek Munz Lake Piru Creek Pole Creek Sespe Creek Torrey Canyon Creek Wheeler Canyon/Todd Barranca	Algae Ammonia Chema* (tissue) Chloride Coliform Enrichment Eutrophic Fish kills Low DO/Organic Enrichment Nitrate + Nitrite Odors pH Sulfate Trash Total Dissolved Solids Toxaphene	City of Fillmore City of Oxnard City of San Buenaventura City of Santa Paula Ventura County Watershed Protection District

Xxxxxx xx, 2009 - Tentative

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**ATTACHMENT A**  
 Watershed Management Areas

**T E N T A T I V E**

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Calleguas Creek	403.11 403.12 403.61 403.62 403.63 403.64 403.67 403.66 403.68	Calleguas Creek Calleguas Creek Estuary Arroyo Conejo Arroyo Las Posas Arroyo Simi Beardsley Channel Conejo Creek Fox Barranca Mugu Lagoon Mugu Drain/Oxnard Drain Rio de Santa Clara/Oxnard Drain Revolon Slough Tapo Canyon	Algae Ammonia Boron ChemA* (tissue) Chlordane (tissue, sediment) Chloride Chlorpyrifos (tissue) Coliform, fecal Copper (total, dissolved) Dacthal (sediment) DDT (tissue, sediment) Dieldrin (tissue) Endosulfan (tissue, sediment) Hexachlorocyclohexane (tissue) Mercury Nickel Nitrate + Nitrite Nitrate as Nitrogen (NO3) Nitrogen Organophosphorus Pesticides PCBs (tissue) Sediment Toxicity Sedimentation/Siltation Selenium Sulfate Total Dissolved Solids Toxaphene (tissue, sediment) Toxicity Trash Zinc	City of Camarillo City of Moorpark City of Oxnard City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

**ATTACHMENT A**  
 Watershed Management Areas

**T E N T A T I V E**

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303 (d) Pollutant(s) of Concern	Permittees
Malibu Creek	401.00 403.11 404.21 404.22 404.23 404.24 404.25 404.26 404.47 404.45	Malibu Creek Malibu Creek Lagoon Lake Lindero Lake Sherwood Las Virgenes Creek Liner Creek Malibu Lake Medea Creek Palo Comado Santa Monica Bay Westlake Lake Triunfo Creek	Algae Ammonia Coliform DDT (tissue, sediment) Enteric viruses Eutrophic Lead Low DO/Organic Enrichment Nutrients (algae) PAHs (sediment) PCBs (tissue, sediment) PH Mercury Scum/foam Sedimentation/Siltation Sediment Toxicity Selenium Specific Conductance Trash	City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

**ATTACHMENT A**

Watershed Management Areas

**T E N T A T I V E**

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Miscellaneous Ventura Coastal	401.00 403.11	Channel Islands Harbor Channel Islands Beach Hobie Beach Mandalay Beach McGrath Lake McGrath Beach Ormond Beach Port Hueneme Harbor Promenade Park Beach Rincon Beach San Buenaventura Beach Santa Clara River Estuary Beach/Surfers Knoll Ventura Harbor: Ventura Keys	Beach closures Coliform (fecal) Chlordane (sediment) DDT (tissue, sediment) Dieldrin (sediment) PCBs (tissue, sediment) Lead (sediment) Sediment Toxicity Zinc (sediment)	City of Oxnard City of Port Hueneme City of San Buenaventura Ventura County Watershed Protection District

**ATTACHMENT B**

Calleguas Creek Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-CC), Receiving Water (W-3 & W-4), and Land Use (A-1) Sites

<b>Wet Weather</b>	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Residual Chlorine	
TDS	
<b>Metal</b>	
Aluminum - Total	Chromium - Total
Barium - Total	Cooper - Dissolved
Beryllium - Total	Mercury - Total
Cadmium - Total	Nickel - Total
<b>Nutrient</b>	
Nitrate as Nitrogen	
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Hexachlorobenzene	
Indeno(1,2,3-cd)pyrene	
Pentachlorophenol	
<b>Pesticide</b>	
4,4'-DDD	
4,4'-DDE	

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<sup>1</sup> Mass Emission, Receiving Water, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern

**ATTACHMENT B**

Santa Clara River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-SCR) and Land Use (I-2 & R-1) Sites

<b>Wet Weather</b>	
<b>Anion</b>	
Chloride	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Ph	
TDS	
<b>Metal</b>	
Aluminum - Total	Cooper - Dissolved
Arsenic - Total	Mercury - Total
Barium - Total	Nickel - Total
Cadmium - Total	Selenium - Total
Chromium - Total	Zinc - Dissolved
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Indeno(1,2,3-cd)pyrene	
<b>Pesticide</b>	
4,4'-DDE	

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<sup>1</sup> Mass Emission, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

**ATTACHMENT B**

Ventura River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME- VR & ME- VR2) Sites

<b>Wet Weather</b>
<b>Anion</b>
Chloride
<b>Bacteriological</b>
E. Coli
Fecal Coliform
<b>Conventional</b>
TDS
<b>Metal</b>
Aluminum - Total
Cadmium - Total
Chromium - Total
Mercury - Total
Nickel - Total
Zinc - Dissolved
<b>Organic</b>
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Chrysene
Hexachlorobenzene
<b>Pesticide</b>
4,4'-DDD
4,4'-DDE

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<sup>1</sup> Mass Emission wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07). Monitoring data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

**ATTACHMENT C**  
Municipal Action Levels

**Table 1 - Conventional Pollutants**

Pollutants	TSS mg/L	Nitrate & Nitrite- total mg/L
Municipal Action Level	252	2

**Table 2 – Metals**

Pollutants	Cu- total µg/L	Pb- total µg/L	Zn- total µg/L
Municipal Action Level	87	122	660

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**ATTACHMENT C**  
Treatment BMP Performance Standards

**Table 3 - Effluent Concentrations as Median Values**

BMP Category	Total Suspended Solids mg/L	Total Nitrate-Nitrogen mg/L	Total Copper, ug/L	Total Lead, ug/L	Total Zinc, ug/L
Detention Pond	27	0.48	15.9	14.6	58.7
Wet Pond	10	0.2	5.8	3.4	21.6
Wetland Basin	13	0.13	3.3	2.5	29.2
Bioreactor	18	0.36	9.6	5.4	27.9
Media Filter	11	0.66	7.6	2.6	32.2
Hydrodynamic Device	23	0.29	11.8	5	75.1

Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database, 2007.

See subpart 4.A.3 (Storm Water Quality Management Program Implementation- General Requirements).

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**ATTACHMENT D**  
**Critical Sources Categories<sup>1</sup>**

- Municipal Landfills (SIC 4953)
- Hazardous Waste Treatment, Disposal and Recovery Facilities<sup>1</sup>
- Facilities Subject to SARA Title III (also known as EPCRA)<sup>2</sup>
- Restaurants<sup>3</sup>
- Wholesale trade (scrap, auto dismantling) (SIC 50)
- Automotive service facilities<sup>2</sup>
- Fabricated metal products (SIC 34)
- Motor freight (SIC 42)
- Chemical/allied products (SIC 28)
- Automotive Dealers/Gas Stations (SIC 55)
- Primary Metals Products (SIC 33)
- Nursery<sup>3</sup> (NAICS 424930 and 444220)
- Electric/Gas/Sanitary (SIC 49)
- Air Transportation (SIC 45)
- Water Transportation (SIC 44)
- Rubbers/Miscellaneous Plastics (SIC 30)
- Local/Suburban Transit (SIC 41)
- Railroad Transportation (SIC 40)
- Oil & Gas Extraction (SIC 13)
- Lumber/Wood Products (SIC 24)
- Machinery Manufacturing (SIC 35)
- Transportation Equipment (SIC 37)

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<sup>1</sup> Non-underlined categories belong to Industrial Facilities.

<sup>2</sup> Various categories subject to these requirements.

<sup>3</sup> See Definition in Part 7. of the Order.

**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Stone, Clay, Glass, Concrete (SIC 32)

Leather/Leather Products (SIC 31)

Miscellaneous Manufacturing (SIC 39)

Food and kindred Products (SIC 20)

Mining of Nonmetallic Minerals (SIC 14)

Printing and Publishing (SIC 27)

Electric/Electronic (SIC 36)

Paper and Allied Products (SIC 26)

Furniture and Fixtures (SIC 25)

Laundries (SIC 72)

Instruments (SIC 38)

Textile Mills Products (SIC 22)

Apparel (SIC 23)

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<sup>1</sup> Non-underlined categories belong to Industrial Facilities.

**ATTACHMENT E**  
Determination of Erosion Potential

$E_p$  is determined as follows- The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The index under urbanized conditions is compared to the index under pre-urban conditions expressed as a ratio ( $E_p$ ). The effective work index ( $W$ ) is computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:

$$W = \sum_{i=1}^n (\tau_i - \tau_c)^{1.5} \cdot V \cdot \Delta t_i \quad (1)$$

Where  $\tau_c$  = critical shear stress that initiates bed mobility or erodes the weakest bank layer,  $\tau_i$  = applied hydraulic shear stress,  $\Delta t$  = duration of flows (in hours), and  $n$  = length of flow record. The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential ( $E_p$ )<sup>1</sup> (McRae (1992, 1996).

$$E_p = \frac{W_{post}}{W_{pre}} \quad (2)$$

where:

$W_{post}$  = work index estimated for the post-urban condition  
 $W_{pre}$  = work index estimated for the pre-urban condition

<sup>1</sup> MacRae, C.R. 1992. The Role of Moderate Flow Events and Bank Structure in the Determination of Channel Response to Urbanization. Resolving conflicts and uncertainty in water management: Proceedings of the 45th Annual Conference of the Canadian Water Resources Association. Shrubsole, D, ed. 1992, pg. 12.1-12.21; MacRae, C.R. 1996. Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection. Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE Engineering Foundation Conference, Snowbird, Utah, pg. 144-162

**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

CONSTITUENTS	MLs
<b>CONVENTIONAL POLLUTANTS</b>	
	<b>mg/L</b>
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 - 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
<b>BACTERIA (single sample limits)</b>	
	<b>MPN/100ml</b>
Total coliform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
<b>GENERAL</b>	
	<b>mg/L</b>
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1 umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L

<sup>1</sup> For priority pollutants, MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified. Method Detection Levels (MDLs) must be lower than or equal to the ML value, unless otherwise approved by the Regional Board.

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**ATTACHMENT G**

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

METALS (Dissolved & Total)	
	<b>µg/L</b>
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Copper	0.5
Hex. Chromium	5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1
SEMIVOLATILE ORGANIC COMPOUNDS	
	<b>µg/L</b>
ACIDS	
	<b>µg/L</b>
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
BASE/NEUTRAL	
	<b>µg/L</b>
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10

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**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>BASE/NEUTRAL</b>	<b>µg/L</b>
Benzo(k)fluoranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexyl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	10
2,4-Dinitrotoluene	5
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1
Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1

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**ATTACHMENT G**

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

CHLORINATED PESTICIDES	
	µg/L
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
POLYCHLORINATED BIPHENYLS	
	µg/L
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1254	0.5
Aroclor-1260	0.5
ORGANOPHOSPHATE PESTICIDES	
	µg/L
Atrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
HERBICIDES	
	µg/L
2,4-D	0.02
Glyphosate	5
2,4,5-TP-SILVEX	0.2

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**ATTACHMENT I**  
Storm Water Monitoring Program's Major Outfall Stations

PERMITTEE	STATION ID	LATITUDE	LONGITUDE
City of Camarillo	Camarillo-1	34°13'10.00"N	119° 3'58.06"W
City of Fillmore	Fillmore-1	34°24'16.51"N	118°55'50.47"W
Unincorporated Ventura County	VCMeiners Oaks-1	34°26'43.98"N	119°17'25.18"W
City of Moorpark	Moorpark-1	34°16'44.29"N	118°54'19.40"W
City of Ojai	Ojai-1	34°26'41.25"N	119°14'28.43"W
City of Oxnard	Oxnard-1	34°14'17.38"N	119°11'23.08"W
City of Port Hueneme	Hueneme-1	34° 8'29.30"N	119°11'21.09"W
City of Santa Paula	Santa Paula-1	34°20'54.99"N	119° 3'19.82"W
City of Simi Valley	Simi Valley-1	34°16'18.59"N	118°47'1.51"W
City of Thousand Oaks	Thousand Oaks-1	34°12'49.16"N	118°55'16.24"W
City of Ventura	Ventura-1	34°14'35.86"N	119°11'40.86"W

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## Camarillo

**Waterbody:** Camarillo Hills Drain (tributary to Revolon Slough)

**Location:** Daily Rd. overcrossing (34°13'10.00"N, 119° 3'58.06"W)

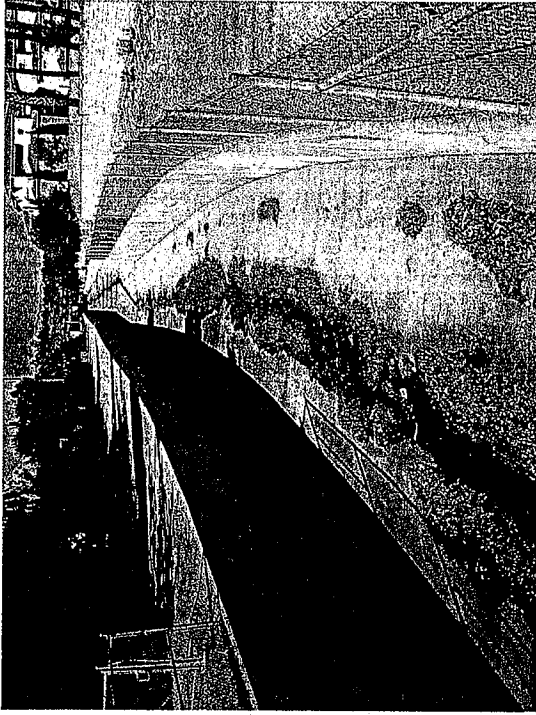
**Pros:** Likely well-defined rating table

**Cons:** Moderate potential for vandalism

**Outstanding Site Selection Tasks:** None

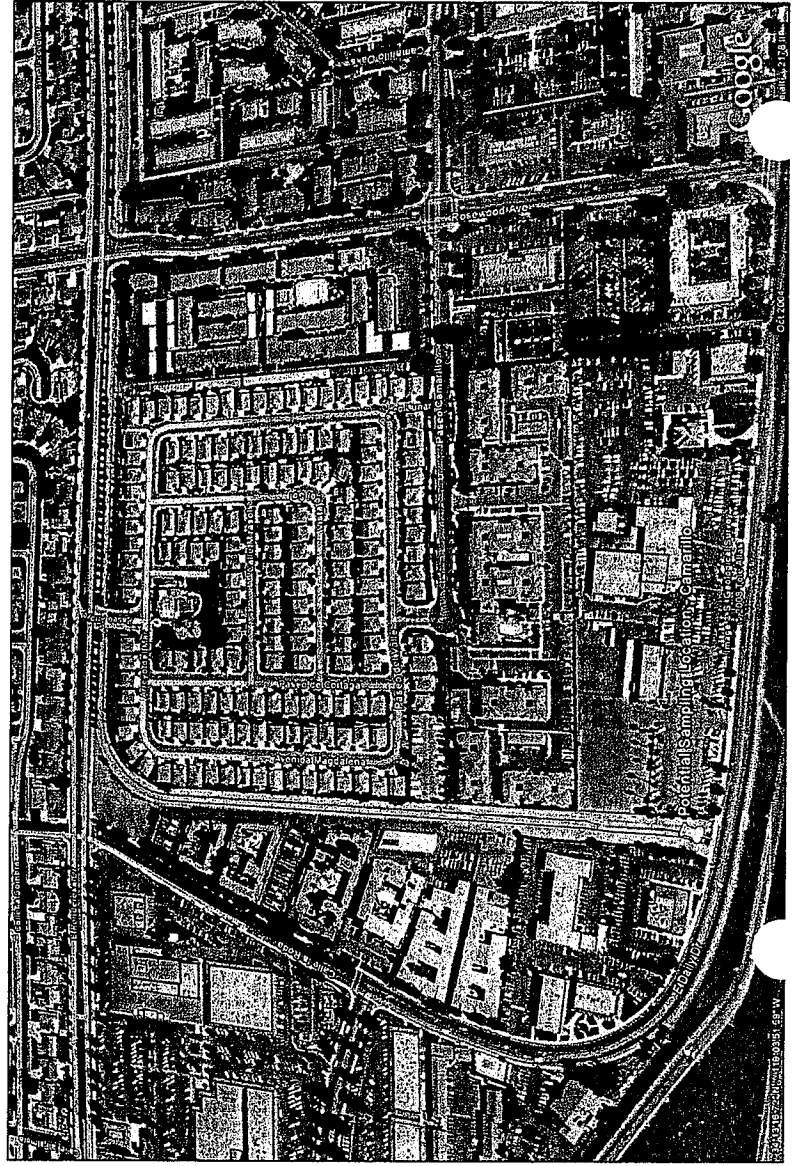
**Other Potential Sites:** None

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff

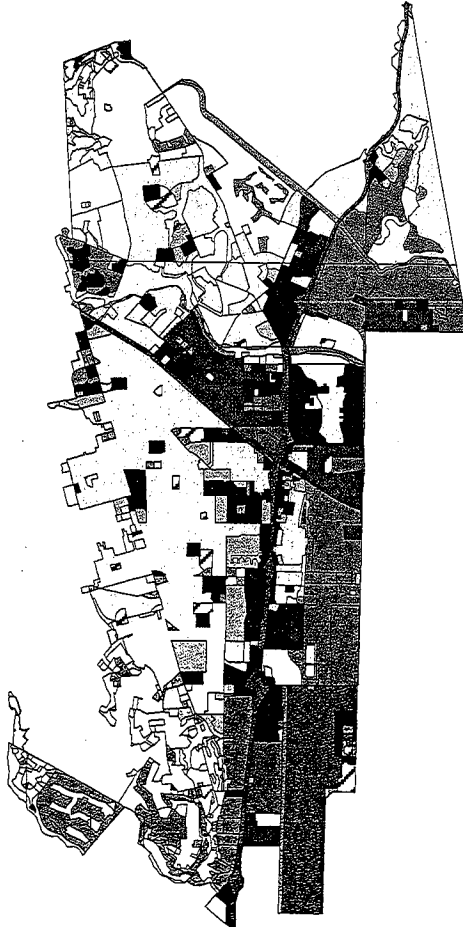


### Land Use Details for Drainage Area

Land use	Percent	Acres
Agriculture	0.01	31.59
Commer.	0.11	303.75
Facility	0.02	52.29
No Info Given	0.02	57.38
Res. 1	0.10	270.91
Res. 2	0.09	260.63
Res. 3	0.54	1514.11
Res. 4	0.01	20.16
Schools	0.04	97.14
Transportation	0.03	84.52
Under Construction	0.00	2.39
Utilities	0.00	2.60
Vacant Undiffere	0.03	88.62
	1.00	2786.08



# City Land Use Camarillo



Land Use	Percent	Acre
Agriculture	0.1258	1585.7746
Com Indus. Mix	0.0010	12.4825
Commer.	0.0521	657.2187
Extraction	0.0047	58.4407
Facility	0.0104	129.4709
Industrial 1	0.0024	32.1771
Industrial 3	0.0494	622.5578
Military 2	0.0005	5.7407
No Info Given	0.0164	202.1719
Recreation	0.0386	489.4019
Res. 1	0.1039	1305.9014
Res. 2	0.0352	443.4280
Res. 3	0.2585	3253.4781
Res. 4	0.0417	525.0315
Schools	0.0255	324.9816
Transportation	0.0759	954.1950
Under Constructi	0.0234	294.7624
Utilities	0.0204	255.8463
Vacant Undiffere	0.1136	1423.3767
Totals	1.0000	12576.4400

**Fillmore**

**Waterbody:** North Fillmore Drain (tributary to Sespe Creek)

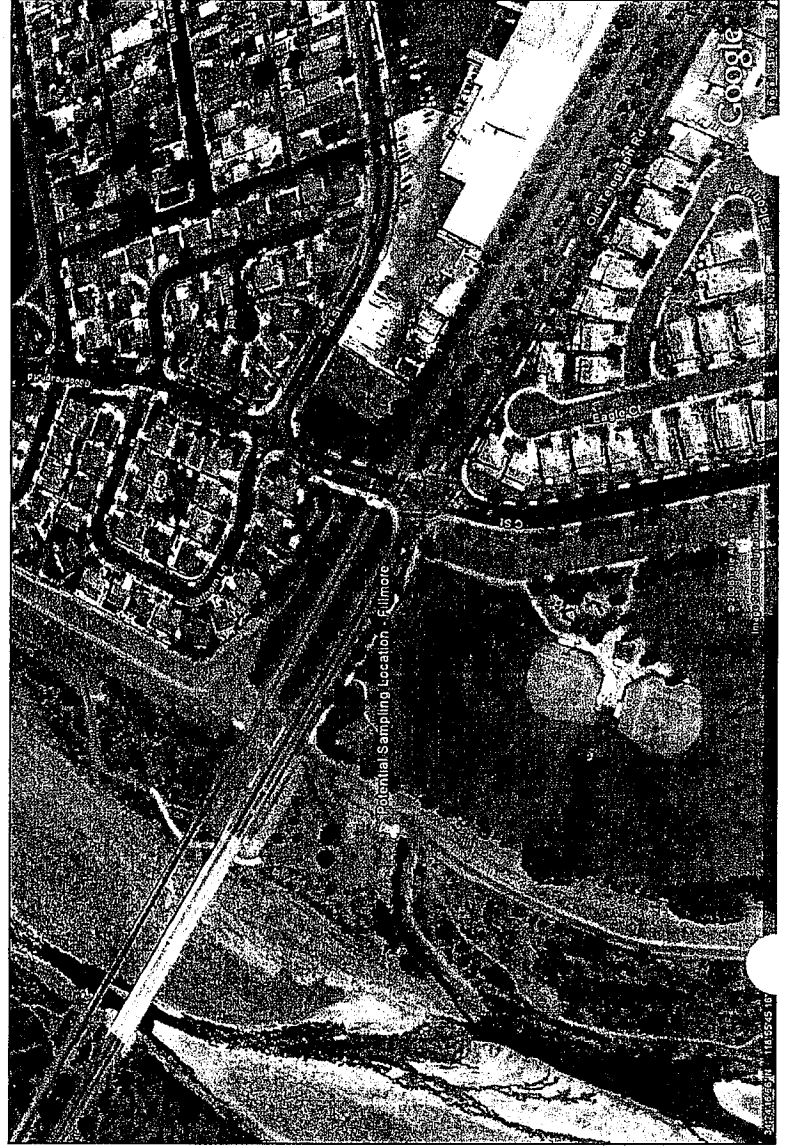
**Location:** 75 yds. southwest of Old Telegraph Rd. (34°24'16.51"N, 118°55'50.47"W)

**Pros:** Some portion of vegetation could be cleared by City of Fillmore  
**Cons:** Potential for vandalism

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** C Street Drain and Central Ave. Drain

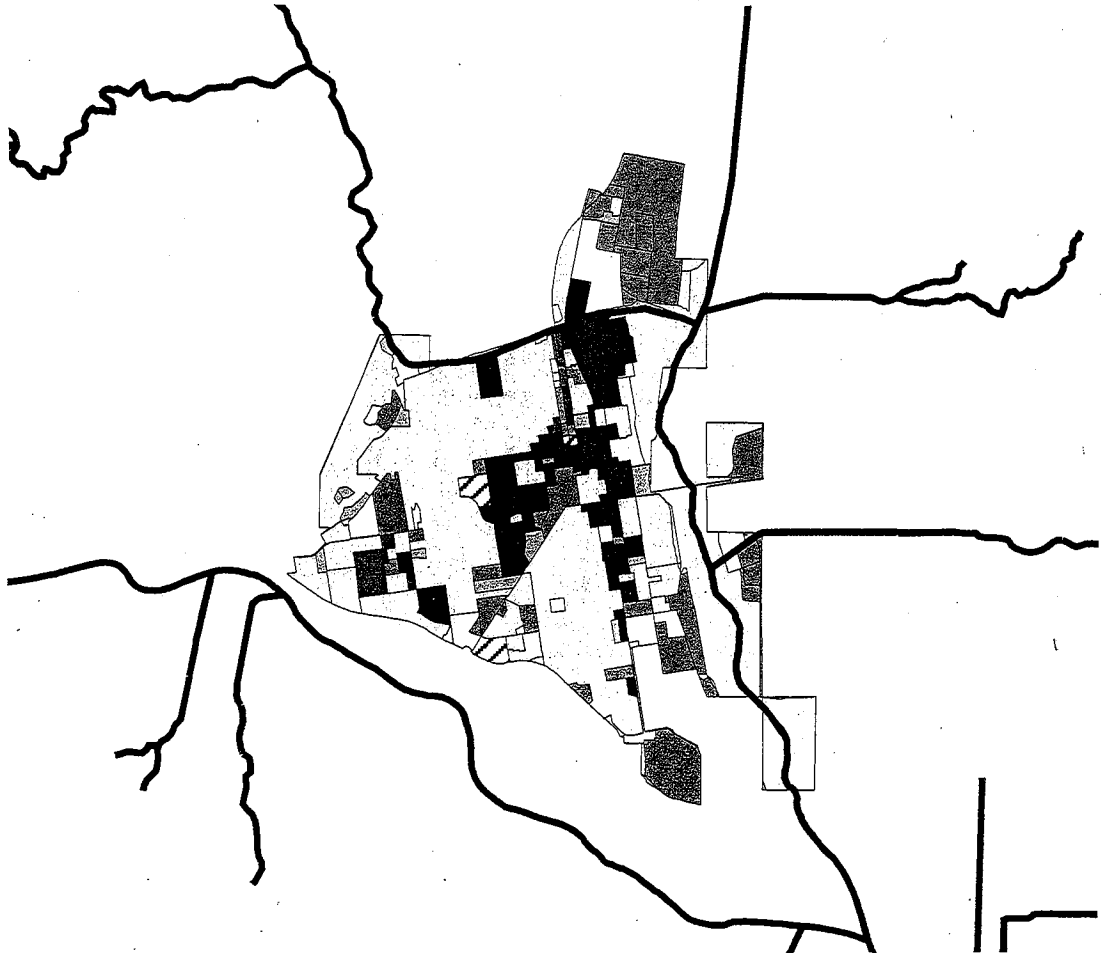
**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff



**Land Use Details for Drainage Area**

Land use	Percent	Acres
Agriculture	0.13	274.79
Com_Indus. Mix	0.01	10.42
Commer.	0.05	103.21
Facility	0.01	27.30
Industrial_1	0.02	31.33
Industrial_3	0.01	28.66
No Info Given	0.01	21.86
Res.1	0.03	52.78
Res.2	0.02	44.57
Res.3	0.34	693.14
Schools	0.04	87.58
Transportation	0.00	6.36
Under Constructi	0.03	58.40
Utilities	0.02	45.75
Vacant_Undiffere	0.28	582.49
<b>Totals</b>	<b>1.00</b>	<b>2998.65</b>

# City Land Use Fillmore



Land Use	Percent	Acres
Agriculture	0.13	274.79
Com_Indus. Mix	0.01	10.42
Commer.	0.05	103.21
Facility	0.01	27.30
Industrial_1	0.02	31.33
Industrial_3	0.01	28.66
No Info Given	0.01	21.86
Res.1	0.03	52.78
Res.2	0.02	44.57
Res.3	0.34	693.14
Schools	0.04	87.58
Transportation	0.00	6.36
Under Constructi	0.03	58.40
Utilities	0.02	45.75
Vacant Undiffere	0.28	582.49
Totals	1.00	2068.65

**Meiners Oaks (Unincorporated)**

**Waterbody:** Baldwin Rd. Drain (tributary to Ventura River)

**Location:** Northwest of Baldwin Rd. and Old Baldwin Rd. intersection (34°25'44.34"N, 119°17'41.25"W)

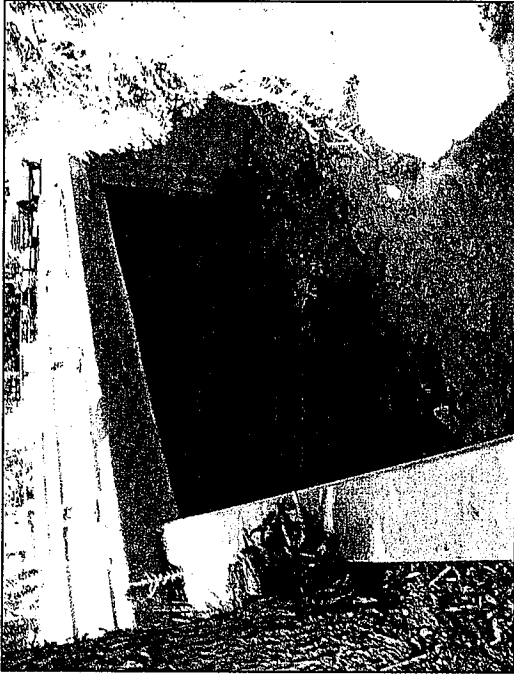
**Pros:** Good horizontal control, fairly good access

**Cons:** Vertical control varied (grouted rip-rap), moderate visibility

**Outstanding Site Selection Tasks:** Assess private property issues

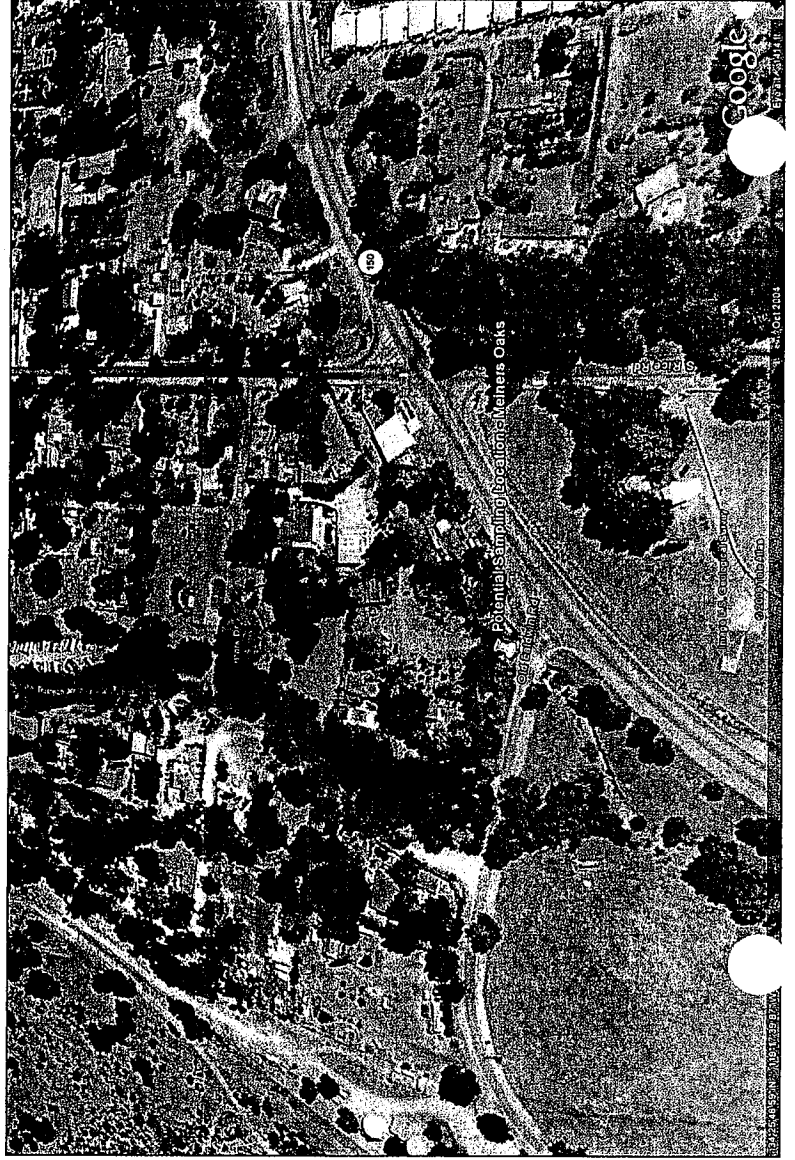
**Other Potential Sites:** Approximately 100 yds. downstream at Baldwin Rd.

**Dry Season Flow Potential:** Unknown at end of rainy season; unlikely later in summer

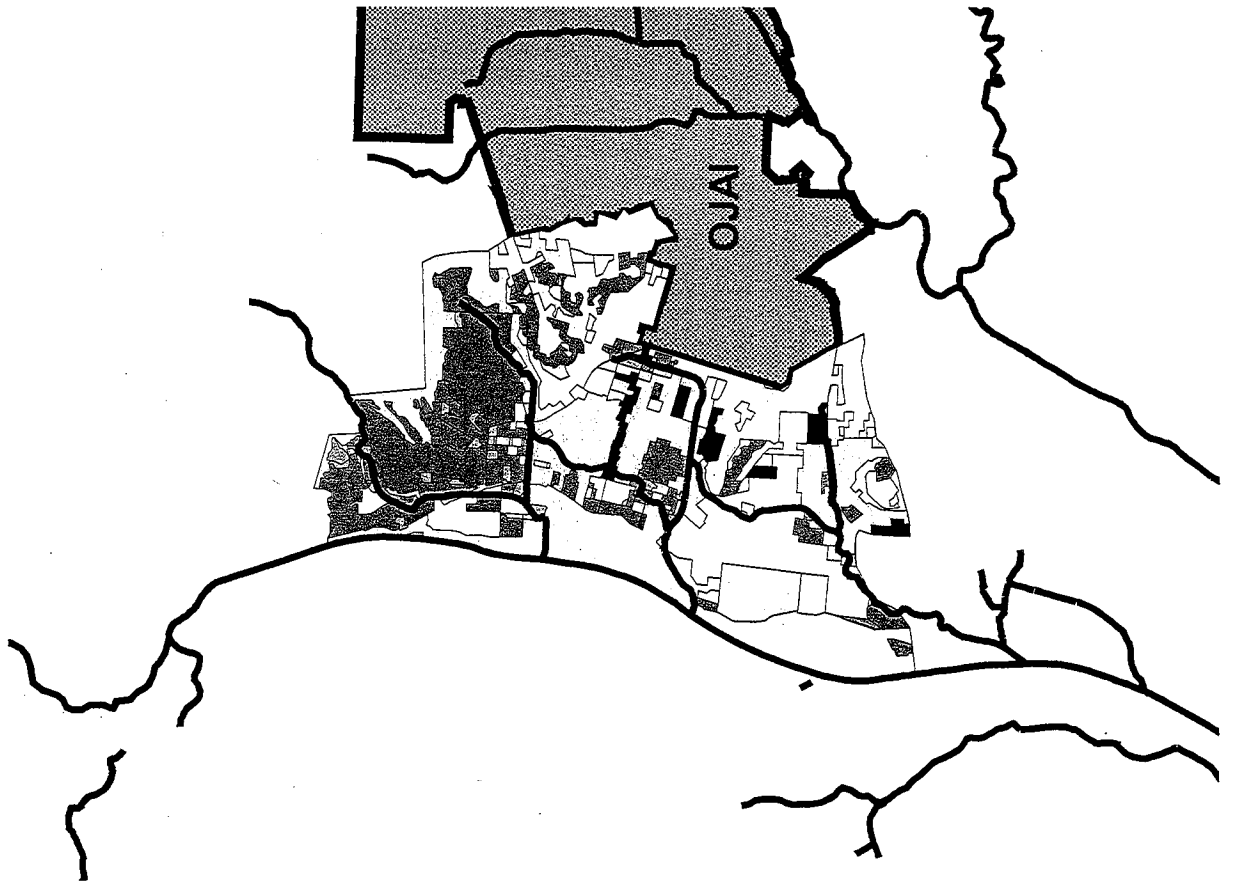


**Land Use Details for Drainage Area**

Land Use	Percent	Acre
Agriculture	0.2147	657.9549
Cemeteries	0.0000	0.0283
Commer.	0.0107	32.9880
Facility	0.0051	15.4949
Recreation	0.0097	29.9170
Res. 1	0.2647	812.3366
Res. 2	0.0143	43.9300
Res. 3	0.1510	463.3542
Schools	0.0152	46.5190
Utilities	0.0063	19.3214
Vacant Uplifere	0.3079	944.9509
	1.0000	3066.8000



# City Land Use Meiners Oaks



Land Use	Percent	Acres
Agriculture	0.2147	657.9549
Cemeteries	0.0000	0.0283
Commer.	0.0107	32.9880
Facility	0.0051	15.4949
Recreation	0.0097	29.9170
Res.1	0.2647	812.3366
Res.2	0.0143	43.9300
Res.3	0.1510	463.3542
Schools	0.0152	46.5190
Utilities	0.0063	19.3214
Vacant Undiffere	0.3079	944.9509
Totals	1.0000	3066.8000



## Moorpark

**Waterbody:** Gabbert Canyon Drain (tributary to Arroyo Las Posas)

**Location:** North side of SR 118 near southwest corner of So. Cal. Edison property (34°16'44.29"N, 118°54'19.40"W)

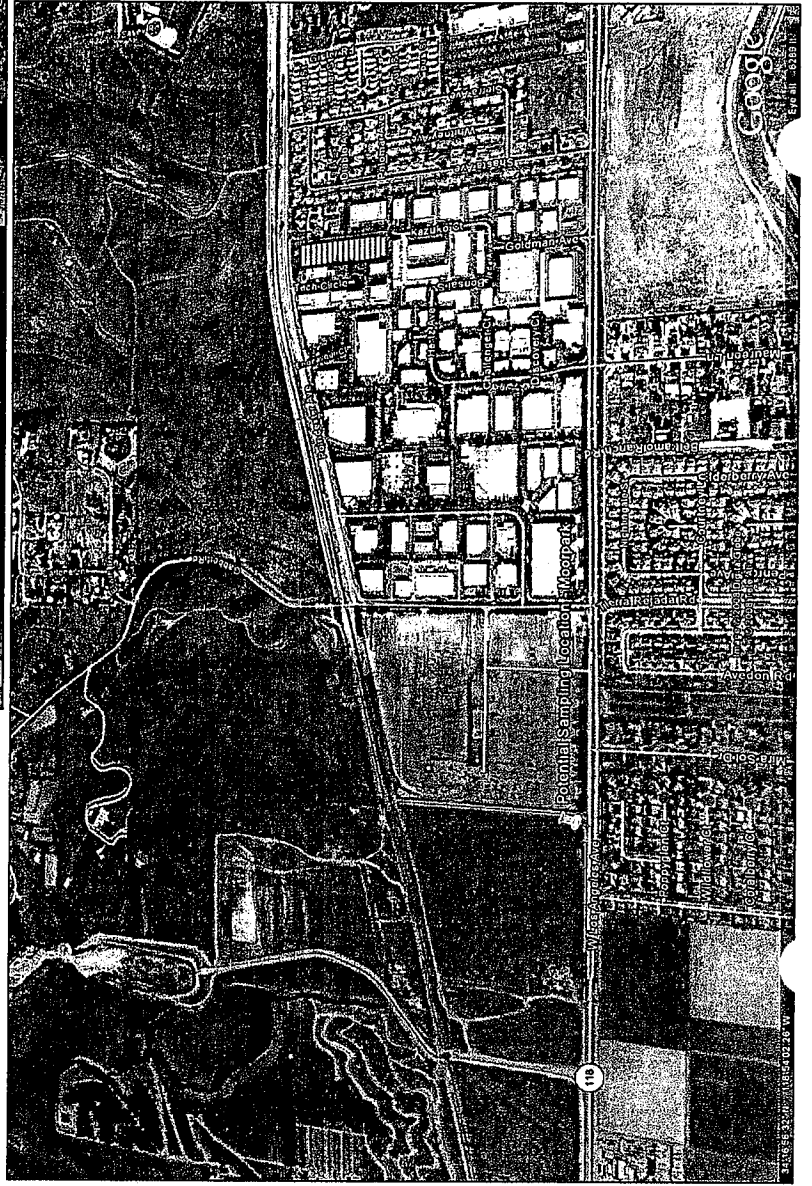
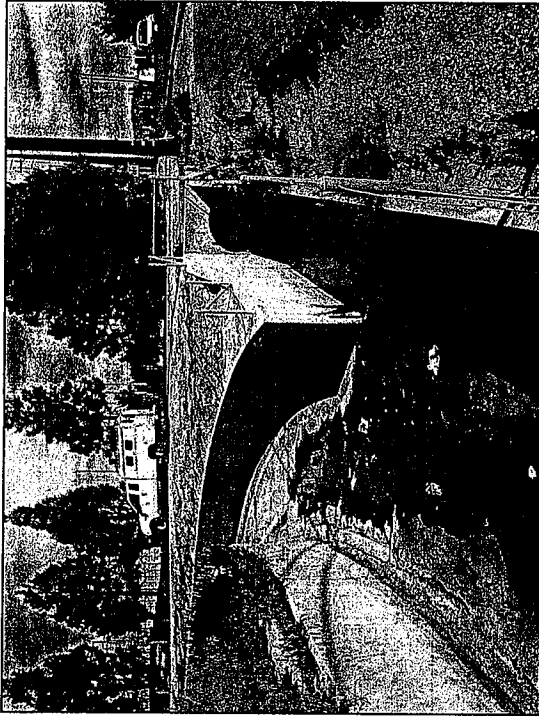
**Pros:** Likely well-defined rating table

**Cons:** Aerial deposition from vehicular traffic on 118, potential for vandalism

**Outstanding Site Selection Tasks:** Move sampling location shown on watershed map

**Other Potential Sites:** Upstream current location, although site would interfere with access road

**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff



### Land Use Details for Drainage Area

Land use	Percent	Acre
Agriculture	0.22	478.89
Commer.	0.01	6.71
Extraction	0.00	0.34
Facility	0.01	16.85
Industrial 1	0.01	23.59
Industrial 3	0.05	100.93
Recreation	0.01	31.01
Res. 1	0.04	82.31
Res. 2	0.02	37.22
Res. 3	0.03	57.59
Res. 4	0.00	1.48
Schools	0.00	10.52
Transportation	0.00	3.07
Under Construction	0.08	166.23
Utilities	0.05	111.89
Vacant Undiffere	0.47	1021.25
	1.00	2149.87



# City Land Use Moorpark



Land Use	Percent	Acre
Agriculture	0.04	351.726
Com Indus. Mix	0.00	9.140
Commer.	0.02	196.280
Extraction	0.00	39.164
Facilitiy	0.01	40.864
Industrial_1	0.00	21.331
Industrial_3	0.03	225.246
No Info Given	0.02	148.271
Recreation	0.02	186.119
Res.1	0.03	213.527
Res.2	0.02	190.449
Res.3	0.23	1854.568
Res.4	0.01	106.770
Schools	0.04	302.143
Transportation	0.02	198.042
Under Constructi	0.06	472.895
Utilities	0.03	211.873
Vacant Undiffere	0.40	3213.132
Totals	1.00	7981.540

## Ojai

**Waterbody:** Fox Canyon Barranca (tributary to San Antonio Creek)

**Location:** Concrete box channel upstream Ojai Valley Athletic Club and downstream pedestrian walkway (34°26'41.25"N, 119°14'28.43"W)

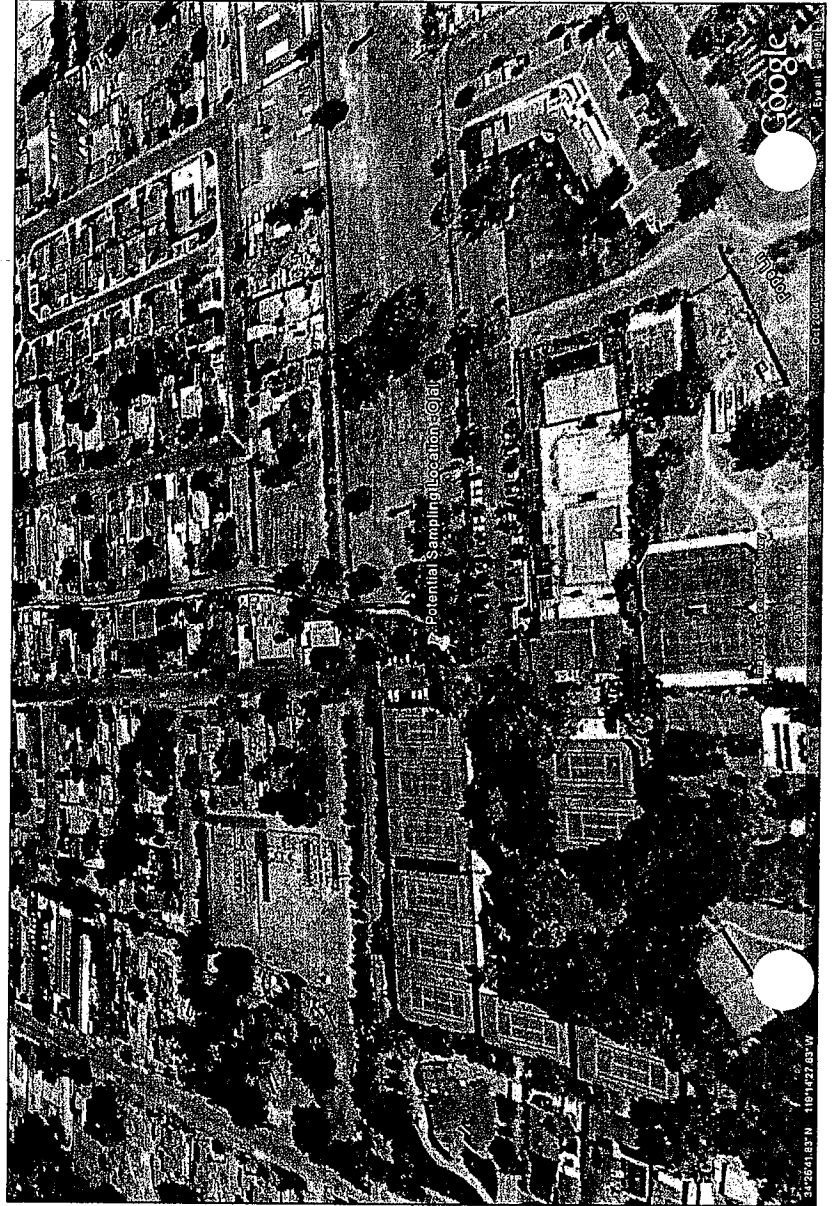
**Pros:** Numerous bridges to sample from, located behind VCWPD gate, likely well-defined rating table

**Cons:** Some potential for vandalism

**Outstanding Site Selection Tasks:** Work with VCWPD O&M to ensure enclosure doesn't interfere with maintenance activities

**Other Potential Sites:** Downstream where Stewart Canyon crosses beneath Ventura St. (bioassessment #8)

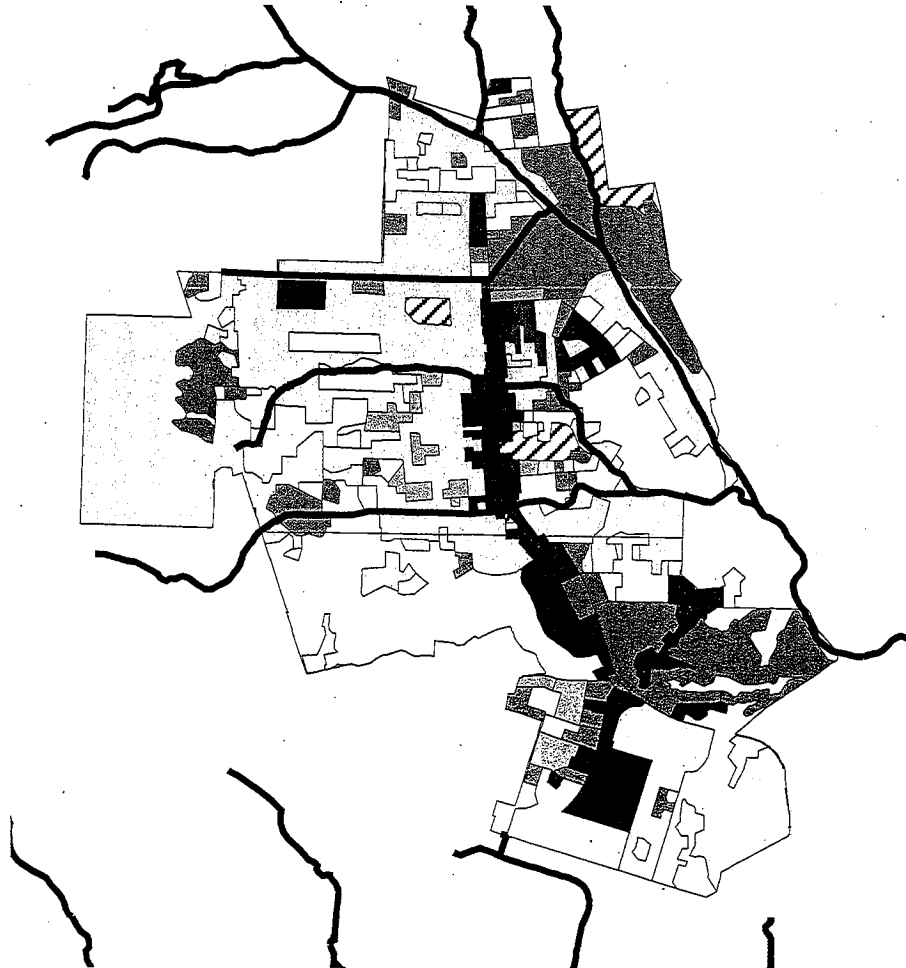
**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff



**Land Use Details for Drainage Area**

Land use	Percent	Acres
Agriculture	0.04	41.39
Com Indus. Mix	0.00	0.55
Commer.	0.05	56.00
Facility	0.01	7.86
Industrial 3	0.01	13.24
No Info Given	0.03	27.39
Recreation	0.01	14.76
Res. 1	0.14	140.32
Res. 2	0.04	38.34
Res. 3	0.27	280.68
Res. 4	0.00	3.28
Schools	0.02	24.58
Utilities	0.00	3.99
Vacant Land/Forest	0.37	381.12
	1.00	1033.51

# City Land Use Ojai



Land Use	Percent	Acre
Agriculture	0.0298	83.1481
Cemeteries	0.0014	3.8334
Com_Indus. Mix	0.0027	7.6182
Commer.	0.0557	155.1137
Facility	0.0154	43.2255
Industrial 3	0.0048	13.2375
No Info Given	0.0199	55.6258
Recreation	0.1118	312.0504
Res.1	0.2217	620.7189
Res.2	0.0219	61.3324
Res.3	0.1914	534.8453
Res.4	0.0011	3.2763
Schools	0.0360	100.6181
Utilities	0.0119	32.9340
Vacant Undiffere	0.2747	767.1168
Totals	1.0000	2794.6900

## Oxnard

**Waterbody:** El Rio Drain (tributary to Santa Clara River)

**Location:** Manhole near pedestrian walkway along Ventura Rd., 185 yards southwest of railroad tracks (34°14'17.38"N, 119°11'23.08"W)

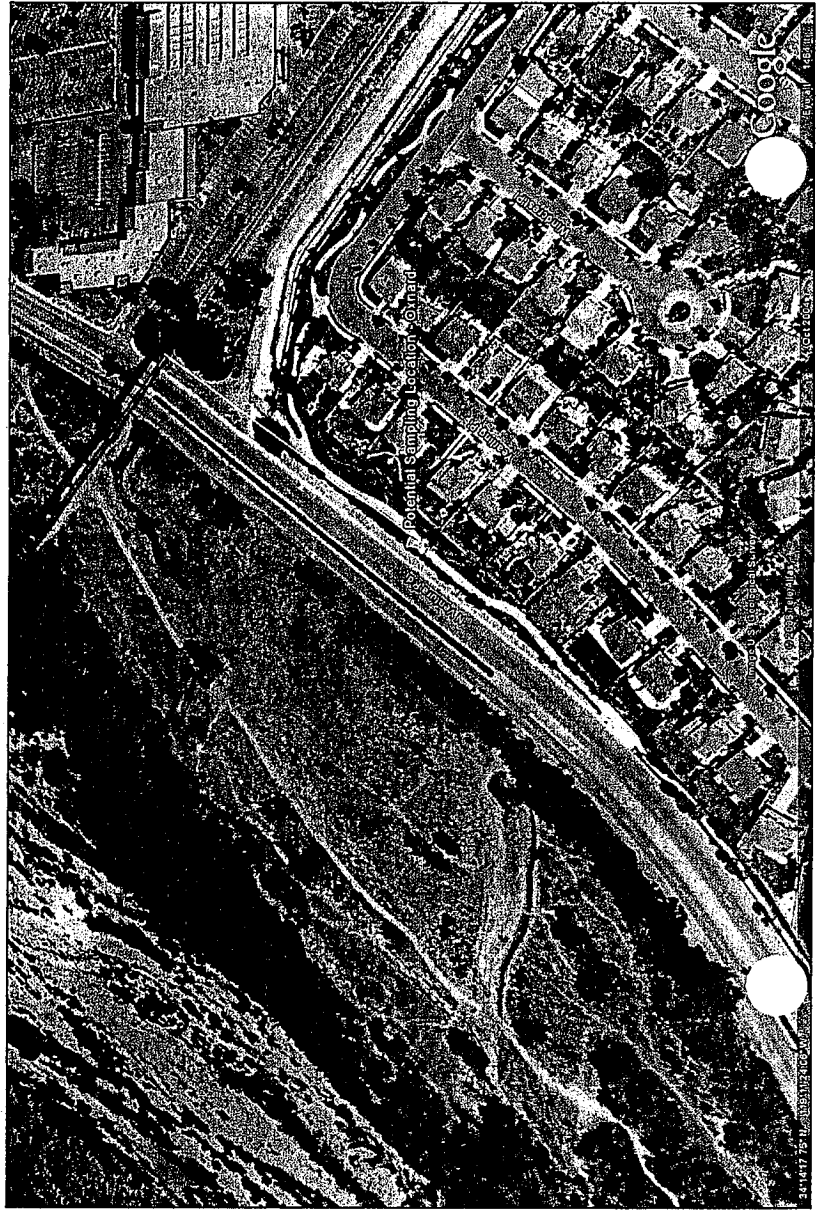
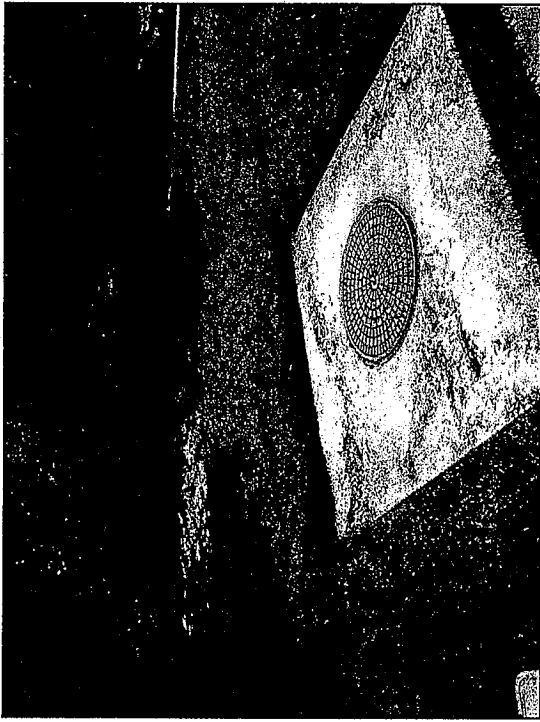
**Pros:** Likely well-defined rating table, fairly secure inside manhole

**Cons:** All equipment below-ground (maintenance and trouble-shooting more complicated)

**Outstanding Site Selection Tasks:** Move sampling location shown on watershed map

**Other Potential Sites:** 150 yds. to northeast before El Rio Drain goes underground

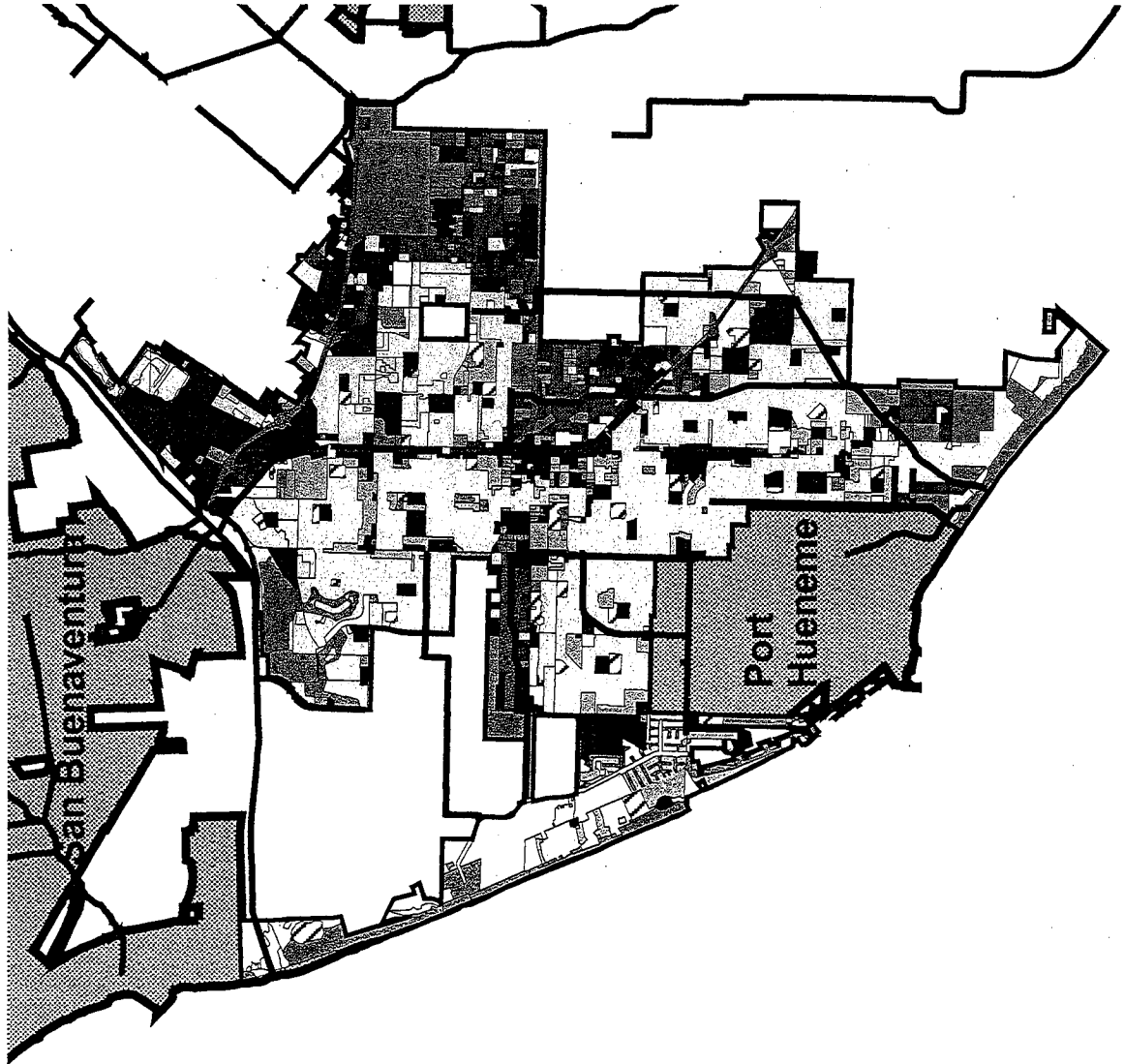
**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff



**Land Use Details for Drainage Area**

Land Use	Percent	Acre
Agriculture	0.02	38.44
Commer.	0.12	284.90
Facility	0.04	88.55
Industrial_1	0.00	9.22
Industrial_3	0.00	0.89
Military_2	0.01	15.26
No Info Given	0.03	81.06
Recreation	0.00	3.91
Res.1	0.00	0.53
Res.2	0.18	424.26
Res.3	0.50	1181.25
Res.4	0.02	47.44
Schools	0.06	148.01
Transportation	0.00	3.77
Under Constructi	0.00	9.11
Utilities	0.00	9.88
Vacant Und:ffere	0.00	6.89
	1.00	2352.35

# City Land Use Oxnard



Land use	Percent	Acres
Agriculture	0.0563	969.3590
Cemeteries	0.0013	22.4117
Com_Indus. Mix	0.0094	165.0848
Commer.	0.0802	1385.8709
Extraction	0.0132	227.2617
Facility	0.0140	244.8177
Industrial_1	0.0095	163.7167
Industrial_3	0.0645	1104.0045
Industrial_4	0.0036	62.2570
Military_1	0.0001	1.7304
Military_2	0.0002	4.0172
No Info Given	0.0215	371.5759
Recreation	0.0392	679.4447
Res.1	0.0216	369.0647
Res.2	0.0669	1149.3005
Res.3	0.3433	5892.4337
Res.4	0.0095	162.9984
Schools	0.0410	703.4811
Transportation	0.0329	560.5159
Under Constructi	0.0465	802.6182
Utilities	0.0175	298.0009
Vacant Undiffere	0.1011	1740.2449
Water	0.0046	82.0022
Totals	1.0000	17162.2100

## Port Hueneme

**Waterbody:** Hueneme Drain (tributary to Pacific Ocean)

**Location:** Pedestrian bridge 200 yds. downstream Surfside Dr. (34° 8'29.30"N, 119°11'21.09"W)

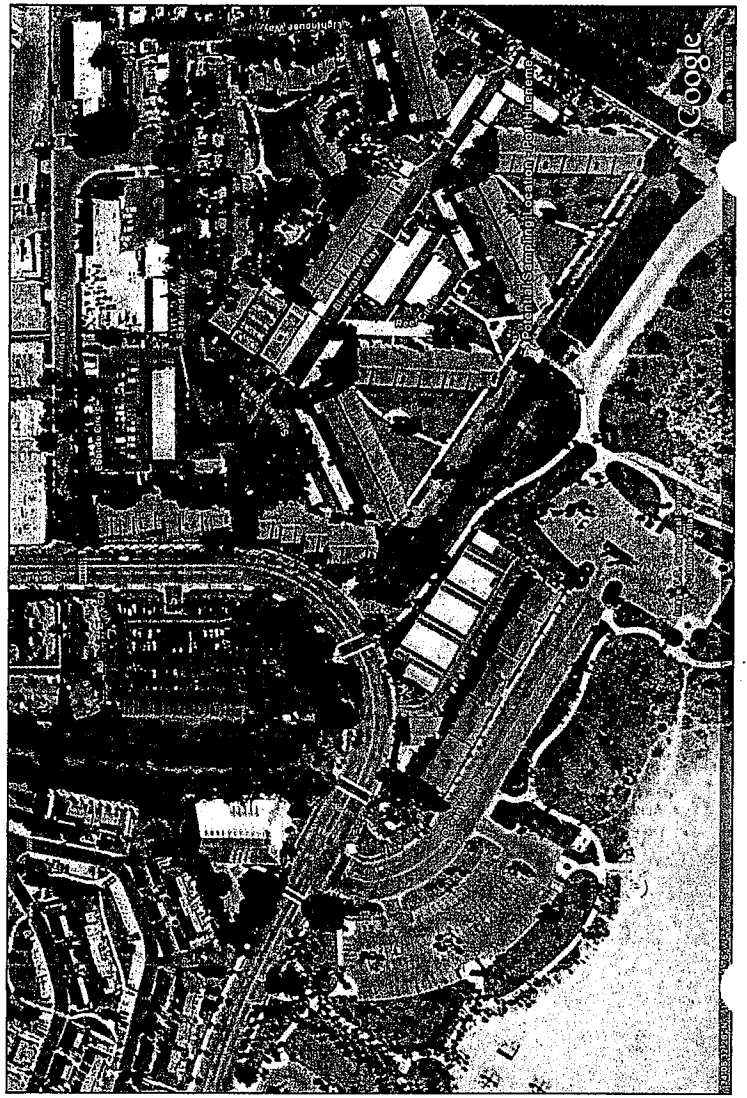
**Pros:** Grass-covered sides fairly stable

**Cons:** Lots of activity nearby, high potential for vandalism, stagnant water

**Outstanding Site Selection Tasks:** Verify positive flow

**Other Potential Sites:** At Surfside Rd. at lower end of Bubbling Springs Park

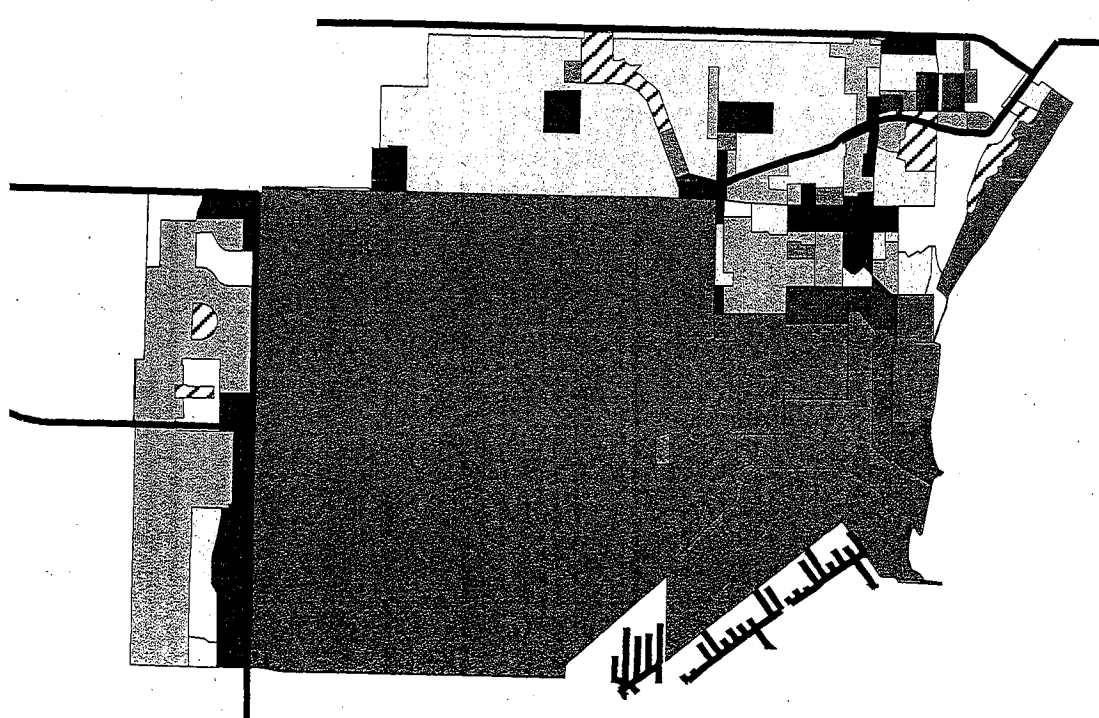
**Dry Season Flow Potential:** Likely year-round flow due to urban runoff and groundwater contribution



**Land Use Details for Drainage Area**

Land use	Percent	Acre
Commer.	0.03	19.21
Facility	0.03	15.15
Industrial 3	0.02	9.99
Military 2	0.01	5.69
No Info Given	0.06	35.84
Res. 2	0.08	45.47
Res. 3	0.61	359.09
Res. 4	0.07	40.85
Schools	0.06	32.63
Under Constructi	0.00	2.10
Utilities	0.01	6.55
Vacant Undiffere	0.03	16.81
	1.00	589.42

# City Land Use Port Hueneme



Kvm_cat1	Sum_percent	Sum_acre
Commer.	0.0366	105.3656
Facility	0.0070	20.4377
Industrial_1	0.0113	32.5143
Industrial_3	0.0121	34.9072
Military_2	0.5396	1558.4059
No Info Given	0.0185	53.7006
Recreation	0.0134	38.5308
Res.2	0.1066	308.2959
Res.3	0.1501	432.8983
Res.4	0.0362	104.3382
Schools	0.0144	41.5753
Transportation	0.0103	29.7226
Under Constructi	0.0007	2.1033
Utilities	0.0021	5.9975
Vacant Undiffere	0.0123	35.4306
Water	0.0289	83.6482
Totals	1.0000	2887.8700



## Simi Valley

**Waterbody:** Bus Canyon Drain (tributary to Arroyo Simi)

**Location:** North of intersection at 5<sup>th</sup> St. and Los Angeles Ave. (34°16'18.59"N, 118°47'1.51"W)

**Pros:** Likely well-defined rating table, located behind VCWPD gate

**Cons:** Pedestrian traffic on levee nearby

**Outstanding Site Selection Tasks:** Assess impacts of large groundwater discharge upstream, move sampling location shown on watershed map

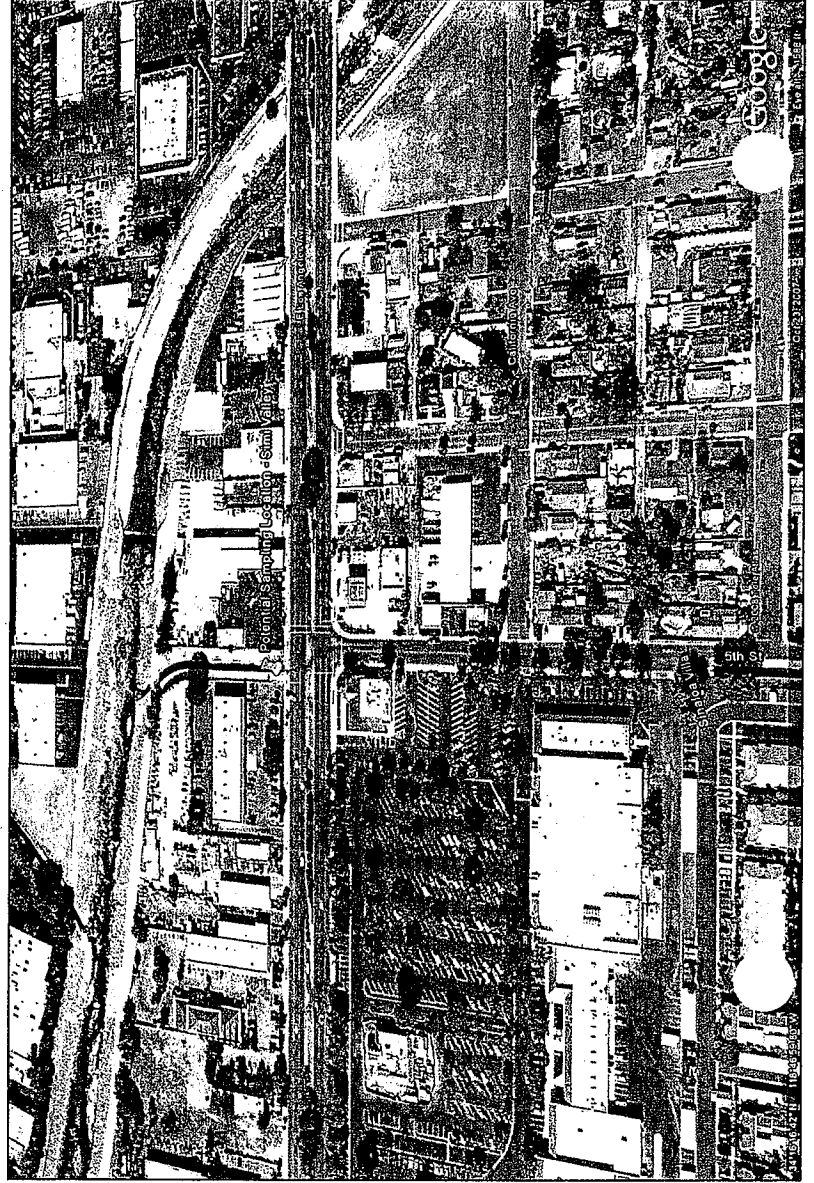
**Other Potential Sites:** Upstream at 5<sup>th</sup> and Ventura Ave.

**Dry Season Flow Potential:** Likely year round flow due to urban runoff and groundwater discharge upstream



### Land Use Details for Drainage Area

Land use	Percent	Acre
Agriculture	0.01	33
Cemeteries	0.00	10
Commer.	0.01	23
Facility	0.00	13
No Info Given	0.00	9
Res. 1	0.12	395
Res. 2	0.01	40
Res. 3	0.24	783
Schools	0.03	97
Under Construction	0.00	16
Utilities	0.00	2
Vacant Undiffere	0.57	1900
	1.00	3321





# City Land Use Simi Valley



Land Use	Percent	Acres
Agriculture	0.0162	435.4883
Cemeteries	0.0012	34.2790
Com_Indus_Mix	0.0010	24.4053
Commer.	0.0390	1051.3804
Extraction	0.0041	111.8102
Facility	0.0078	217.0850
Industrial_1	0.0019	50.2601
Industrial_3	0.0130	353.3034
Industrial_4	0.0002	5.9227
No Info Given	0.0145	381.9865
Recreation	0.0204	560.9333
Res.1	0.0374	1024.9952
Res.2	0.0219	585.9593
Res.3	0.2946	7947.6525
Res.4	0.0041	110.7140
Schools	0.0193	517.4710
Transportation	0.0204	546.9367
Under Constructi	0.0144	385.6229
Utilities	0.0095	260.9715
Vacant Undiffere	0.4560	12291.4509
Totals	1.0000	26898.6300

## Santa Paula

**Waterbody:** 11<sup>th</sup> Street Drain (tributary to Santa Clara River)

**Location:** Upstream Santa Paula Airport (34°20'54.99"N, 119° 3'19.82"W)

**Pros:** Excellent flat pad on top of outfall for sampling equipment

**Cons:** High potential for vandalism

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

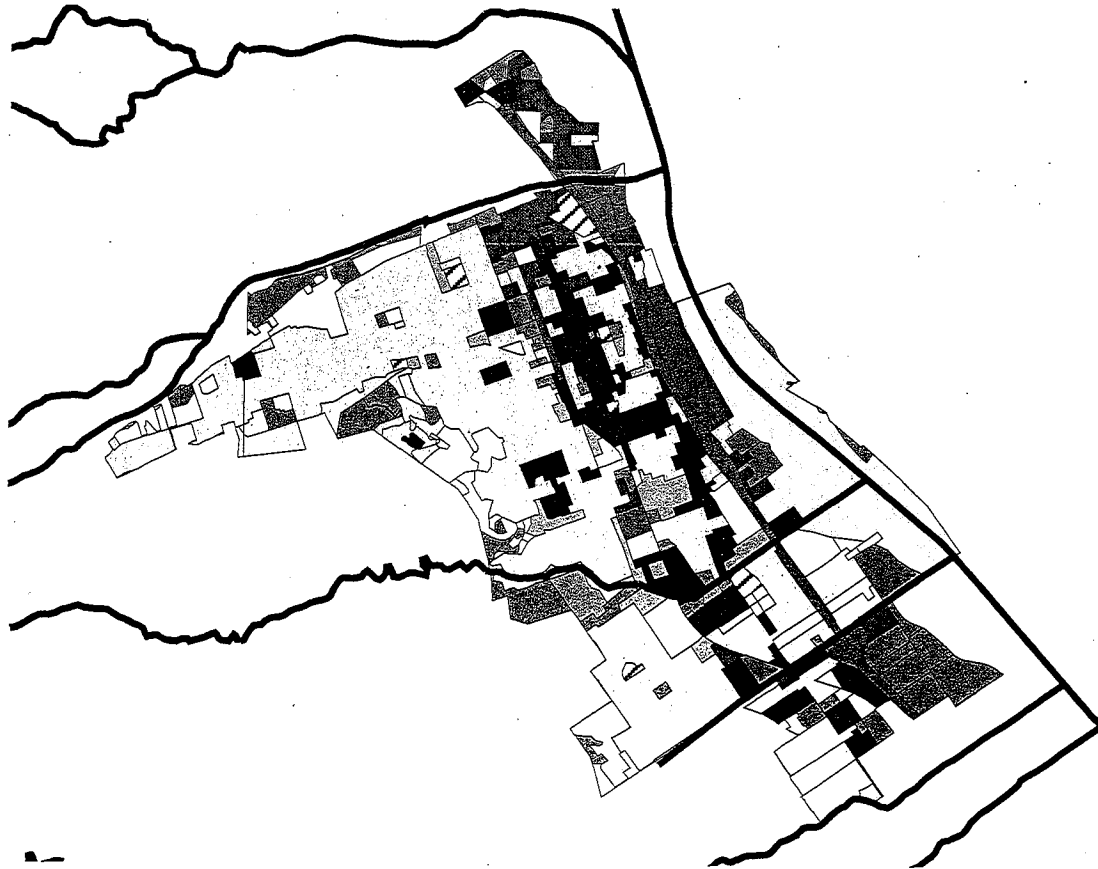
**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff. No flow at time of initial observation



### Land Use Details for Drainage Area

Land Use	Percent	Acres
Agriculture	0.02	16.48
Commer.	0.10	112.48
Extraction	0.01	8.64
Facility	0.02	24.35
Industrial 1	0.02	21.35
Industrial 3	0.01	14.37
No Info Given	0.00	5.22
Res. 1	0.08	88.73
Res. 2	0.04	44.52
Res. 3	0.34	374.31
Res. 4	0.01	5.86
Schools	0.05	57.91
Transportation	0.09	92.23
Under Constructi	0.00	2.68
Utilities	0.00	2.94
Vacant Undiffere	0.20	213.55

# City Land Use Santa Paula



Land Use	Percent	Acres
Agriculture	0.0701	210.2608
Cemeteries	0.0065	19.4447
Com_Indus. Mix	0.0015	4.6427
Commer.	0.0784	235.3535
Extraction	0.0101	30.4699
Facilitiy	0.0141	42.3856
Industrial_1	0.0244	73.7397
Industrial_3	0.0445	133.0462
No Info Given	0.0112	33.4767
Recreation	0.0016	4.7097
Res.1	0.0890	266.8856
Res.2	0.0288	86.8062
Res.3	0.3552	1065.8808
Res.4	0.0156	46.7632
Schools	0.0305	91.7347
Transportation	0.0554	166.3944
Under Constructi	0.0029	8.7402
Utilities	0.0137	41.1479
Vacant Undiffere	0.1468	440.5522
Totals	1.0000	3002.4300

## Thousand Oaks

**Waterbody:** North Fork Arroyo Conejo (tributary to Conejo Creek)

**Location:** Hill Canyon WWTP sampling location R-1(34°12'49.16"N, 118°55'16.24"W)

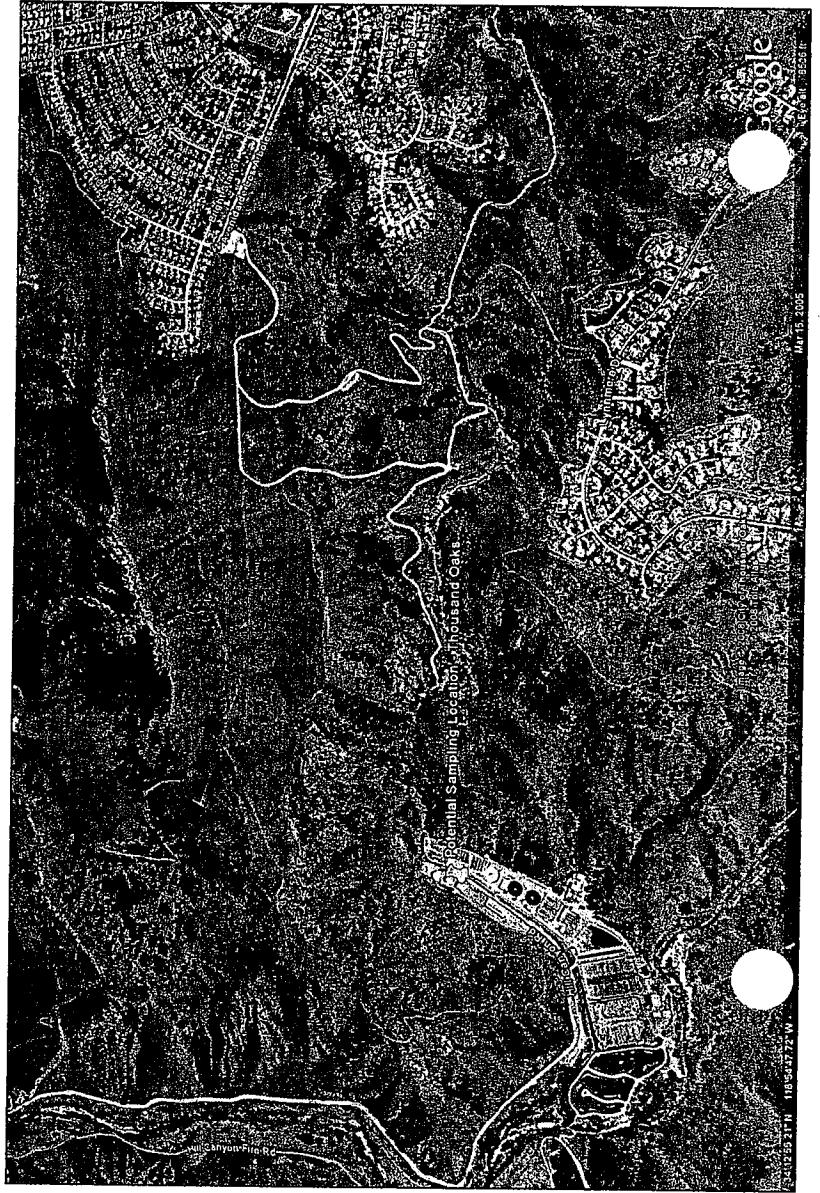
**Pros:** Very secure, helpful staff onsite, fairly well-defined channel, accessible via concrete stairs

**Cons:** Late-night access to WWTP could present problem

**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

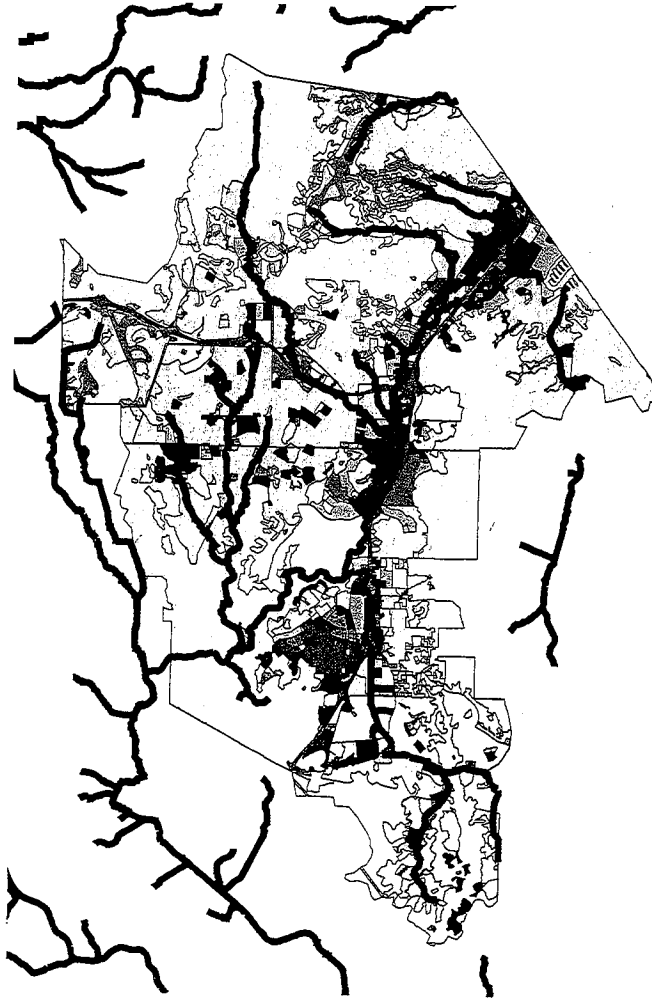
**Dry Season Flow Potential:** Likely year-round flow due to urban runoff



**Land Use Details for Drainage Area**

Land use	Percent	Acre
Agriculture	0.00	14
Commer.	0.02	83
Facility	0.01	67
No Info Given	0.02	95
Recreation	0.00	9
Res. 1	0.02	90
Res. 2	0.01	71
Res. 3	0.50	2644
Res. 4	0.02	84
Schools	0.04	224
Transportation	0.01	62
Under Construction	0.02	79
Utilities	0.01	77
Vacant Undiffere	0.32	1676
	1.00	5276

# City Land Use Thousand oaks



Land Use	Percent	Acre
Agriculture	0.0057	207.0276
Com Indus. Mix	0.0006	23.1939
Commer.	0.0424	1499.6829
Extraction	0.0003	8.9594
Facility	0.0083	291.5793
Industrial 1	0.0025	94.2592
Industrial 3	0.0129	457.7459
No Info Given	0.0131	459.1938
Recreation	0.0165	574.1982
Res.1	0.0469	1683.8501
Res.2	0.0280	1000.3003
Res.3	0.2644	9323.5639
Res.4	0.0080	288.0990
Schools	0.0170	587.5876
Transportation	0.0172	605.3885
Under Constructi	0.0080	281.5617
Utilities	0.0069	260.5872
Vacant Undiffere	0.4965	17465.0543
Totals	1.0000	35111.8300

## Ventura

**Waterbody:** Moon Ditch (tributary to Santa Clara River)

**Location:** Between Leland St. and US 101, north of Johnson Dr. (34°14'35.86"N, 119°11'40.86"W)

**Pros:** Likely well-defined rating table, fairly good protection (located behind VCWPPD gate)

**Cons:** Wide concrete bottom will spread out low flows, placement of intake somewhat difficult

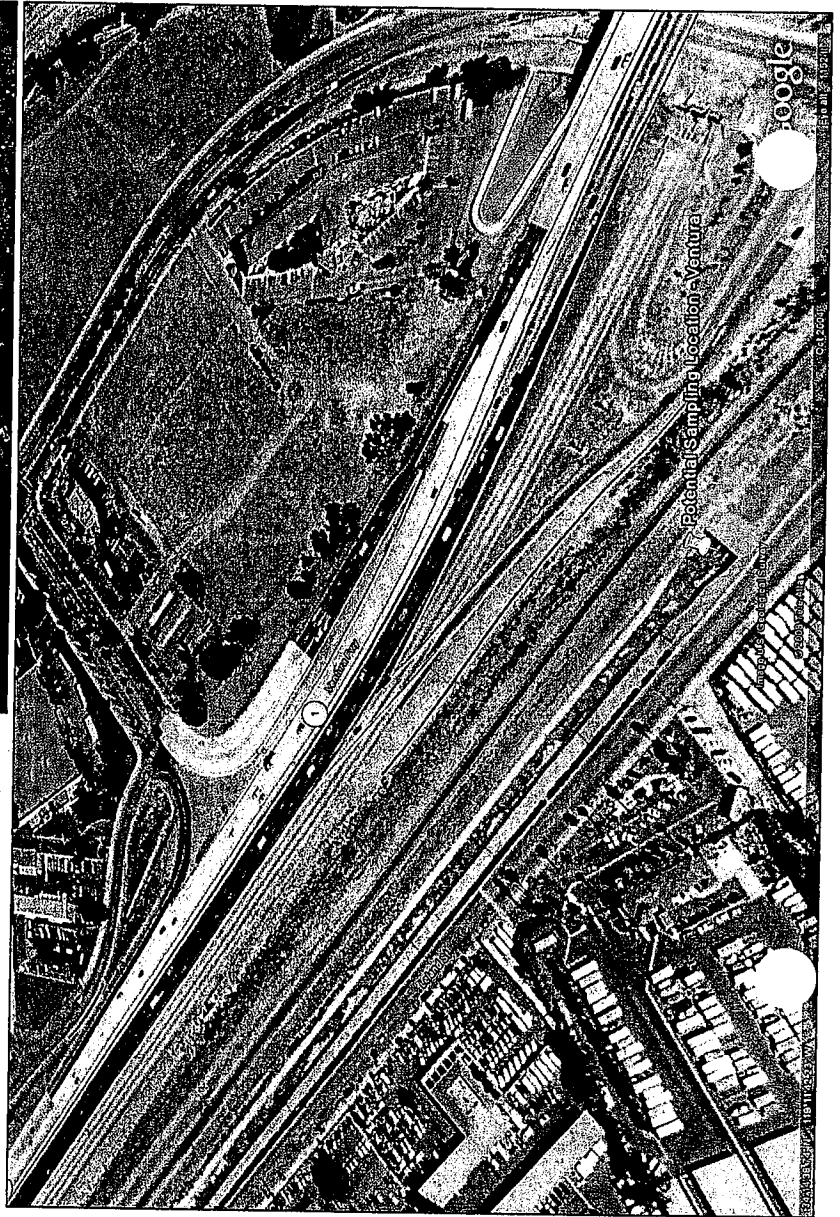
**Outstanding Site Selection Tasks:** None

**Other Potential Sites:** None

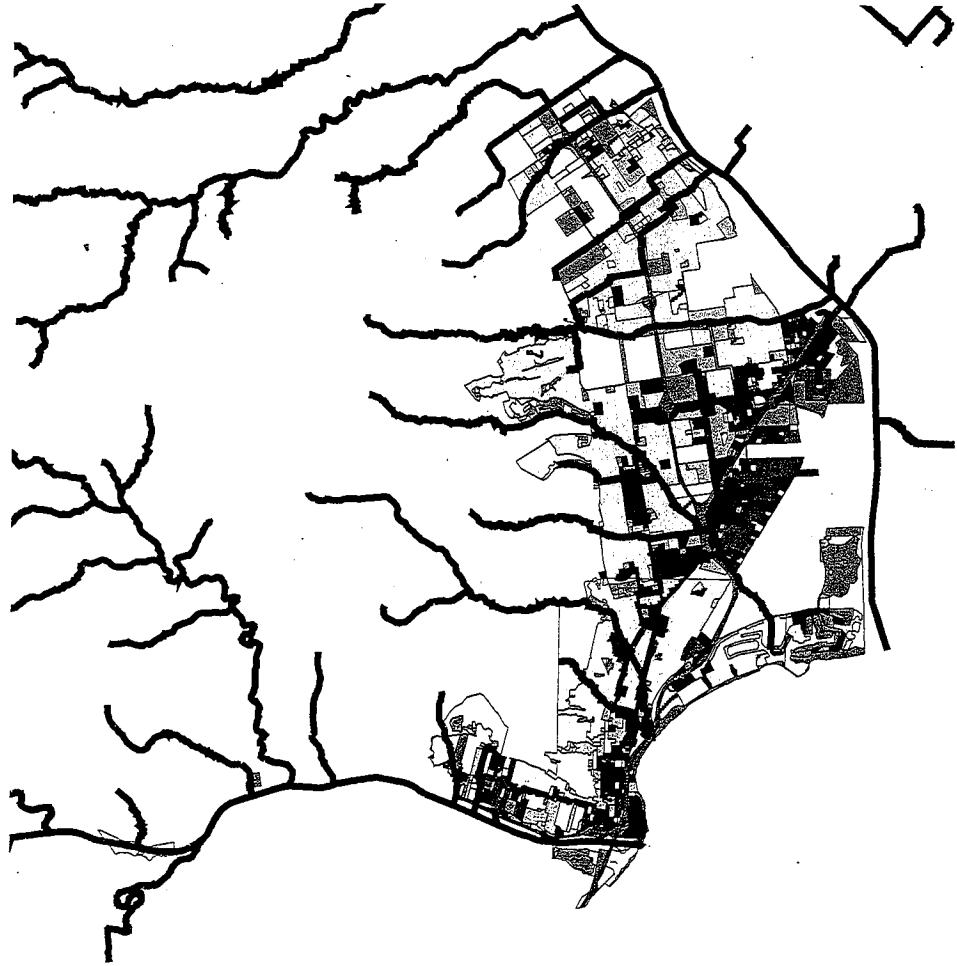
**Dry Season Flow Potential:** Likely intermittent year-round flow due to urban runoff

### Land Use Details for Drainage Area

Land Use	Percent	Acres
Agriculture	0.01	5.83
Com Indus. Mix	0.01	6.53
Commer.	0.24	171.75
Extraction	0.01	6.30
Industrial_1	0.02	10.75
Industrial_3	0.03	22.96
No info Giver	0.01	5.28
Res. 1	0.01	8.72
Res. 2	0.15	109.07
Res. 3	0.33	234.85
Res. 4	0.01	4.83
Schools	0.03	18.39
Transportation	0.06	40.75
Under Construction	0.04	26.58
Utilities	0.00	3.46
Vacant Undiffere	0.02	16.32
	1.00	692.46



# City Land Use San Buenaventura



Land Use	Percent	Acres
Agriculture	0.0474	667.6195
Cemeteries	0.0051	72.5784
Com_Indus. Mix	0.0068	95.3573
Commer.	0.1003	1402.8554
Extraction	0.0028	39.1869
Facilitiy	0.0217	303.7800
Industrial_1	0.0063	90.5285
Industrial_3	0.0445	619.5500
Military_2	0.0003	3.6231
No Info Given	0.0205	285.7144
Recreation	0.0370	516.2863
Res.1	0.0258	361.0833
Res.2	0.0661	923.9946
Res.3	0.3716	5209.6452
Res.4	0.0052	72.3674
Res.5	0.0002	2.8393
Schools	0.0358	495.8359
Transportation	0.0406	570.0459
Under Constructi	0.0053	73.6732
Utilities	0.0089	125.4181
Vacant Undiffere	0.1439	2018.0976
Water	0.0043	61.5110
Totals	1.0000	14011.5900





# California Regional Water Quality Control Board

## Los Angeles Region



Jada S. Adams  
A/EPA Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.waterboards.ca.gov/losangeles>

Arnold Schwarzer  
Governor

February 24, 2009

Mr. Jeff Pratt, Director  
Ventura Countywide Stormwater Quality Management Program  
Ventura Watershed Protection District  
800 South Victoria Avenue, L#1600  
Ventura, CA 93009

Ventura County Municipal Storm Water Permittees

### TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM ORDER (NPDES PERMIT No. CAS004002) - LETTER OF TRANSMITTAL

Dear Mr. Pratt:

We are pleased to transmit to you the Tentative National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Order (attached) and waste discharge requirements for storm water discharges and non-storm water discharges from the MS4 within the Ventura County Watershed Protection District, County of Ventura and the incorporated cities therein. The Ventura County MS4 Order requires the Ventura County Watershed Protection District, herein referred to as the Principal Permittee, and other Co-Permittees to implement the NPDES Permit No. CAS004002, including the Reporting Program (Monitoring Report and Program Report).

Permittee comments and comments from the public and other interested persons on the Tentative Ventura County MS4 Order are appreciated and due to the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board) by 5 p.m. on April 10, 2009. Comments may be mailed to the Regional Water Board, attention: Tracy Woods, Storm Water Permitting at the above address or e-mailed to:

[VenturaMS4Comments041009@waterboards.ca.gov](mailto:VenturaMS4Comments041009@waterboards.ca.gov). The Los Angeles Water Board will conduct a public hearing at the Ventura County Government Center on May 7, 2009 to receive comments on the Tentative Ventura County MS4 Order, and consider renewing the Ventura County MS4 Order.

*California Environmental Protection Agency*



*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*

**E000226**

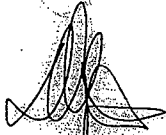


Mr. Jeff Pratt, Director  
Ventura Countywide Stormwater Quality Management Program  
Ventura Watershed Protection District

February 24, 2009

We welcome the Principal Permittee and other Municipal Permittees' continued participation and assistance during the development of the MS4 permit. Should you have any questions, please do not hesitate to call me at (213) 576-6605, or Samuel Unger at (213) 576-6622.

Sincerely,

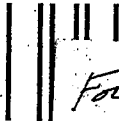


Chief Deputy S.O.

Tracy J. Egoscue  
Executive Officer

Enclosure

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Los Angeles Regional  
Control Board  
320 West 4th St., Suite 200  
Los Angeles, CA 90013

*TRACY WOODS*

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**320 W. 4th Street, Suite 200  
Los Angeles, California 90013  
(213) 576-6600**

**Public Notice No. 09-070  
NPDES No. CAS004002**

**NOTICE**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION PERMIT AMENDMENT  
for  
THE COUNTY OF VENTURA WATERSHED PROTECTION DISTRICT  
THE COUNTY OF VENTURA AND INCORPORATED CITIES THEREIN  
(Municipal Separate Storm Sewer System)**

The County of Ventura Watershed Protection District, the County of Ventura and the Incorporated Cities Therein (hereinafter Permittee) discharged waste from its Municipal Separate Storm Sewer System under waste discharge requirements, which served as an NPDES permit, contained in Order No. 00-108, adopted by the Regional Board on July 27, 2000 (NPDES Permit No. CAS004002).

The area covered by this Order includes all areas within Ventura County boundaries and all areas within each co-permittee's boundaries that drain into the MS4. The Permittees covered under this Order were designated on a system-wide basis under Phase I of the CWA § 402(p)(3)(B)(i). The action of covering all Ventura County municipalities under a single MS4 permit on a system-wide basis was consistent with the provisions of 40 CFR122.26(a)(3)(iv), which states that one permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems; and the Regional Water Board may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.

Permittees have expressed their intention to work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system. Permittees filed a report of waste discharge (ROWD) and applied for renewal of its WDRs and NPDES permit for discharge of wastes to surface waters on January 26, 2005.

Storm water discharges consist of surface water runoff generated from various land uses in all the hydrologic drainage basins, which discharge into Waters of the State. The quality of these discharges varies and is affected by geology, land use, season, hydrology, and sequence and duration of hydrologic events. Based on the Ventura Countywide Storm Water Monitoring Program's Water Quality Monitoring Reports which were required under Order No. 00-108, the dry weather and wet weather Pollutants of Concern (POC) in urban storm water include an anion, bacteria, conventional pollutants, metals, a nutrient, organic compounds, and pesticides. The POC are identified in Attachment "B" of this Order. Many of the POC listed are causing

impairments identified on the federal Clean Water Act (CWA) § 303(d) list of impaired waterbodies.

Common pollutants in urban storm water and their respective sources are: bacteria from animal droppings and illegal discharges; Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications and from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints and automotive parts; copper from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; and dioxins as products of combustion.

In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems. In addition, the high volumes and high velocities of storm water discharged from MS4s into natural watercourses can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed hydromodification. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California.

This proposed Order includes the updates associated with a revised Record of Waste Discharge submitted by the Discharger

On the basis of a preliminary staff review and application of lawful standards and regulations, the Regional Water Quality Control Board, Los Angeles Region, tentatively proposes to renew Order 2009-XXX and terminate the requirements in Order R4-00-108 incorporating changes requested by the State Board and updates reflecting new information provided in an updated ROWD and supporting documentation from the Discharger.

#### HEARING DATE AND LOCATION

Date: May 7, 2009  
Time: 9:00 a.m.  
Place: Ventura County Board of Supervisors Meeting Room  
800 S. Victoria Ave.  
Ventura, California 93009

Please check the website address (<http://www.waterboards.ca.gov/losangeles/>) for the most up to date public hearing location as it is subject to change.

#### SCOPE OF HEARING

NOTE: The matter before the Board is the renewal of Waste Discharge Requirements for discharges from the Municipal Storm Water Separate Sewer System in Ventura County.

#### AVAILABILITY OF DOCUMENTS

The proposed language and other information and documents relied upon are available for inspection and copying between the hours of 8:00 a.m. and 4:30 p.m. by appointment at the following address:

Los Angeles Regional Water Quality Control Board  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Arrangements for file review and/or obtaining copies of the documents may be made by calling the Los Angeles Regional Board at (213) 576-6600. The entire file will become a part of the administrative record of this proceeding, irrespective of whether individual documents are specifically referenced during the hearing or contained in the agenda packet. The entire file will not be present in the hearing room. Should any interested persons desire staff to bring to the hearing any particular documents that are not included in the agenda packet, they must submit a written or electronic request to staff during business hours, not later than five business days before the hearing. The request must identify the documents with enough specificity for staff to locate them.

Additionally, the Tentative Waste Discharge Requirements, Tentative Monitoring and Reporting Programs, Staff Report/Fact Sheet and other related documents can be found on the Regional Board's website:

[http://www.waterboards.ca.gov/rwqcb4/water\\_issues/programs/stormwater/municipal/ventura\\_ms4/venturams4\\_draft\\_tentative\\_permit.shtml](http://www.waterboards.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/ventura_ms4/venturams4_draft_tentative_permit.shtml)

#### PUBLIC COMMENTS AND SUBMITTAL OF EVIDENCE

Persons wishing to comment on, or object to, the tentative TSO, or submit evidence for the Board to consider, are invited to submit them in writing to Tracy Woods at the above address, or send them electronically to: [VenturaMS4Comments041009@waterboards.ca.gov](mailto:VenturaMS4Comments041009@waterboards.ca.gov). To be evaluated and responded to by Regional Board staff, included in the Board's agenda folder, and fully considered by the Board, written comments or testimony regarding the tentative revisions must be received at the Regional Board office no later than close of business on **April 10, 2009**. Failure to comply with these requirements is grounds for the Regional Water Board to refuse to admit the proposed written comment or exhibit into evidence pursuant to section 648.4, title 23 of the California Code of Regulations.

#### NATURE OF HEARING

This proceeding will be a formal adjudicatory proceeding. For such proceedings, the Regional Board follows procedures established by the State Water Resources Control Board, which are set forth in regulations commencing with section 647 of title 23 of the California Code of Regulations, in particular, Article 2, commencing with section 648. While this proceeding is formal, as an administrative proceeding, the Board does not generally require the prior identification or cross examination of witnesses, or other procedures not specified in this notice, that might typically be expected of parties in a courtroom.

## PARTIES TO THE HEARING

The following are the parties to this proceeding:

1. The County of Ventura Watershed Protection District
2. The County of Ventura
3. Cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura (Ventura), Santa Paula, Simi Valley and Thousand Oaks

Any other persons requesting party status must submit a written or electronic request to staff not later than 20 business days before the hearing. All parties will be notified if other persons are so designated.

## HEARING PROCEDURE

The board meeting, of which the hearing will be a part, will start at 9:00 a.m. Interested persons are invited to attend. When the agenda item is called, staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to five minutes or less for each interested person, depending on the number of persons wishing to be heard. Parties or interested persons with similar concerns or opinions are encouraged to choose one representative to speak, and are encouraged to coordinate their presentations with each other. Parties will be advised after the receipt of public comments, but prior to the date of the hearing, of the amount of time each is allocated for presentations. That decision will be based upon the complexity and number of issues under consideration, the extent to which the parties have coordinated, the number of parties and interested persons anticipated, and the time available for the hearing. The parties are invited to contact staff not later than April 10, 2009, to discuss how much time they believe is necessary for their presentations, and staff will endeavor to accommodate reasonable requests. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests or requests for alternative hearing procedures should contact staff, who will endeavor to accommodate reasonable requests. Objections to any procedure to be used during the hearing must be submitted in writing no later than close of business 15 business days prior to the date of the hearing. (Any objections related to the amount of time allocated for parties' presentations must be submitted within two business days of notice thereof, if that date is less than 15 business days before the hearing.) Absent such objections, any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Procedural objections will not be entertained at the hearing.

If there should not be a quorum on the scheduled date of this meeting, all cases will be automatically continued to the next scheduled meeting on June 4, 2009. A continuance will not extend any time set forth herein.

## STAFF CONTACTS

If you have any question regarding this proposed action, please contact Tracy Woods at (213) 620-2095 or via email at [twoods@waterboards.ca.gov](mailto:twoods@waterboards.ca.gov).

VENTURA COUNTY STAR

(This space for filing stamp only)

550 CAMARILLO CENTER DR, CAMARILLO, CA 93010  
Telephone (805) 437-0349 / Fax: (805) 987-2698

PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California )  
County of VENTURA ) ss

Notice Type: GPN - GOVT PUBLIC NOTICE

Ad Description: 09-070 PUBLIC NOTICE - RENEWAL OF WASTE DISCHARGE REQUIREMENTS

I hereby certify that the Ventura County Star, Thousand Oaks Star, Oxnard Star, Simi Valley Star, Moorpark Star, Camarillo Star has been adjudged a newspaper of general circulation by the Ventura within the provisions of the Government Code of the State of California, printed and published in the City of San Buenaventura, County of Ventura, State of California; that I am the principal clerk of the printer of said paper; that the annexed clipping is a true printed copy and publishing in said newspaper on the following dates to wit:

02/24/2009

Executed on: 02/24/2009  
At CAMARILLO, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

*[Handwritten Signature]*  
Signature

CNS#: 1530044  
CALIFORNIA REGIONAL  
WATER QUALITY  
CONTROL BOARD  
LOS ANGELES REGION  
320 W. 4TH Street Suite  
200 Los Angeles, CA 90013  
(213) 576-6600

Public Notice No. 09-070  
Meeting May 7 and 8,  
2009 item to be heard on  
May 7, 2009.

NOTICE

RENEWAL OF WASTE  
DISCHARGE  
REQUIREMENTS FOR  
STORMWATER  
DISCHARGES FROM THE  
MUNICIPAL SEWER  
SYSTEM WITHIN THE  
VENTURA COUNTY  
WATERSHED  
PROTECTION DISTRICT,  
COUNTY OF VENTURA  
AND THE  
INCORPORATED  
CITIES THEREIN

The following filed Reports of Waste Discharge and applied for Waste Discharge Requirements for discharges of wastes to waters of the United States.

A. RENEWAL NAME AND NPDES NO:  
Municipal Separate Storm Sewer System Discharges within the Ventura County Watershed Protection District, Ventura County, and the Incorporated Cities Therein; CAS004002

B. DISCHARGE LOCATIONS (Receiving Waters)  
Receiving Waters within Ventura County, including but not limited to Malibu Creek, Calleguas Creek, Santa Clara River, Ventura River, tributaries to the aforementioned waterbodies and the Pacific Ocean

C. TYPE OF WASTE  
Stormwater and Urban Runoff

On the basis of preliminary staff review and application of lawful standard regulation, the California Regional Water Quality Control Board, Los Angeles Region proposes to renew waste discharge requirements (WDRs) including municipal action

levels and special provisions, and terminate requirements no longer needed. Persons wishing to comment upon, or object to, the tentative discharge requirements or termination order are invited to submit them in writing to the above address. Interested persons should submit written comments no later than April 10, 2009 by 5:00-P.M. The Board will hold a public hearing on May 7 and 8, 2009, (with this item being heard on May 7, 2009) at the Ventura County Government Center, 800 South Victoria Avenue, Ventura, CA 93009. Interested persons are invited to attend. The Board will hear any testimony pertinent to the waste discharge and the tentative WDRs. Oral statements will be heard; however, for accuracy of the record, all important testimony should be in writing. The meeting which the hearing is a part, will begin at 9:00 a.m.

If the item is not completed on May 7, 2009, it shall be continued to May 8, 2009. If there should not be a quorum on the scheduled date of this meeting, all cases will be automatically continued to the next regularly scheduled meeting. That meeting will be held on June 4, 2009.

The Report of Waste Discharge, hearing notice, related documents, tentative requirements, comments received and other information are on file, and may be inspected at 320 W. 4th Street, Suite 200, Los Angeles, California 90013. Arrangement for copies may be made.

Date: February 18, 2009

2/25/09  
CNS-1530044#  
VENTURA COUNTY STAR



E000233

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Invoice	B1530044	09-070 PUBLIC NOTICE RENEWAL OF WASTE DISCHARGE GPN GOVT PUBLIC NOTICE 96500 VENTURA COUNTY STAR 02/24/2009 LEGAL SECTION 1 COLUMN WIDE MIN. LINES NEEDED  <i>Publication</i>	335.16
			335.16

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12/20/2005 20:14	DnLranch@adelphia.net	Doug Archibald
10/21/2005 6:54	Gary_Garofalo@dot.ca.gov	Gary Garofalo
11/2/2005 14:00	Gerhardt.Hubner@ventura.org	Gerhardt Hubner
12/1/2004 14:54	JEndicott@aei-casc.com	Jeff Endicott
1/26/2009 14:31	Jeanine.Hutton@ci.oxnard.ca.us	Jeanine Hutton
1/15/2003 0:00	JohnB648@AOL.com	John Bullington
10/29/2008 3:05	Johnrdarnell@yahoo.com	John R. Darnell II
10/24/2000 0:00	Malloy@law.ucla.edu	Timothy Malloy
3/7/2005 14:37	MarkCapron@vrsd.com	Mark E. Capron
3/11/2005 10:39	Melinda.Talent@ventura.org	Melinda Talent
3/4/2005 10:47	Nancy.Settle@Ventura.Org	Nancy Settle
3/1/2005 10:40	RWPearson@aol.com	Roger W. Pearson
3/11/2005 8:36	Richard.Hauge@ventura.org	Richard Hauge
3/2/2005 9:47	Ronald.Sheets@OjaiSan.org	Ronald Sheets
12/13/2005 9:31	adavis@rbf.com	Anne G. Davis
12/19/2005 11:22	adorablesam_4@yahoo.co.in	sam
1/3/2001 0:00	aharrington@ci.claremont.ca.us	Andrea Harrington
12/17/2005 8:28	ahheil@lacsd.org	Ann Heil
12/23/2008 15:59	ahenderson@biasc.org	Andrew Henderson
12/19/2006 13:14	akuhlman@ci.camarillo.ca.us	Anita Kuhlman
9/8/2005 10:08	allen.camp@sfcoc.com	Allen F. Camp
3/28/2005 13:31	amarsh@pirnie.com	Anita Marsh
1/28/2008 11:54	amys@lwa.com	Amy Storm
3/7/2005 15:36	anelsen1@aol.com	Alan Nelsen
9/19/2007 22:15	arlene.hopkins@gmail.com	arlene hopkins
8/24/2006 15:29	arri@mtaonline.net	Jeffrey Davis
12/28/2004 7:34	asaponara@treadwellrollo.com	Anthony Saponara
11/15/2005 12:22	ashlic@lwa.com	Ashli Desai
12/19/2006 13:10	ashlid@lwa.com	Ashli Desai
3/7/2005 13:11	barry.snyder@amec.com	Barry J. Snyder
8/11/2008 17:19	barry@winefieldassoc.com	Barry White
7/21/2008 12:25	bhelm@crystalstream.com	Brent A. Helm
8/14/2008 15:39	bhill@fs.fed.us	Barry Hill
3/1/2005 9:59	blwilliams@ci.ventura.ca.us	Robert L. Williams
3/28/2005 15:13	boylehm@cdm.com	Heather Boyle
3/11/2002 0:00	bradmilner@kennedyjenks.com	Brad Milner
3/16/2005 9:48	bteaford@ci.burbank.ca.us	Bonnie Teaford
9/20/2006 14:25	ca3@imsinfo.com	Cory R. Espinoza
12/8/2008 18:01	cabrera-stagno.valentina@epa.gov	Valentina Cabrera
2/28/2005 21:25	calcropdoc@yahoo.com	David Holden
5/4/2006 16:09	carla.cummings@westonsolutions	Carla Cummings
12/3/2008 15:20	cchang@waterboards.ca.gov	Cathy Chang
8/5/2008 8:27	chiggins@mines.edu	Christopher Higgins
5/9/2008 8:51	chrism@lwa.com	Chris Minton
1/15/2009 13:07	chrlee@ucla.edu	Christine Lee
2/28/2005 13:14	cleanwater@sfo.com	Daniel Cooper
1/7/2009 16:36	courtney@wreassoc.net	Courtney Davis Nichols
2/28/2005 15:13	cperez@newhall.com	Cris Perez
12/2/2008 9:23	craig.anderson@noaa.gov	Craig Anderson
3/19/2008 17:43	ctyrrell@pirnie.com	Catherine Tyrrell

7/17/2006 17:05	currunaga@waterboards.ca.gov	Carlos Urrunaga
3/13/2007 14:10	dapt@rbf.com	Daniel Apt
3/6/2006 10:57	darrell.siegrist@ventura.org	Darrell Siegrist
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**FACT SHEET/STAFF REPORT**

**FOR THE**

**MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES  
WITHIN ENTURA COUNTY FLOOD CONTROL DISTRICT,  
COUNTY OF VENTURA, AND THE CITIES OF VENTURA COUNTY  
NPDES PERMIT (CAS004002)**

ORDER No. 09-xxxx

May 7, 2009

Los Angeles Regional Water Quality Control Board

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## I. PURPOSE

The purpose of this Fact Sheet/Staff Report is to provide permittees (Ventura County Watershed Protection District, the County of Ventura and the incorporated cities therein and interested parties) an overview of the Ventura County NPDES Permit for storm water discharges from municipal separate storm sewer systems (MS4s), adopted on May 5, 2009. This Fact Sheet/Staff Report also provides the technical basis for the permit requirements. Sections 1 through xx describe water quality problems for storm water and urban runoff, and permit conditions to address these problems. Sections xx and xx discuss each major element of the Permittees' Storm Water Quality Management Plan (SQMP), and are meant to be used as a companion reference document to the permit. Section xx addresses changes that were made at the Xxx xx, 200x Regional Board Meeting.

## II. INTRODUCTION - THE NEED TO REGULATE STORM WATER DISCHARGES

### A. Impacts

The quality of storm water and urban runoff is fundamentally important to the environmental and economic health of the Los Angeles Region (Region), and to the quality of life in southern California. Polluted municipal storm water runoff is one of the leading causes of water quality impairment in the Region. Storm water and urban runoff (during wet and dry weather) are often contaminated with bacteria from animal droppings; Polycyclic Aromatic Hydrocarbons (PAHs), from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications; herbicides from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints, automotive parts; copper from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion;

and dioxins as products of combustion. Water flowing over the Permittee's residential, industrial, and commercial areas carries these untreated pollutants through the storm drain systems directly into the receiving waters of the Region. Water quality impacts and public health risks from Municipal Separate Storm Sewer System (MS4) discharges that affect receiving waters nationwide and within the Region are well documented.

Water quality assessments conducted by the Regional Board have identified impairments and threatened impairments of beneficial uses of water bodies in the Ventura Watersheds. These impairments include many of the Pollutants of Concern (POC) identified by the Ventura Countywide Storm Water Monitoring Program. These impairments are identified on the State of California § 303(d) list of impaired water bodies.

Studies and research conducted by other Regional agencies, and academic institutions have also identified storm water urban runoff as significant sources of pollutants to surface waters in Southern California. A regional survey of the microbiological water quality along the shoreline of the Southern California Bight (SCB), from Point Conception south to Ensenada, Mexico, was conducted during August, 1998, by 36 agencies under the coordination of the Southern California Coastal Water Research Project (SCCWRP). It was found that freshwater outlets,

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comprised mainly of storm drains, had the poorest water quality with 60% and 40% of the shoreline miles exceeding monthly and daily thresholds, respectively. Freshwater outlets were also more likely to demonstrate exceedances by multiple indicators at a single site, and repeat exceedances at sites over the five-week period.<sup>1</sup>

Urban runoff has been found to cause significant receiving water impacts on aquatic life. In order to best identify and understand these impacts, it is necessary to include biological monitoring, using a variety of techniques, and sediment quality analyses, in a monitoring program. Water column testing alone has been shown to be very misleading. Most aquatic life impacts associated with urbanization are probably related to long-term problems caused by polluted sediments and food web disruption. An adequate analysis of receiving water biological impacts must include investigations of a number of biological organism groups in addition to studies of water and sediment quality<sup>2</sup>.

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<sup>1</sup> xxx

<sup>2</sup> Burton, G.A. Jr., and R. Pitt, Stormwater Effects Handbook: A ToolBox for Watershed Managers, Scientists, and Engineers. CRC Press, Inc., Boca Raton, FL. August 2001. 1085 pgs.

### III. INTRODUCTION

#### History of Ventura MS4 NPDES Permit

In 1987, the U.S. Congress amended the Clean Water Act to specifically require storm water discharges including those from municipalities with populations 100,000 or greater, conveyed by a separate storm sewer system to be addressed as point sources of pollution under the NPDES. These municipalities were required to reduce the discharge of storm water pollutants to the maximum extent practicable (commonly referred to as the MEP standard). The U.S. and California Courts have since interpreted federal statutes to give the permitting authority the discretion to also require compliance with water quality standards. In addition, conditions in NPDES permits must be consistent with the assumptions of TMDL WLA's that have been adopted.

The USEPA issued the Final Storm Water Regulations in Nov 1990, which required medium and large municipalities to submit a two part application. The first part required basic system description and ownership identity information. Part 2 required storm water pollutant discharge characterization data from one wet season, and a proposed storm water quality management plan.

In 1990, populations in Oxnard, Thousand Oaks, and Unincorporated Ventura County met the Census definition of medium size municipalities.

The City of Oxnard submitted a Part 1 application in 1991. After discussions with the Ventura County Flood Control District, and the City of Thousand Oaks, the Water Board decided that the VCFD as Principal Permittee would submit a system wide Part 2 application on behalf of all the municipalities in Ventura County, because of the interconnected nature of the flood control system.

A consolidated Part 2 application was submitted in 1993, and the Water Board issued the first term system-wide municipal storm water permit for Ventura County in 1994.

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The first term MS4 permit was adopted in 1994, and the focus of the permit was to require Ventura County municipalities to develop storm water pollution control programs in the areas of public involvement/ education; business/ industry outreach; development planning; development construction; public agency activities; and illicit connection/ discharge elimination, in addition to implementing a basic monitoring program to characterize the quality of municipal storm water discharges.

The second term MS4 permit was adopted in 2000, and the focus of the permit was the implementation of a comprehensive storm water quality management program, to reduce the discharge of storm water pollutants to the MEP, and to meet water quality standards. The monitoring program was expanded to assess mass emissions of pollutants from Ventura County Rivers to coastal waters, and to better understand the quality of wet weather discharges and their adverse impacts.

No doubt the Ventura County MS4 Program, under the leadership of the Ventura County Watershed Protection District has made significant strides in implementing programs to reduce storm water pollution. Yet, more than a decade after the first permit was issued, we continue to see exceedances of water quality standards for storm water pollutants such as bacteria, and heavy metals. In addition, the Ventura County MS4 program having run its second term is a step behind that of Los Angeles County, which closed out its third term last December.

The third term MS4 permit for the first time includes Municipal Action Levels, derived using the USEPA's monitoring dataset for large and medium MS4s. The permit identifies a default set of specific storm water BMPs that industry, construction, and public agencies must implement based on activity to reduce the discharge of storm water pollutants. The permit promotes the implementation of LID strategies for new development and redevelopment, which have the objective of maintaining pre-development hydrology and utilizing natural controls to reduce storm water pollution. The permit incorporates for the first time TMDL WLAs adopted by the Board for impaired water bodies which is consistent with USEPA's TMDL Policy.

Report of Waste Discharge

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The permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The permittees applied for renewal of their waste discharge requirements for a 5-year period, which serves as an NPDES permit to discharge wastes to surface waters.

The Regional Water Board reviewed the ROWD and determined it to be partially complete under the reapplication policy for MS4s issued by the United States Environmental Protection Agency (U.S. EPA) (61 Fed. Reg. 41697). The Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by permittees will meet the requirements of the federal NPDES regulations at 40 CFR122.26.

The permittees Report of Waste Discharge contained a proposed Storm Water Management Program and a Monitoring Program to be considered by the Regional Water Board for incorporation into an MS4 NPDES Permit as permit conditions and to demonstrate compliance with federal law. The permittees are entitled, but did not elect to pursue a permit with numeric end-of-pipe limits for storm water discharges, which would have required them to satisfy specific effluent limitations rather than implement storm water management programs. Where a MS4 permittee voluntarily chooses a Best Management Practice (BMP) based storm water management program as permit effluent limitations rather than end-of-pipe numeric effluent limits, there exists no compulsion of a specific regulatory scheme that would violate the 10th Amendment to the United States Constitution. (City of Abilene V. EPA, 325 F.3d 657 (5th Cir. 2003)).

#### Meetings

The Regional Water Board staff has conducted meetings from October 2005 through January 2009, with permittees their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIAGLA/ VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Collation for Practical Regulation (CPR), Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government Commission, Los Angeles City;

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Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper, and Charles Abbott Associate. On April 5, 2007, September 20, 2007, and July 10, 2008 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the permittees and the public regarding proposed changes.

#### **IV. STATUTORY AND REGULATORY HISTORY OF THE STORMWATER PROGRAM**

The federal Clean Water Act (CWA) generally prohibits the “discharge of any pollutant,” 33 U.S.C. § 1311(a), from a “point source” into the navigable waters of the United States. 33 U.S.C. § 1362(12)(A). An entity can, however, obtain a National Pollutant Discharge Elimination System (NPDES) permit that allows conditionally for the discharge of some pollutants. 33 U.S.C. § 1342(a)(1). The CWA defines point sources as “discernible, confined and discrete conveyances, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure” such as a pipe, ditch, container, rolling stock, concentrated animal feeding operation, landfill leachate collections system, vessel or other floating craft from which pollutants are or may be discharged. 33 U.S.C. § 1362; 40 CFR 122.2.

In 1987, the U.S. Congress enacted the Water Quality Act recognizing both the environmental threats posed by storm water runoff and the U.S. EPA’s problems in implementing regulations for storm water discharges (NRDC II, 966 F.2d at 1296). These Amendments to the CWA

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established new statutory requirements to control industrial and municipal storm water discharges to waters of the United States (CWA § 402(p)).

The amendments require NPDES permits for storm water discharges from Municipal Separate Storm Sewer Systems (MS4s) to waters of the United States, and the MS4 was designated a “point source”. The storm water discharge permits for MS4s (i) may be issued on a system- or jurisdiction-wide basis; (ii) shall include a requirement to effectively prohibit [unauthorized] non-storm water discharges into the storm sewers; and (iii) shall require controls to reduce the discharge of pollutants from storm water to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (See CWA §402(p) (3) (B)).

Ordinarily, an NPDES permit imposes [numerical] effluent limitations on such discharges. See 33 U.S.C. § 1342(a)(1) (incorporating effluent limitations found in 33 U.S.C. § 1311). First, a permit-holder “shall . . . achiev[e] . . . effluent limitations . . . which shall require the application of the best practicable control technology [BPT] currently available.” 33 U.S.C. § 1311(b)(1)(A). Second, a permit-holder “shall . . . achiev[e] . . . any more stringent limitation, including those necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title).” 33 U.S.C. § 1311(b)(1)(C). In the case of MS4 NPDES discharge permits, federal courts have ruled that the U.S. EPA has the discretionary authority under “33 U.S.C. § 1342(p)(2)(E) to determine that ensuring strict compliance with state water-quality standards is

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necessary to control pollutants, or to require less than strict compliance with state water-quality standards, such as a BMP approach” (*Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9<sup>th</sup> Cir., 1999)). Under 33 U.S.C. § 1342(p)(3)(B)(iii), the U.S. EPA has the choice to include either best management practices or numeric limitations in the permits. NRDC II, 966 F.2d at 1308 (“Congress did not mandate a minimum standards approach or specify that [the] EPA develop minimal performance requirements.”).

Regulatory Scheme

On November 16, 1990, pursuant to CWA § 402(p), the U.S. EPA promulgated regulations at 40 CFR 122.26 which established requirements for storm water discharges under the NPDES program. The U.S. EPA defines storm water at 40 CFR 122.26 (b)(13) as ‘storm water runoff, snow melt runoff, and surface runoff and drainage’ [related to storm events or snow melt] (55 Fed. Reg. 47990, 47995). Non storm water discharges to the MS4 are to be “effectively prohibited” by the MS4 operator. “Effective prohibition” meant that the MS4 Permittee was to implement programs to eliminate “illicit discharges” to the storm drain system unless authorized under NPDES permits issued independent of the MS4 permit (55 Fed. Reg. 47995). The storm water regulations also intended to not hold MS4 Permittees responsible for certain categories of non storm water discharges, such as uncontaminated ground water infiltration, natural springs, rising groundwater, stream and diversions, from the MS4. Such discharges might need to be addressed under independent NPDES permits when specifically identified on a case-by case basis by the MS4 Permittee or the permitting authority.

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The U.S. EPA intended that storm water discharges from the MS4 be primarily addressed through the implementation of BMPs on an iterative approach because of the intermittent and variable nature of storm flows and pollutant concentrations as well as insufficient data rather than numerical effluent limitations (61 FR 43761). However, the U.S. EPA's scheme for non-storm water discharges from the MS4 is to bring them under the existing framework of the NPDES program at 40 CFR 122.44(d). (55 Fed. Reg. 47995). Non-numerical limitations such as BMPs for non-storm water discharges may be authorized only where numerical limits are not feasible (40 CFR 122.44(k)). In any case, if the Permittee fails to implement adequate BMPs to prevent exceedance of the receiving water objectives, the permitting authority "may have to consider other approaches to water quality protection" (61 Fed. Reg. 43761; *Interim Permitting Approach*, Response #6, EPA 833-D-96-00, 1996).

The CWA §303(d)(1)(A) requires each State to conduct a biennial assessment of its waters, and identify those waters that are not achieving water quality standards. The resulting list is referred to as the 303(d) list. The CWA also requires States to establish a priority ranking for waters on the 303(d) list of impaired waters and to develop and implement TMDLs for these waters. A TMDL specifies the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and allocates the acceptable pollutant load to point and nonpoint sources. The elements of a TMDL are described in 40 CFR 130.2 and 130.7. A TMDL is defined as "the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background" (40 CFR 130.2). Regulations further require that TMDLs must be set at "levels necessary to attain and maintain the applicable narrative and

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numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality” (40 CFR 130.7 (c) (1)). The regulations at 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters. The U.S. EPA has issued guidance for establishing WLAs for storm water discharges in TMDLs and their incorporation as numerical limitations in MS4 Storm Water Permits (U.S. EPA Office of Water Memo, *Establishing Total Maximum Daily Load Wasteload Allocations for Storm Water Sources and NPDES Permit Requirements Based on those WLAs*, Nov 22, 2002 Memo).

Since provisions in NPDES permits must reflect the assumptions and requirements of available TMDLs (40 CFR 122.44 (d)(1)(vii)(B)), the NPDES permit must incorporate the WLAs as either BMPs (reasonably expected to achieve the WLAs when implemented and properly maintained), under specified circumstances (40 CFR 122.44(k)(2) & (3)), or as a Water Quality Based Limitation (WQBEL) expressed numerically. Where a non-numeric effluent limitation is selected, the permits administrative record must support the expectation that the BMPs are sufficient to achieve the WLAs. (40 CFR 124.8, 124.9, and 124.18.)

#### State Regulatory Authority and Permit History

The State of California is one of forty-five States with duly delegated authority under the CWA to implement the NPDES permitting program. The Porter-Cologne Act (California Water Code) authorizes the State Board, through the nine regional boards, to issue NPDES permits, and regulate and control the discharge of pollutants into waters of the State. To comply with the

CWA, the Los Angeles Regional Water Board (LA Water Board) issued the first storm water permit (“predecessor permit”) for the County of Ventura on August 22, 1994, to the municipalities (Permittees) in Ventura County (Order No. 94-082; NPDES Permit No. CAxxxxx). The Ventura County MS4 Permit was reissued on July 27, 2000 (Order No. 00-108; NPDES Permit No. CAS004002).

Because of the complexity and networking of the storm drain system and drainage facilities within and tributary to the County of Ventura, the LA Water Board adopted a countywide approach in permitting storm water and urban runoff discharges. The permit requires Permittees to conduct monitoring and to implement programs in the areas of public involvement and participation, industrial/commercial inspection, development planning, development construction, public agency activities, and to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of Ventura to the waters of the U.S. In addition, Permittees are required to effectively prohibit the discharge of unauthorized non storm water into the MS4 (except where they are authorized under a NPDES permit), by implementing a program to detect and eliminate illicit discharges/connections to the MS4.

The Ventura County MS4 Permit requires Permittees to develop, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) to the waters of the U.S. In addition, it states that discharges from the MS4 to waters of the U.S. including Calleguas Creek, Santa Clara River, Ventura River, Malibu Creek, and Ventura County Coastal areas are required

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to meet water quality standards. Upon establishment of TMDLs by the State or the U.S. EPA, the State is required to incorporate the TMDLs into the State Water Quality Management Plan (40 CFR 130.6 (c) (1), 130.7). The Water Quality Control Plan for the Los Angeles Region (Basin Plan), and applicable statewide plans, serves as the State Water Quality Management Plan governing the watersheds under the jurisdiction of the LA Water Board. LA Water Board-issued NPDES permits must contain provisions consistent with the State Water Quality Management Plan.

## V. DISCUSSION OF SPECIAL PROVISIONS

### A. General Requirements

#### **Non Storm Water Discharges** Discharges from Potable Water Sources

Federal Regulations promulgated on November 16, 1990 at 40 CFR 122.26 required Permittees to effectively prohibit all non-storm water discharges. However, the federal regulations also included a list of specific non-storm water discharges that "need not be prohibited." These discharges include among others, discharges from potable water sources.

This Regional Board, on April XX 2009, issued an NPDES permit for releases of potable water from distribution systems. Releases may occur only with the implementation of appropriate BMPs and dechlorination prior to discharge

## Municipal Action Levels

### Introduction

The draft Tentative Ventura County MS4 Order establishes Municipal Action Levels (MALs) for selected pollutants based on a regional subset of nationwide Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were computed using the statistical based population approach, one of three approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). The MALs were obtained by calculating the 80<sup>th</sup> percentile value of selected pollutants. The end-of-pipe assessment points for the determination of MAL exceedances are the major outfalls, as defined in 40 CFR122.26(b)(5) and (b)(6). Staff chose to incorporate MALs derived from a USEPA Climate Zone 6 subset of nationwide MS4 data, included in the National Stormwater Quality Database, because of the large number of events sampled for each pollutant. A Climate Zone 6 subset of the nationwide MS4 dataset was used to assure that the calculated values were relevant to Ventura County monitoring data (Ventura County is in USEPA Climate Zone 6). The California Water Board's Storm Water Panel Final Report states, "the statistically based population approach would once again rely on the average distribution of measured water quality values developed from many water quality samples taken for many events at many locations." Over 100 events were sampled for all MAL pollutant included in the Order. Approximately 350 events were sampled for most MAL pollutants. In addition, the use of the nationwide dataset provided for the sampling of a wide variety of storm events. The Climate Zone 6 subset of the nationwide data includes events sampled for storms ranging from 0.02" to 9.85" rainfall depth. The nationwide data incorporates monitoring events from various areas/climate zones in the nation, notably USEPA Climate Zone 6, which includes Ventura County. The nationwide MS4 data is derived from the sampling of runoff from multiple land uses and drainage areas of varying sizes, from 0.4 acres to over 10,000 acres. The California Water Board's Storm Water Panel Final Report states, "In built-out urbanized environments, there are greater opportunities to examine various data sets for setting Action Levels." The report acknowledges the importance of monitoring various land uses, which are included in the National Stormwater Quality Database, and setting Action Levels based on a large number of sampling events, which are

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included in the National Stormwater Quality Database. Staff selected common storm water pollutants as MALs with the presumption that appropriate control of the selected pollutants would lead to appropriate control of the majority of storm water pollutants and serve as a quantifiable measure of storm water management program effectiveness.

Discussion of New Requirement

- 1) Beginning Year 3 after Order adoption date, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the U.S. that exceed the Municipal Action Levels (MALs) for the pollutants listed in Attachment "C" (Municipal Action Levels) will require each permittee to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutant(s) in accordance with the Maximum Extent Practicable (MEP) provision. Staff chose to incorporate a running average of 20% or greater exceedances of a MAL over a three year period to require Permittees to address pollutants that consistently demonstrated a potential threat to storm water quality. The purpose of this requirement is to help ensure that Permittee's do not act on sampling anomalies, but focus on identifying and eliminating sources of pollutants that consistently exceed MALs. The MAL requirement in the Ventura MS4 Order does not require that all outfalls be retrofitted with treatment Best Management Practices (BMPs). Staff's intent in incorporating the MAL requirement is to require Permittees to assess and implement effective program components such as industrial/construction inspections, public education and public agency activities to control pollutants in MS4 storm water discharges to the MEP
- 2) Permittees who have storm water discharges that continue to exceed a MAL pollutant(s) after Year 3 of the operative MAL(s) are required to demonstrate they have implemented adequate storm water control measures and BMPs to comply with the MEP criteria. To demonstrate compliance with the MEP standard, Permittees must submit to the Executive Officer (within three years of Permit Adoption), an MAL Action Plan for those subwatersheds with discharges in excess of the MALs. The plan should include an assessment of their storm water program, the sources responsible for the abnormal pollutant levels and the methodology used in identifying those sources (e.g. storm water computer modeling), the existing BMPs that address those sources, the additional practicable BMPs

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and/or actions the Permittee proposes to ensure compliance with the MEP standard, and a BMP implementation schedule for all structural and non-structural BMPs.

- 3) Within 90 days of the plan approval, the Permittee shall initiate the BMPs and actions proposed in the MAL Action Plan, together with any other practicable BMPs or actions that the Executive Officer determines to be necessary to comply with the MEP standard. The Permittee shall complete the proposed actions in accordance with the approved implementation schedule. Upon completion of the actions specified in the approved MAL Action Plan, the Permittee shall re-monitor the subject subwatershed in accordance with the MRP, and submit a Post-Project MAL Assessment Report to the Executive Officer. The Executive Officer will either accept the report as evidence that the Permittee has complied with the MEP standard or, alternatively, identify additional actions which the Executive Officer determines necessary to comply with the standard.

## **B. Watershed Initiative Participation**

### Introduction

The Principal Permittee consents to participate in water quality meetings for watershed management and planning, including but not limited to the Southern California Stormwater Monitoring Coalition (SMC) and other Watershed planning groups, as appropriate.

### Participation

The Principal Permittee consents to participate in the following regional water quality programs, and projects for watershed management and planning:

- (a) SMC Regional Monitoring Programs
  - (1) Southern California Regional Bioassessment
    - (A) Level of effort per watershed
      - (i) Probabilistic sites per watershed
        - (I) Ventura River - Six

- (II) Santa Clara River - Three
- (III) Calleguas Creek - Six
- (ii) Integrator sites per watershed
  - (I) Ventura River - One
  - (II) Santa Clara River - One
  - (III) Calleguas Creek - One
  - (IV) Six
- (iii) Fixed sites per watershed
  - (I) Ventura River - One
  - (II) Santa Clara River - One
  - (III) Calleguas Creek - One
- (b) Southern California Bight Projects
  - (1) Regional Monitoring Survey - 2008, and successive years.

### C. Public Information and Participation Program

#### Introduction

Implementation of a PIPP is a critical BMP and a necessary component of a storm water management program. The State Board Technical Advisory Committee "recognizes that education with an emphasis on pollution prevention is the fundamental basis for solving nonpoint source pollution problems." The USEPA Phase II Fact Sheet 2.3 (Fact Sheet 2.3) finds that "An informed and knowledgeable community is critical to the success of a storm water management program since it helps insure the following: (i) greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, and (ii) greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."

The USEPA's, Public Participation/Involvement Minimum Control Measure- fact Sheet, finds that Public education and outreach involves using effective mechanisms and programs, guided

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by a detailed outreach strategy, to engage the public's interest in preventing stormwater pollution. A key factor to consider when developing a strategy is that the public has varying levels of background knowledge of both storm water management and their role in reducing storm water pollution. Furthermore, the public can provide valuable input and assistance to a municipal storm water management program and, therefore, should play an active role in the development and implementation of the program. An active and involved community is essential to the success of a storm water management program because it allows for:

- Broader public support since residents who participate in the development and decision making process are partially responsible for the program and, therefore, are more likely to take an active role in its implementation.
- Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of residents volunteers.
- A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and A conduit to other programs as residents involved in the storm water program development process make important cross-connections and relationships with other community and government programs.

This benefit is particularly valuable when trying to implement a storm water program on a watershed basis.

Discussion of New Requirements

- 1) The Draft Ventura MS4 Permit requires Permittees to establish watershed Citizen Advisory Groups/ Committees. The intent of this requirement is to solicit public input for messages/activities that will persuade the public to modify their common activities to reduce/prevent pollutants from being discharged in storm water. A paper presented by David Galvin during the 4th National Conference Nonpoint Source and Stormwater Pollution Education Programs October 17-20, 2005 \*Measuring Results from Outreach and Education Programs: Can We See Improvements Downstream? states, "Experiential programs appear

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to be more powerful than information campaigns, more likely to connect people with their watershed. Activities such as citizen volunteer monitoring, hands-on restoration, storm-drain-stenciling projects, and other ways to get an experiential element incorporated into the program have a greater likelihood of success. Get peoples' feet wet and their hands dirty. Once they have invested in the watershed, even in a tiny part of it, they will have more ownership." Direct feedback from the public on storm water pollution prevention messages can be an inexpensive alternative to traditional surveys and studies as well as promoting increased public support for storm water pollution prevention campaigns. The Draft Ventura MS4 Permit requires Permittees to establish watershed Citizen Advisory Groups/ Committees, which can be a subset of existing committees/groups. The intent of this requirement is to solicit public input for messages/activities that will persuade the public to modify their common activities to reduce/prevent pollutants from being discharged in storm water. A paper presented by David Galvin during the 4th National Conference Nonpoint Source and Stormwater Pollution Education Programs October 17-20, 2005 \*Measuring Results from Outreach and Education Programs: Can We See Improvements Downstream? states, "Experiential programs appear to be more powerful than information campaigns, more likely to connect people with their watershed. Activities such as citizen volunteer monitoring, hands-on restoration, storm-drain-stenciling projects, and other ways to get an experiential element incorporated into the program have a greater likelihood of success. Get peoples' feet wet and their hands dirty. Once they have invested in the watershed, even in a tiny part of it, they will have more ownership." Direct feedback from the public on storm water pollution prevention messages can be an inexpensive alternative to traditional surveys and studies as well as promoting increased public support for storm water pollution prevention campaigns.

- 2) The Draft Ventura MS4 Permit requires an increase in media impressions and identifies the media venues. The intent of these changes is to provide an increase in public knowledge of storm water pollution prevention practices in an effective and cost efficient manner. Several studies have found that an increase in the frequency of storm water pollution prevention messages contributes to the likelihood that these messages will be remembered.
- 3) The Draft Ventura MS4 Permit requires outreach to ethnically diverse communities. The USEPA, Tailoring Outreach Programs to Minority and Disadvantaged Communities and

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Children Fact Sheet finds that, “many residents of ethnically and culturally diverse communities don't speak English. English messages contained in public education outreach materials may not be effectively reaching a significant portion of some communities. The intent of this provision is to encourage behavior changes that reduce pollutants in storm water to a portion of the population who might otherwise be overlooked.

- 4) The Draft Ventura MS4 Permit requires Permittees to work with other regional and/or statewide agencies and associations such as the California Storm Water Quality Association (CASQA), to develop a corporate outreach program to educate and inform corporate and local managers about storm water regulations and Best Management Practices (BMPs). The intent of this provision is to ensure that management is aware of the potential impacts their business can have on storm water quality, facilitate compliance with storm water requirements, and give management sufficient guidance to train staff throughout their business on appropriate business practices to mitigate the potential water quality impacts of their operations.
- 5) The Draft Ventura MS4 Permit requires Permittees to implement a Business Assistance Program to provide technical information to small businesses to facilitate their efforts to reduce the discharge of pollutants in storm water. The provision requires the distribution of storm water pollution prevention education materials to operators of auto repair shops, car wash facilities (including mobile car detailing), mobile carpet cleaning services, commercial pesticide applicator services and restaurants providing guidance on appropriate business practices to mitigate the potential impacts their business practices can have on storm water quality.

#### **D. Industrial/Commercial Businesses Program**

##### Purpose

The purpose of the **Industrial/Commercial Businesses Program** is to assure that the implementation of adequate controls and inspection and monitoring activities at

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industrial/commercial sites will assist municipalities comply with the Maximum Extent Practicable and water quality standards for discharges from their MS4s. The goal of the program is also to assure that the need not be permitted non-stormwater discharges, such as air conditioning condensate, drains for foundations, footings, and crawl spaces, etc., are not a significant source of pollution and the Permittees are actively enforcing the prohibition against non-stormwater discharges. The Permittees have the legal authority to actively control pollutants in storm water discharges, to prohibit illegal discharges/illicit connections, to control spills, and to require compliance with the local ordinances, including the implementation of source control BMPs and other necessary control measures and carry out inspections within their respective jurisdictions.

#### Legal Framework

In this third iteration of the MS4 stormwater discharges permit to be issued to Ventura County MS4 Permittees, there are a number of upgrades for the industrial/commercial business program in comparison with the previous 2000 permit. The upgrades are in line with the current requirements in the Los Angeles MS4 permit issued in 2001 and other MS4 permits recently issued in California, e.g. Sacramento, San Bernardino MS4 permits and nationwide, e.g. Seattle, Washington. This iterative approach for MS4 stormwater discharge permits, to contain better tailored BMPs, it is described by the USEPA in its *Interpretative Policy Memorandum on Reapplication Requirements* of MS4s issued by USEPA (61 Fed. Reg. 41697). In the Memorandum, USEPA specifies that "...[it] is seeking to improve existing MS4 storm water management programs by using information and experience municipalities have gained during the previous permit term." In its *Interpretative Memorandum Q&As* part (EPA 833-D-96-001), USEPA further clarified that based on the Section 301 of the Clean Water Act (CWA), it is required that discharger permits include effluent limitations necessary to meet State Water Quality Standards (WQS). However, under the CWA and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in storm water permits, including BMPs, performance objectives, narrative conditions, monitoring triggers, action levels (e.g., monitoring benchmarks, toxicity reduction action levels, etc.), as the necessary water quality-based effluent limitations.

The types of activities proposed in the new Ventura MS4 permit are similar with the conditions currently found in the Los Angeles MS4 permit. It is important to note that similar controls for industrial/commercial sites required by the Los Angeles MS4 permit, including inspection activities, are also required in the San Bernardino MS4 permit that was challenged in Court. In the decision for that case, the Appellate Court found that “[...] permittees are responsible for inspecting construction and industrial sites and commercial facilities within their jurisdiction for compliance with and enforcement of local municipal ordinances and permits” (*City of Rancho Cucamonga v. Regional Water Quality Control Bd.- Santa Ana Region (2006) Feb 27 Cal/4 E037079*).

On a separate action that challenged the Los Angeles MS4 permit, the Superior Court determined “that the Permit contains reasonable inspection requirements for these types of facilities... Addressing pollution after it has entered the storm sewer system is not working to meet legislative goals. More work is required at the source of pollution... Federal law requires [municipal] permittees to inspect dischargers... Nothing in the regulations precludes the inspections of facilities with state-issued permits...” (*In Re L.A. County Municipal Storm Water Permit Litigation (2004) BS080548*) In a subsequent decision, the Appellate Court upheld the Superior Court decision and the inclusion in the permit of the requirement to inspect industrial/commercial and construction sites (*County of Los Angeles et al. v. California State Water Resources Control Board et al. (2006) Nov 6 Cal/5 B184034*): “The legal authority extended to: requiring persons to comply with permittees’ ordinances; holding dischargers to storm drain systems accountable; controlling pollutants and their potential contributors; inspecting, watching, and monitoring procedures to insure compliance with the permit including prohibition of illicit discharges into storm drain systems; and requiring the use of best management practices to reduce pollutant discharge into the storm drain systems to the maximum extent possible”(underlined added). In addition, the Court recognized the Regional Board’s authority to require in NPDES permits the implementation of specific better-tailored BMPs that achieve compliance with the MEP and WQS: “the regional board has the authority to impose additional restrictions... the federal Clean Water Act authorizes National Pollutant Discharge Elimination Systems permits to set forth specific practices which will restrict polluted storm water runoff... Thus, nothing in state law is violated by the specific pollution control requirements imposed on the permittees.”

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Regional Board is authorized under 40 CFR 122.44(k)(2) to require BMPs in lieu of numeric effluent limitations in NPDES permits when the Regional Board finds numeric effluent limitations to be infeasible. The Regional Board may also impose BMPs which are "reasonably necessary... to carry out the purposes of the Clean Water Act" under 40 CFR 122.44(k)(3). Both of these standards for imposing BMPs were recognized in *NRDC v. Costle, 568 F.2d 1369, 1380 (D.C. Cir. 1977)*. Furthermore as mentioned before, the same authority was recognized in the state Appellate Circuit in *County of Los Angeles et al. v. California State Water Resources Control Board et al. (2006) Nov 6 Cal/5 B184034*.

State of the pollution at sites of industrial/commercial activity

Since the NURP study<sup>1</sup> in early 1980s, sites of industrial activity demonstrated the potential of contributing higher quantities of pollutants into the stormwater runoff when compared with other land uses. Data from the NURP study were analyzed further in the *U.S. Geological Survey (USGS) Urban Storm Water Data Base for 22 Metropolitan Areas Throughout the United States*

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<sup>1</sup> Results of the Nationwide Urban Runoff Program, Volume 1—Final Report. U.S. EPA. 1983. Office of Water. Washington, D.C.

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study<sup>1</sup>. The USGS report summarized additional monitoring data compiled during the mid-1980s, covering 717 storm events at 99 sites in 22 metropolitan areas, and documented problems associated with metals and sediment concentrations in urban stormwater runoff.

The *California Stormwater BMP Handbook - Industrial and Commercial* published in January 2003 by California Stormwater Quality Association (CASQA) lists as potential pollutants from sites of industrial activities: sediments, nutrients, metals, organics and toxicants, oil and grease, bacteria, pesticides. The type of activity or facility that potentially discharge those pollutants in stormwater runoff include vehicle & equipment fueling, vehicle & equipment maintenance and repair, outdoor loading & unloading of materials, outdoor storage of raw materials, products, and byproducts, building and grounds maintenance, parking/storage area maintenance.

USEPA's *Considerations in the Design of Treatment BMPs to improve Water Quality* (EPA 600/R-03/103, September 2002) also shows that lands of industrial/commercial use contribute significant loads of pollutant in urban areas. As examples, the industrial land uses may typically

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<sup>1</sup> U.S. Geological Survey Urban Storm Water Data Base for 22 Metropolitan Areas Throughout the United States. Driver, N.E., M.H. Mustard, R.B. Rhinesmith, and R.F. Middleburg. 1985. Report No. 85-337 USGS. Lakewood, CO.

contribute 0.2 lb/ac/yr of lead, 0.4 lbs/ac/yr of zinc, 0.6 lb/ac/yr of chromium, 500 lb/ac/yr of suspended solids, while commercial land uses typically contribute 2.7 lb/ac/yr of lead, 2.1 lb/ac/yr of zinc, 0.15 lb/ac/yr of chromium, 1,000 lb/ac/yr of suspended solids. In the same document urban stormwater pollutants event mean concentrations for different U.S. regions show concentrations for copper, lead, zinc consistently above water quality standards.

The water quality monitoring data submitted by the Ventura MS4 Permittees (Annual Monitoring Report 04-05) reveal that a number of constituents, such as metals, PAHs, pesticides exceeded the receiving water quality standards during wet events. Because studies and research demonstrated that the same types of pollutants are typically released in higher quantities into stormwater runoff from sites of industrial and commercial activities, there is a strong presumption that pollutants in stormwater runoff discharges from those sites cause or contribute to the exceedances.

Studies that are more recent confirm that tendency. The *Critical Source Selection and Monitoring Report*<sup>1</sup> performed on behalf of Los Angeles MS4 Permittees, identified seven highest ranked pollution potential activities to be, in order of ranking: (i) wholesale trade (scrap,

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<sup>1</sup> Critical Source Selection and Monitoring Report, Woodward-Clyde, 1997

auto dismantling), (ii) *automotive repair/parking*, (iii) fabricated metal products, (iv) motor freight (including trucking), (v) chemical and allied products, (vi) automotive dealers/gas stations, (vii) primary metals products. It is significant to note that five out of seven categories of activities are subject to Phase I industrial storm water regulations. Although *automotive repair/parking* and *automotive dealers/gas stations* categories were not the focus of the Phase I storm water regulations, the study identified these commercial categories as significant potential pollutant contributors based on the principles developed in the critical source criteria study.

Rank (pollution potential) <sup>1</sup>	Industrial Category	SIC Code
1	Wholesale trade (scrap, auto dismantling)	50
2	Automotive repair/parking	75
3	Fabricated metal products	34

<sup>1</sup> Critical Source Selection and Monitoring Report (Table 1-3) - Woodward-Clyde, 1996

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Rank (pollution potential) <sup>1</sup>	Industrial Category	SIC Code
4	Motor freight (including trucking)	42
5	Chemical and allied products	28
6	Automotive Dealers/Gas Stations	55
7	Primary Metals Products	33

More recent research reviewing stormwater monitoring data reveals that the stormwater runoff from industrial sites contains significant loads of pollutants. In *Utility of Stormwater Monitoring- H. Lee, M.K. Stenstrom- Water Environ. Res., 77, 219 (2005)*, the authors reviewed three years of stormwater monitoring data from industrial sites in Los Angeles County covered by the statewide Industrial Activities Stormwater General Permit (IASGP). The authors concluded that the data clearly show that certain industrial sectors contribute higher quantities of pollutants in the stormwater runoff. In addition, concentrations of metals exceeded the stormwater benchmark values suggested by the US EPA more frequently than the basic water-quality parameters. In *Industrial Storm Water Monitoring Program Existing Statewide Permit Utility and Proposed Modifications (H. Lee, M.K. Stenstrom -US EPA cooperative agreement CP-82969201 from the California State Water Resources Control Board, contract number 02-172-140-0, 2005)* the authors examined data collected over the nine-year period from 1992 to 2001 from industrial sites in Los Angeles and Ventura County covered by the statewide IASGP. The analysis of the expanded data set confirmed the conclusions of the prior research that industrial/commercial sites contribute higher quantities of pollutants in the stormwater runoff.

Nationwide and statewide research and monitoring data has shown that nurseries are also a category of facilities that tend to release a higher quantity of pollutants in stormwater runoff. Recognizing this class of facilities and activities as a potential source of pollutants, the Regional Board adopted a *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region (Waiver)*, Order No. R4-2005-0080. The Waiver

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covers discharges from “irrigated lands where water is applied for producing crops and, ... includes, but is not limited to, land planted for row, vineyard, field and tree crops as well as nurseries, nursery stock production, and greenhouse operations... which are not subject to waste discharge requirements, including Municipal Separate Storm Sewer System (MS4) or other National Pollutant Discharge Elimination System (NPDES) permits.” However, because the non-agricultural nurseries present in the urban environment can manifest the same characteristics as their agricultural counterparts, the nurseries under specified NAICS codes are covered under the current Ventura MS4 permit.

Proposed Enhancements

The new permit requirements build on the activities and experience gained in the previous ones and moves from a more educational effort to the next iteration of better source control BMPs implementation, inspection and enforcement. A special emphasis is put on mandatory implementation of a baseline minimum set of common sense source control BMPs recommended by the California Stormwater Quality Association (CASQA) BMP Handbook similar to the approach suggested by the Permittees in their ROWD for controlling pollution in stormwater discharges from construction sites.

In their ROWD, the Ventura County Permittees did not propose an enhancement of their program to control pollutants in stormwater runoff from industrial/commercial sites into the MS4 further than the provisions contained in the 2000 permit. The Permittees also did not propose any improvements in the monitoring program to better characterize the discharge of pollutants from sites of industrial or commercial use and prioritize the activities to control them. In addition, the Permittees did not propose any improvements in the type and extent of BMPs that must be implemented at industrial/commercial sites in order to control the quantity of pollutants into the stormwater runoff discharged into their MS4s. The Permittees must require the implementation of such controls at industrial/commercial sites to the extent that municipalities can comply with the MEP and water quality standards for discharges of stormwater from their MS4s.

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Based on the dual coverage and partnership approach between the permitting authority and municipalities that the USEPA called for in the storm water regulations and in order to best use limited resources at the State and local level, the permit includes the following improvements.

Recognizing that this permit represents a *third iteration* permit, and building upon the experience and tools developed under the previous permits, the Industrial/Commercial program has been elevated to an inspection, baseline mandatory source control BMPs implementation and enforcement program. Based also on the extensive educational effort performed by the Permittees since mid 1990s to familiarize industrial and commercial site operators with the requirements of the stormwater pollution prevention techniques and municipal regulations the new permit includes a number of enhancements. Municipalities are required to control the storm water discharges associated with industrial activities and other commercial facilities identified as significant contributors of pollutants through the implementation of a mandatory baseline minimum set of source control BMPs;

performance of an inspection program to verify the adequacy of BMPs implementation in the field and compliance with the municipal ordinances; and assist the Regional Board in ensuring that industrial activities subject to regulations are covered by the general industrial stormwater permit. Regional Board will also assist the municipalities in case of instances of egregious non-compliance with the municipal ordinances and state and federal laws and regulations.

Many owner/operators of industrial/commercial sites should be familiar by now with the legal requirements outlined in the municipal ordinances and the type of BMPs necessary to minimize the contribution of pollutants into stormwater runoff from their sites. The enhancements are also based on the results of the monitoring data showing that pollutants of concern that are typically discharged from sites of industrial and commercial activities cause or contribute to the exceedances of the water quality standards. The permit includes conditions that the Permittees:

- Continue to update the inventory of industrial/commercial sites under their jurisdiction;
- Perform routine inspections;

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- Require minimum set of source control BMPs implementation as a baseline;
- Enforce against violators of the municipal ordinances requirements.

The permit also provides for an enhanced coordination between Municipal and RB stormwater industrial programs.

Costs Evaluation

These permit enhancements have a limited financial impact and represent only an incremental increase in costs. A number of municipalities are already performing inspections, many of them in a very efficient way by combining various regulatory aspects, e.g. industrial waste, stormwater, etc., into one consolidated inspection program. Therefore, for those municipalities the increase in costs may be fiscally minimal to neutral. For those municipalities that performed site visits only, the increase may be incrementally elevated but by sharing in the experience of the municipalities that use a consolidated inspection program where the stormwater inspections are an addition to an already existing inspection program, those costs can be minimized. The *Pollution Source Control Practices Manual 8* (Center for Watershed Protection, July 2004) estimates that non-regulatory site inspections (site visits) range in cost between \$30 to \$80 per facility. The regular site inspections range in cost between \$75 to \$175 per facility. For on site illicit discharge investigations where the threat to water quality is higher or the damage already occurred the costs range from \$200 to \$900 per facility, but the municipalities in many cases can recuperate those costs through an enforcement action allowed under municipal ordinances. In order to alleviate some of the added costs, a number of municipalities use a permitting approach for sites of industrial/commercial activity discharging stormwater runoff into the MS4. The cities collect a fee as a consolidated charge for permitting a facility for various municipal services such as pretreatment, stormwater, potable water, solid waste, etc., programs.

The *California Stormwater BMP Handbook - Industrial and Commercial* states that source control BMPs are preferred over treatment control BMPs because they are generally effective if implemented properly and are usually, but not always, less costly than treatment control BMPs. Typical source control nonstructural (operational) and structural BMPs include using alternative less toxic chemicals and covering an activity area that is a pollutant source. The BMP Handbook

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continues to state: "the axiom of "80% of the problem can be solved with 20% of the effort" probably is true for most industries. Low or modest cost BMPs, many of which may already be in place, will usually provide satisfactory protection." The BMP Handbook provides a list of the categories of structural and operational source control BMPs that should be considered:

- Installing berms or simple curbing to divert runoff water from around the activity area to reduce the amount of polluted stormwater leaving the area;
- Implementing overhead coverage: this includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with stormwater and authorized non-stormwater discharges;
- Using secondary containment structures: this generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills;
- Moving an outdoor operation indoors;
- Designating equipment wash areas;
- Good housekeeping;
- Preventive maintenance;
- Spill prevention and response;
- Material handling and storage;
- Material and practices substitution;
- Waste handling and recycling;
- Employee training;
- Routine inspections;
- Record keeping and internal reporting;
- Quality assurance

As early as the early 1990's, USEPA recognized that: "EPA believes the pollution prevention approach is the most environmentally sound and cost-effective way to control the discharge of pollutants in stormwater runoff from industrial facilities... The first class of management practices includes those that are low in cost, applicable to a broad class of industries and substances, and widely considered essential to a good pollution control program. Some examples of practices in this class are good housekeeping, employee training, and spill response and

prevention procedures. The second class includes management practices that provide a second line of defense against the release of pollutants. This class addresses containment, mitigation, and cleanup... Experience with these practices and controls has shown that they can be used in permits to reduce pollutants in storm water discharges in a cost-effective manner.” (58 Fed. Reg. 61162) A number of municipalities in the nation, such as Pierce County, Washington, under Ordinance No. 96-47 are already requiring the implementation of mandatory source control BMPs since the late 1990’s.

Although the operational source control measures are considered inexpensive, typically involving the costs of staff performing good housekeeping activities with the use of low cost materials and tools, for some of the structural source control BMPs some costs data is available. For example, in the *Pollution Source Control Practices Manual* the costs for storage protection devices range from \$3.50 to \$5.00 per square foot of concrete slab (6”), containment pallets from \$50 to \$350 based on the size and number of barrels to be stored, for storage buildings from \$6 to \$11 per square foot, and between \$25 to \$500 for tarps and canopies depending on the size of area to cover. Also, discounted spill containment kits, storm drain plugs, drip pans, tarps, range in cost from \$60 to \$250 per facility.

For the educational aspect of their program, it is estimated that a presentation to a business group ranges in cost between \$40 to \$60 per hour, while a business recognition program, such as Sacramento’s *Clean Water Business Partner Program* range in cost between \$40 to \$75 per facility. Municipalities can also employ a Stormwater School concept that requires owners/operators found in minor violation of the stormwater ordinances to participate in a mandatory stormwater quality protection seminar. Similar techniques used for the Pretreatment Program showed that participation by high-level management from non-compliant permittees in such courses demonstrated a higher rate of compliance after the participation. This technique can be used in lieu of a fine or issuance of a Notice of Violation for minor violations of the municipal code.

In some cases, the baseline source control measures alone may not be sufficient to assure the reduction of pollutants in stormwater runoff to levels that will guarantee compliance with the applicable standards. In those instances, the municipalities have the legal authority to require the

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mitigation of pollution through the implementation of additional treatment controls. This is of elevated importance for areas of the MS4s that may discharge into receiving waters of increased environmental sensitivity or in need of special protection.

Conclusion

Because the ROWD submitted by the applicants does not include any proposed significant improvements and because the monitoring data submitted by the Permittees shows exceedances of water quality standards for a number of pollutants that can be released in stormwater runoff from industrial/commercial sites the proposed enhancements are appropriate and reasonable. The municipalities have performed an extensive effort to educate the industrial/commercial site owners/operators about the source control pollution prevention techniques for over a decade. They also familiarized the facility owners/operators with the requirements of the municipal ordinances as they pertain to the protection of the quality of stormwater runoff. The types of baseline source control measures required by the permit are proven very effective and inexpensive in most cases. Many of these measures should be part of the routine operations by now, such as good housekeeping, employee training, elimination of non-stormwater discharges, removal of illicit connections, etc. Since many of these techniques are already implemented, they should not represent a significant fiscal burden for compliance for the industrial/commercial facilities.

There is ample case law that demonstrates and supports Regional Board's authority to require the enhancements proposed in this permit. The additional requirements represent only an incremental fiscal burden for the Permittees, many of whom currently perform activities close to the level expected by the proposed permit. The permit also builds on the tools and activities prescribed in the previous permits in an iterative mode, focusing on implementation of better-tailored BMPs, inspection, enforcement activities and a better coordination with the Regional Board's activity for a more efficient use of limited resources.

The administrative record contains a substantial volume of technical and legal material that supports the findings of this permit. The significant amount of documentation material currently available demonstrates that many effective techniques and methods are available, in many cases

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at low or moderate costs levels. One of the remaining challenges is to assure their full and unequivocal implementation at every industrial/commercial site that contributes or has the potential to contribute significant quantities of pollutants in the stormwater runoff discharges. [Briefly, the level to be achieved is the "Pharmacy Cleanliness" level due to aggressive source control and pollution prevention BMPs implementation, inspection and enforcement.]

**E. Planning and Land Development Program**

Post construction land development control requirements on new development and redevelopment offer the most cost-effective strategy to reduce pollutant loads to surface waters. Retrofit of existing development will be expensive and may be considered on a targeted basis. Studies on the economic impacts of watershed protection indicate that storm water quality management has a positive or at least neutral economic effect while greatly improving the quality of surface waters.<sup>1</sup>

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<sup>1</sup> *The Economics of Watershed Protection*, T. Schueler (1999), Center for Watershed Protection, Endicott, MD. The article summarizes nationwide studies to support the statement that watershed planning and storm water management provides positive economic benefits.

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The USEPA storm water regulations at 40 CFR 122.26 require that pollutants in storm water be reduced to MEP. The USEPA's definition is intentionally broad to provide maximum flexibility in MS4 permitting and to give municipalities the opportunity to optimize pollutant reductions on a program-to-program basis.<sup>1</sup> The definition of MEP has generally been applied to mean implementation of economically achievable management practices. Because storm water runoff rates can vary from storm to storm, the statistical probabilities of rainfall or runoff events become economically significant and are central to the control of pollutants through cost effective BMPs. Further, it is recommended that storm water BMPs be designed to manage both flows and water quality for best performance.<sup>2</sup> It is equally important that treatment control BMPs once implemented be routinely maintained.

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<sup>1</sup> *Storm Water Phase II Final Rule – Pre-Federal Register Version*, p 87 (USEPA 1999). See USEPA's discussion in response to challenges that the definition is sufficiently vague to be deemed adequate notice for purposes of compliance with the regulation.

<sup>2</sup> *Urban Runoff Pollution – Summary Thoughts – The State of Practice Today and For the 21<sup>st</sup> Century*. Wat. Sci. Tech. 39(2) pp. 353-360. L.A. Roesner (1999)

Financing the MS4 program offers a considerable challenge for municipalities. A proven successful financing mechanism is the establishment of a storm water utility.<sup>1</sup> Utility fees, which are assessed on the property owner based on some estimate of storm water runoff generated for the site, are a predictable and dedicated source of funds. Utility fees can also provide a mechanism to provide incentives to commercial and industrial property owners to reduce impervious surface areas. Such incentives offer flexibility to property owners to choose the better economic option – paying more fees or making improvements to reduce runoff from the site.

#### Review of Design Standards

The American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for storm water that is derived from a mathematical equation to maximize treatment of runoff volume for water quality based on rainfall/ runoff statistics and which is economically sound.<sup>2</sup> The maximized treatment volume is

<sup>1</sup> *Preliminary Data Summary of Urban Storm Water Best Management Practices* (1999), Report No. USEPA-821-R-99-012, USEPA. The document reviews municipal financing mechanisms and summarizes experience in the U.S. to date.

<sup>2</sup> *In Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87*. WEF, Alexandria, VA; ASCE, Reston, VA. 259 pp. (1998).

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cut-off at the point of diminishing returns for rainfall/ runoff frequency. On the basis of this equation the maximized runoff volume for eighty-five percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inches depending on the imperviousness of the watershed area and the mean rainfall.<sup>1</sup>

Other methods of establishing numerical BMP design standards include: (i) Percent treatment of the annual runoff; (ii) Full treatment of runoff from rainfall event equal to or less than a predetermined size; and (iii) Percent reduction in runoff based on a rainfall event of standard size.<sup>2</sup> These numerical design standards have been applied to Development Planning in Puget Sound, WA; Alexandria, VA; Montgomery County, MD; Denver, CO; Orlando, FL; Portland, OR; and Austin, TX.

Some States have established numerical standards for sizing storm water post-construction BMPs for new development and significant redevelopment. The State of Maryland has

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<sup>1</sup> *Sizing and Design Criteria for Storm Water Treatment Controls, Presentation to California Storm Water Quality Task Force, November 13, 1998, Sacramento, CA. L.A. Roesner, Camp Dresser McKee.*

<sup>2</sup> *Sizing and Design Criteria for Storm water Quality Infrastructure, Presentation at California Regional Water Quality Control Board Workshop on Standard Urban Storm Water Mitigation Plans, August 10, 1999, Alhambra, CA., R.A. Brashear, Camp Dresser McKee.*

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established storm water numerical criteria for water quality of 0.9 to 1 inch, and BMP design standards in a unified approach combining water quality, stream erosion potential reduction, groundwater recharge, and flood control objectives.<sup>1</sup> The State of Florida has used numerical criteria to require treatment of storm water from new development since 1982, including BMPs sized for 80 percent reduction (95 percent for impaired waters) in annual TSS loads derived from the 90 percent (or greater for impaired waters) annual runoff treatment volume method for water quality.<sup>2</sup> The State of Washington has proposed at least six different approaches of establishing storm water numerical mitigation criteria for new development, which add 10,000 square feet of impervious surface or more for residential development, and 5,000 square feet of impervious surface or more for other types of development.<sup>3</sup> Other mitigation criteria options include the

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<sup>1</sup> *Maryland Storm Water Design Manual* - (Maryland Department of the Environment 2000).  
<sup>2</sup> *Florida Development Manual: A Guide to Sound Land and Water Management* (Florida Department of Environmental Protection 19xx). The manual describes structural and non-structural construction and post construction BMPs design criteria.  
<sup>3</sup> *Storm Water Management in Washington State Volumes 1 – 5*. (Washington Department of Ecology 2001). The volumes 1,3 and 5 are most relevant to new development standards and cover Hydrologic and Flow Control Designs, Minimum Technical Requirements and Treatment BMPs. The volumes were adopted as statewide standards in late 2001.



90<sup>th</sup> percentile 24-hour rainfall event (used by the State of Maryland) and the six month 24 hour rainfall event (used by the State of Washington).

On a national level, the USEPA is planning to standardize minimum BMP design and performance criteria for post-construction BMPs, and will likely build from the experience of effective state and local programs to establish national criteria.<sup>1</sup> The USEPA, based on the NURP, supports the first half-inch of rainfall as generating first flush runoff.<sup>2</sup> First flush runoff is associated with the highest pollutant concentrations, and not pollutant load. The USEPA considers the first flush treatment method, the rainfall volume method, and the runoff capture volume method as common approaches for sizing of water quality BMPs.

On April 22, 1999, the Los Angeles Regional Board approved a List of BMPs for MS4 Permittees to select from and required implementation of the most effective BMPs in their Development Planning and Development Construction programs.<sup>3</sup> The State Board issued a

<sup>1</sup> *Storm Water Phase II Final Rule* – 64 Fed. Reg. 68759. See USEPA's discussion on construction and post-construction BMP requirements for Phase II.

<sup>2</sup> *A Watershed Approach to Urban Runoff: Handbook for Decisionmakers*, Terrene Institute and USEPA Region 5 (1996). See discussion on sizing rules for water quality purposes, p 36.

<sup>3</sup> (Board Resolution No. 99-03).

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precedential decision<sup>1</sup> on the matter in Order WQ 2000-11, largely sustaining the new development requirements as approved by the LA Regional Board. The State Water Board articulated its support for regional solutions and the mitigation banking.

The post construction requirements for Ventura County were first adopted as Stormwater Quality Urban Impact Mitigation Plans in Board Order No. 00-108, in 2000. It established new development and significant redevelopment conditions for residential, commercial, and industrial new development and redevelopment projects in the following categories:

The SQUIMP included numerical design criteria for structural and treatment control BMPs. The criteria included were:

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<sup>1</sup> *State Water Board Order WQ 2000-11: SUSMP*; Memorandum from Chief Counsel to Regional Board Executive Officers, (December 26, 2000) discusses statewide policy implications of the decision.

- a) the 85<sup>th</sup> percentile 24-hour runoff event, determined as the maximized capture storm water volume for the area from the formula recommended by the WEF and ASCE study<sup>1</sup>; or
- b) the annual runoff volume, based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the BMP Handbook;<sup>2</sup>
- c) the volume of runoff produced from each and every storm event up to and including a historical-record based reference 24-hour rainfall criterion for "treatment" that achieves approximately the same reduction in pollutant loads achieved by the 85<sup>th</sup> percentile 24-hour runoff event; and/or
- d) the flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
- e) 10% of the 50-year design flow rate,

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<sup>1</sup> *In Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. (1998).

<sup>2</sup> *California Storm water Best Management Practices Handbook – Industrial/ Commercial,* (1993)

- f) the flow of runoff produced from a rain event equal to at least two times the 85<sup>th</sup> percentile hourly rainfall intensity for Ventura County; or
- g) the flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

The present Order integrates and advances the post-construction requirements in the Land Development and Planning Section as follows ----

#### **F. Development Construction Program**

##### Introduction

Soil disturbing activities during construction and demolition exacerbate sediment losses. Sediment is a primary pollutant impacting beneficial uses of watercourses. Sediments, and other construction activity pollutants must be properly controlled to reduce or eliminate adverse impacts.

1. Enhanced BMPs
  - (a) Each permittee shall implement a program to control storm water discharges from construction activity at all construction sites within its jurisdiction.
  - (b) Each Permittee shall implement, or require implementation of, enhanced practices to address the threat to water quality posed by all construction sites on hillsides as defined in this Order and construction sites that directly discharge to a waterbody listed on the CWA § 303 (d) list for siltation or sediment, or that occur within or directly adjacent to an Environmentally Sensitive Area (ESAs). Construction sites located on hillsides, adjacent to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to ESAs are termed "High risk sites."

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- (A) On hillsides with slopes 20% or steeper prior to land disturbance (If hillside development is not defined by a zoning ordinance, then the prohibition will apply to steep or long continuous slopes, or areas with silty soils, fine sands, or soils lacking vegetative cover.).
  - (B) Directly discharging to a waterbody listed on the CWA § 303 (d) list for siltation or sediment; or
  - (C) Within or adjacent to an environmentally sensitive area (ESAs)
- (c) Depending on the project area, the developer shall implement the Erosion and Sediment control BMPs listed in the following Tables 6, 7, and 8.

2. Construction Sites Less than an Acre

This permit intends that each permittee shall require the implementation of an effective combination of the following BMPs at all construction sites (see Table 6-BMPs at Construction sites less than 1 acre) to prevent erosion and sediment loss, and the discharge of construction wastes. The BMPs are from the California BMP

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Handbook, Construction, January 2003 and the Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March 2003, and addenda. Where the Erosivity Factor (R) for the construction project is 50 or greater, erosion controls (erosion avoidance) are the preferred BMPs.<sup>1</sup>

Table 1 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites For Erosion Control	CASQA Handbook	Caltrans Handbook
<b>Scheduling</b>	EC-1	SS-1
<b>Preservation of Existing Vegetation</b>	EC-2	SS-2
<b>Sediment Controls</b>		
<b>Silt Fence</b>	SE-1	SC-1
<b>Sand Bag Barrier</b>	SE-8	SC-8
<b>Stabilized Construction Site Entrance/Exit</b>	TC-1	TC-1
<b>Non-Storm Water Management</b>		

<sup>1</sup> Fact Sheet, *Construction Rainfall Erosivity Waiver* (2001) EPA 833-F-00-014; *Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE)* (1997), USDA Agricultural Handbook No. 703.

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Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>1</sup>	NS-2	NS-2
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

3. Construction Sites 1 acre or greater but Less than 5 acres
  - (a) Each permittee shall require the implementation of an effective combination of the following BMPs in Table 7 (BMPs at Construction sites 1 acre or greater but

<sup>1</sup> Poned storm water may be discharged at a concentration of Total Suspended Solids (TSS) of 100mg/L or less.

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less than 5 acres) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) at all construction sites 1 acre and greater but less than 5 acres to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 2 - BMPs at Construction sites 1acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

4. Construction Sites 5 acres and Greater
  - (a) Each permittee shall require the implementation of an effective combination of the following BMPs in Table 8 (BMPs at Construction sites 5 acres or greater) in

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addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) and Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 3 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
Sediment Controls		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Tracking Control BMPs		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
Non-Storm Water Management		
Vehicle and Equipment Maintenance	NS-10	NS-10
Waste Management		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

5. Local Agency Requirements

(a) Each permittee shall require for all construction sites 1 acre or greater, compliance with all conditions identified in the preceding subparts F.1 - F.5, and the following requirements:

(1) Local Storm Water Pollution Prevention Plan (Local SWPPP),

(A) Each permittee shall require the preparation and submittal of a Local SWPPP, for the permittee's review and written approval prior to issuance of a grading or construction permit for construction projects. If the Local SWPPP is revised, the permittee shall review and approve those revisions. The permittees' approval signature shall be contained within the first pages of the Local SWPPP (with sufficient room for approval of revisions.)

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- (i) The permittee shall not approve any Local SWPPP unless it contains appropriate site-specific construction site BMPs, specific locations, and maintenance schedules.
  - (ii) The Local SWPPP must include the rationale used for selecting or rejecting BMPs. The project architect, or engineer of record, or authorized qualified designee, must sign a statement on the Local SWPPP to the effect:
    - (I) ***“As the architect/ engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project’s construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity.”***
- (2) Certification Statement
- (A) Each permittee shall require that each landowner or the landowner’s agent sign a statement on the Local SWPPP to the effect:
    - (i) ***“I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/ or adequately implement the Local SWPPP may result in revocation of grading and/ or other permits or other sanctions provided by law.”***

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- (B) The Local SWPPP certification shall be signed by the landowner as follows:
  - (i) Corporation - by a responsible corporate officer which means the following:
    - (I) President, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
    - (II) Manager of the construction activity if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
  - (ii) Partnership or sole proprietorship - by a general partner or the proprietor; or
  - (iii) Municipality or other public agency - by an elected official, a ranking management official (e.g., County/ City Administrative Officer, City Manager, Director of Public Works, or City Engineer).
- 6. Roadway Paving or Repaving Operations (For Private or Public Projects)
  - (a) Each permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.
    - (1) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
    - (2) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat
    - (3) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses
    - (4) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt
    - (5) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose properly

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- (6) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed off properly
  - (7) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly
  - (8) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm
  - (9) Cover loads with tarp before haul-off to a storage site, and do not overload trucks
  - (10) Minimize airborne dust by using water spray during grinding
  - (11) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses
  - (12) Protect stockpiles with a cover or sediment barriers during a rain
7. Site Tracking System
- (a) Each permittee shall use an site system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each permittee. To satisfy this requirement, the use of a database or GIS system is encouraged.
8. Inspections
- (a) Each permittee shall inspect all construction sites for the implementation of storm water quality controls a minimum of once during the wet season. Concurrently, each permittee shall ensure that:
    - (1) The Local SWPPP is reviewed for compliance with local codes, ordinances, and permits.
    - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Local SWPPP.

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- (b) Each permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
- (c) Each permittee can refer sites to the Regional Water Board for further joint enforcement actions for violation of municipal storm water ordinances and the Construction Activities Storm Water General Permit (CASGP), or Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), after conducting a minimum of 2 site inspections and issuing a minimum of 2 written notices to the operator regarding the violation (copied to the Regional Water Board). In making such referrals, permittees shall include, at a minimum, the following documentation:
  - (1) Name of the site
  - (2) WDID number
  - (3) Site developer
  - (4) Site owner
  - (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report
  - (6) Written notice of the violation copied to the Regional Water
- (d) Prior to approving and/ or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each permittee shall inspect the constructed site design, source control and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. The initial/ acceptance BMP verification inspection does not constitute a maintenance and operation inspection, as required in the preceding subpart E.IV.2(c).

9. State Conformity Requirements

- (a) Each permittee shall ensure that no grading permit, encroachment permit, demolition permit, building permit, electrical permit, or construction permit (or any other municipal authorization to move soil and/ or construct or destruct

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that involves land disturbance) is issued for any project requiring coverage under the CASGP or Small LUP General Permit<sup>1</sup> unless:

- (1) Proof of coverage under a State NPDES permit is demonstrated (a copy of a letter from the State Water Board showing a valid Waste Discharger Identification Number (WDID) for that site).
- (2) Demonstration or Certification that a SWPPP has been prepared by the project developer.
- (3) Proof of an updated NOI(s) and a copy of the modified SWPPP(s) at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

10. Interagency Coordination
    - (a) Referral of Violations:
- 

<sup>1</sup> NPDES Permit No. CAS000005, Waste Discharge Requirements For Discharges of Storm Water Runoff Associated with Small Linear Underground/ Overhead Construction Projects (Small LUP General Permit) for any linear land disturbing activity or activities (cumulatively) that will cause one acre or more of land disturbance but not more than 5 acres.

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A permittee may refer a violator of the municipal storm water ordinance and CWC § 13260 to the Regional Water Board provided that the permittee has made a good faith effort at progressive enforcement consistent with the preceding subpart F.8(c). At a minimum, the permittee's good faith effort shall be documented with:

- (1) A minimum of 2 follow-up inspection reports (inspections completed within 3 months).
  - (2) A minimum of two warning letters or NOVs.
- (b) Referral of Non-filers under the CASGP or the Small LUP General Permit: Each permittee shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) under the CASGP or Small LUP General Permit, to the Regional Water Board, no later than 15 days after making a determination of failure to file. In making such referrals, permittees shall include, at a minimum, the following documentation:
- (1) Project location address
  - (2) Project description
  - (3) Developer or owners name with complete mailing address
  - (4) Project size

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- (5) Records of communication with the developer or owner regarding filing requirements
- (c) Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:
  - (1) Each permittee shall initiate, within one business day,<sup>1</sup> an initial investigation of complaint(s) (other than non-storm water discharges) on the construction site(s) within its jurisdiction.
    - (A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water/ urban runoff ordinances, and to oversee corrective action.
- (d) Support of Regional Water Board Enforcement Actions – As directed by the Regional Water Board Executive Officer:
  - (1) Each permittee shall support Regional Water Board enforcement actions by:

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<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to “initiate” the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.



- (A) Assisting in identification of current owners, operators, and lessees of properties and sites.
- (B) Providing staff, when available, for joint inspections with Regional Water Board inspectors.
- (C) Appearing to testify as witnesses in Regional Water Board enforcement hearings.

Providing copies of inspection reports and other progressive enforcement documentation.

**G. Public Agency Activities Program**

- I. Each permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:
  - i. Public Construction Activities Management.
  - ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
  - iii. Vehicle and Equipment Wash Areas
  - iv. Landscape and Recreational Facilities Management
  - v. Storm Drain Operation and Management
  - vi. Streets and Roads Maintenance
  - vii. Infrastructure Maintenance - Long-term
  - viii. Public Industrial Activities Management
  - ix. Emergency Procedures
  - x. Employee Training
- I. Public Construction Activities Management
  - (a) Each permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. of this Order at permittee owned or operated public construction projects for project types identified in part 5.E of this Order.

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- (b) Each permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. for streets, roads, and highways construction of 10,000 square feet or more of surface area
  - (c) Each permittee shall implement and comply with the appropriate Development Construction Program requirements in part 5.F. of this Order at permittee owned or operated construction projects.
  - (d) For public projects that disturb less than one acre of soil the permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Table 5.
2. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Long Term Maintenance Programs
- (a) Each permittee shall implement the following BMPs<sup>1</sup> at all permittee owned, leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Tables.

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<sup>1</sup> These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda.

Additionally, for any activity or area described in the footnote below,<sup>1</sup> each permittee shall also implement the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 9 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards).

Table 4 - BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards

From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide	Appendix B
<b>Activity Specific BMPs</b>	<b>Page</b>
<b>General BMPs</b>	B-4
<b>Flexible Pavement</b>	B-9
Asphalt Cement Crack and Joint Grinding/ Sealing	B-9
Asphalt Paving	B-10
Structural Pavement Failure (Digouts) Pavement Grinding and Paving	B-11
Emergency Pothole Repairs	B-13

<sup>1</sup> Scheduling and Planning; Spill Prevention and Control; Sanitary/ Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/ Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill / Discharge Control and Maintenance Facility Housekeeping Practices.

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Sealing Operations	B-14
<b>Rigid Pavement</b>	B-15
Portland Cement Crack and Joint Sealing	B-15
Mudjacking and Drilling	B-16
Concrete Slab and Spall Repair	B-17
<b>Slope/ Drains/ Vegetation</b>	B-19
Shoulder Grading	B-19
Nonlandscaped Chemical Vegetation Control	B-21
Nonlandscaped Mechanical Vegetation Control/ Mowing	B-23
Nonlandscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-24
Fence Repair	B-25
Drainage Ditch and Channel Maintenance	B-26
Drain and Culvert Maintenance	B-28
Curb and Sidewalk Repair	B-30
<b>Litter/ Debris/ Graffiti</b>	B-32
Sweeping Operations	B-32
Litter and Debris Removal	B-33
Emergency Response and Cleanup Practices	B-34
Graffiti Removal	B-36
<b>Landscaping</b>	B-37
Chemical Vegetation Control	B-37
Manual Vegetation Control	B-39
Landscaped Mechanical Vegetation Control/ Mowing	B-40
Landscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-41
Irrigation Line Repairs	B-42
Irrigation (Watering), Potable and Nonpotable	B-43
<b>Environmental</b>	B-44
Storm Drain Stenciling	B-44
Roadside Slope Inspection	B-45
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Storm Water Treatment Devices	B-48
Traction Sand Trap Devices	B-49

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<b>Public Facilities</b>	B-50
Public Facilities	B-50
<b>Bridges</b>	B-52
Welding and Grinding	B-52
Sandblasting, Wet Blast with Sand Injection and Hydroblasting	B-54
Painting	B-56
Bridge Repairs	B-57
Draw Bridge Maintenance	B-58
<b>Other Structures</b>	B-59
Pump Station Cleaning	B-59
Tube and Tunnel Maintenance and Repair	B-61
Ferryboat Operations	B-62
Tow Truck Operations	B-63
Toll Booth Lane Scrubbing Operations	B-64
<b>Electrical</b>	B-65
Sawcutting for Loop Installation	B-65
<b>Traffic Guidance</b>	B-67
Thermoplastic Striping and Marking	B-67
Paint Striping and Marking	B-68
Raised/ Recessed Pavement Marker Application and Removal	B-70
Sign Repair and Maintenance	B-71
Median Barrier and Guard Rail Repair	B-73
Emergency Vehicle Energy Attenuation Repair	B-75
<b>Snow and Ice Control</b>	B-76
Snow Removal	B-76
Ice Control	B-77
<b>Storm Maintenance</b>	B-78
Minor Slides and Slipouts Cleanup/ Repair	B-78
<b>Management and Support</b>	B-80
Building and Grounds Maintenance	B-80
Storage of Hazardous Materials (Working Stock)	B-82
Material Storage Control (Hazardous Waste)	B-84

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Vehicle and Equipment Fueling	B-86
Vehicle and Equipment Cleaning	B-87
Vehicle and Equipment Maintenance and Repair	B-88
Aboveground and Underground Tank Leak and Spill Control	B-90

3. Vehicle and Equipment Wash Areas
  - (a) Each permittee shall eliminate discharges of wash waters from vehicle and equipment washing no later than (365 days after Order adoption date) by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:
    - (1) Self-contain, and haul off for disposal
    - (2) Equip with a clarifier
    - (3) Equip with an alternative pre-treatment device; or
    - (4) Plumb to the sanitary sewer
  - (b) Each permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced has all vehicle and equipment wash areas plumbed to the sanitary sewer or be self contained and all wastewater/ washwater hauled for legal disposal.
  
4. Landscape, Park, and Recreational Facilities Management
  - (a) Integrated Pest Management (IPM)
 

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each permittee shall implement a jurisdiction-wide IPM program and includes the following:

    - (1) Pesticides are used only if, after monitoring indicates they are needed according to established guidelines.
    - (2) Treatments are made with the goal of removing only the target organism.

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- (3) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.
  - (4) Its use of pesticides, including Organo-phosphates and Pyrethroids do not threaten water quality.
  - (5) Partner with other agencies and organizations to ensure that pesticide use within their jurisdiction does not threaten water quality.
  - (6) Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the permittees' overall operations and on municipal property.
  - (7) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
    - (A) Quantify pesticide use by its staff and hired contractors.
    - (B) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
    - (C) Demonstrate reductions in pesticide use.
- (b) Each permittee shall implement the following requirements no later than (180 days after Order adoption date):
- (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers.
  - (2) Comply with the provisions and the monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2004-0008-DWQ).
  - (3) Ensure no application of pesticides or fertilizers are applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area.
  - (4) Ensure that no banned or unregistered pesticides are stored or applied.
  - (5) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.

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- (6) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs; and
  - (7) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment.
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills.
    - (B) Regularly inspect storage areas.
5. Storm Drain Operation and Management
- (a) Catch Basin Cleaning
    - (1) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:
      - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash.
      - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash.
      - Priority C: Catch basins that are designated as generating low volumes of trash.Within one year of Order adoption, Permittees shall submit a map or list of Catch Basins with their GPS coordinates and their designations. The map or list shall contain the rationale or data to support designations.
    - (2) Each Permittee shall inspect catch basins according to the following schedule:
      - Priority A: A minimum of 3 times during the wet season and once during the dry season every year.
      - Priority B: A minimum of once during the wet season and once during the dry season every year.
      - Priority C: A minimum of once per year.Catch basins shall be cleaned as necessary on the basis of inspections. Permittees shall maintain inspection records for Regional Board review.
    - (3) In addition to the preceding schedule, Permittees shall ensure that any catch basin that is determined to be at least 25% full of trash shall be cleaned out.

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- (b) Trash Management at Public Events
  - (1) Each Permittee shall require for any event in the public right of way or wherever it is foreseeable that substantial quantities of trash and litter may be generated, the following measures:
    - (A) Proper management of trash and litter generated; and
    - (B) Arrangement for temporary screens to be placed on catch basins; or
    - (C) Provide clean out of catch basins, trash receptacles, and grounds in the event area within 24 hours subsequent to the event.
- (c) Trash Receptacles
  - (1) Each Permittee shall install trash receptacles, or equivalent trash capturing devices in areas subject to high trash generation within its jurisdiction no later than (one year after Order adoption date).
  - (2) Each Permittee shall ensure that all trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.
- (d) Catch Basin Labels
  - (1) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest each catch basin and inlet before the rainy season begins.
  - (2) Each Permittee shall record and re-stencil or re-label within 15 days of inspection, catch basins with illegible stencils.
- (e) Additional Trash Management Practices
  - (1) Each Permittee shall install trash excluders, or equivalent devices on or in catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water no later than two years after Order adoption date in areas defined as Priority A (Provision 1a(2)) except in sites where the application of such BMP(s) alone will cause flooding. Lack of maintenance that causes flooding is not an acceptable exception to the requirement to install BMPs. Alternatively the Permittee may implement alternative or enhanced BMPs beyond the provisions of this permit (such as but not limited to increased street sweeping, adding trash cans near trash generation sites, prompt enforcement of trash accumulation, increased trash collection on public property, increased litter prevention messages or trash nets within the MS4) that provide substantially equivalent removal of trash. Permittees

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shall demonstrate that BMPs, which substituted for trash excluders provide equivalent trash removal performance as excluders. When outfall trash capture is provided, revision of the schedule for inspection and cleanout of catch basins in task (a) may be proposed by the Permittee for approval by the Executive Officer.

(f) Storm Drain Maintenance

- (1) Each Permittee shall implement a program for Storm Drain Maintenance no later than (180 days after Order adoption date) that includes the following:
  - (A) Visual monitoring of Permittee-owned open channels and other drainage structures for debris at least annually.
  - (B) Remove trash and debris from open channel storm drains a minimum of once per year before the storm season.
  - (C) Eliminate the discharge of contaminants during MS4 maintenance and clean outs.
  - (D) Quantify the amount of materials removed using techniques appropriate for quantifying solid waste and ensure the materials are properly disposed of.

(g) Spill Response Plan

- (1) Each permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response Plan shall clearly identify agencies responsible and telephone numbers and e-mail address for contact and shall contain at a minimum the following:
  - (A) Investigation of all complaints received within 24 hours of the incident report.
  - (B) Response within 2 hours to spills for containment upon notification.
  - (C) Notification to appropriate public health agencies and the Office of Emergency Services (OES).

(h) Permittee Owned Treatment Control BMPs

- (1) Each permittee shall implement an inspection and maintenance program for all permittee owned treatment control BMPs, including post-construction treatment control BMPs.

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- (2) Each permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
- (3) Any residual water within a treatment control BMP when being maintained shall be:
  - (A) Hauled away and legally disposed of;
  - (B) Discharged to the sanitary sewer system (with permits or authorization); or
  - (C) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 10 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

Table 5 - Discharge Limitations for Dewatering Treatment BMPs<sup>1</sup>

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

<sup>1</sup> Technology based effluent limits.

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6. Streets and Roads
  - (a) Maintenance
    - (1) Each permittee shall perform street sweeping of curbed streets in commercial areas and areas subject to high trash generation to control trash and debris at least two times per month.
  - (b) Road Construction and Reconstruction
    - (1) Each permittee shall implement the following BMPs for road reconstruction:
      - (A) Drain Inlet protection from sediments.
      - (B) Dewatering of below grade construction areas.
      - (C) Secondary containment for cold mix.
      - (D) Sheeting underneath cold mix (during storage) to prevent discharge of spray release, and
      - (E) Sheeting to cover cold mix (during storage).
      - (F) If street material is to be concrete, then provide a vehicle wash off area that is isolated from the MS4.
7. Emergency Procedures
  - (a) Each permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.
    - (1) Where the self-waiver has been invoked, the permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implement to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
    - (2) Minor repairs of essential public service systems and infrastructure in emergency situations (can be completed in less than one day) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.
8. Municipal Employee and Municipal Contractor Training

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- (a) Each permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors in targeted positions (whose interactions, jobs, and activities affect storm water quality) on the requirements of the overall storm water management program to:
  - (1) Promote a clear understanding of the potential for activities to pollute storm water.
  - (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
- (b) Each permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training programs shall address:
  - (1) The potential for pesticide-related surface water toxicity.
  - (2) Proper use, application, handling, and disposal of pesticides.
  - (3) Least toxic methods of pest prevention and control, including IPM.
  - (4) Reduction of pesticide use.
- (c) Each permittee shall, no later than (12 months after Order adoption date) and annually thereafter before June 30, train all of their employees and contractors who are responsible for illicit connections and illicit/ illegal discharges. Training programs shall address:
  - (1) Identification
  - (2) Investigation
  - (3) Termination
  - (4) Cleanup
  - (5) Reporting of Incidents
  - (6) Documentation of Incidents

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**H. Illicit Connections and Illicit Discharges Elimination Program**

Introduction

During dry weather, much of the discharge to storm drain systems consists of wastes and wastewater from non-storm water sources. A significant amount of such discharges may be from illicit discharges or connections, or both. Illicit discharges may occur either through direct connections, such as deliberate or mistaken piping, or through indirect connections, such as dumping, spillage, subsurface infiltration, and wash-downs.

Monitoring data from MS4 programs across the nation have shown that dry weather discharges can contribute significant pollutant loads to receiving waters. *The Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments* finds, if these (dry weather discharges) are ignored by only focusing on storm water runoff (wet weather discharges), little improvements in receiving water quality may occur.

The objective of a municipality's illicit connection/illicit discharge (IC/ID) elimination program should be to detect illicit connections and illicit discharges to the storm drain system, and to promptly remove such discharges and connections. Municipalities typically employ the approaches listed below to achieve this objective:

- Permitting connections to the municipal storm drain.
- Mapping the storm drain system, locations of catch basins, outfalls, permitted connections, and the names and locations of all waters of the U.S. that receive discharges from the outfalls.
- Adopting a storm water/ urban runoff ordinance to prohibit unauthorized non-storm water discharges into the MS4, and implementing appropriate enforcement procedures and actions.
- Implementing a program to detect and eliminate non-storm water discharges to the MS4, including illegal dumping.
- Educating public employees, businesses, and the general public about the dangers associated with illegal discharges and improper disposal.
- Establishing a public reporting hotline or other mechanism to report illicit discharges and illegal dumping.

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- Establishing measurable goals to evaluate successful program implementation.

Discussion of New Requirements

- 1) The Draft Ventura MS4 Permit requires Permittees to develop and submit to the Principal Permittee, a map showing the length and location of underground pipes 18 inches and greater in diameter, and channels within their jurisdiction within a specified time frame. The intent of this provision is to enhance the Permittees ability to identify, locate, and eliminate sources of pollutants identified by monitoring results and spill/complaint notifications.
- 2) The Draft Ventura MS4 Permit requires Permittees to screen storm pipes greater than 36" in diameter, that have not been screened within 3 years of adoption of the Order, high priority areas identified during the mapping of illicit connections and discharges, that have not been screened within 3 years of adoption of the Order, and portions of the storm drain system 50 years or older in age that have not been screened within 3 years of adoption of the Order. The Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments states, "The average age of development in a subwatershed may predict the potential for illicit discharge problems. For example, a subwatershed where the average age of development is more than 100 years was probably constructed before sewer service was widely available, and many of the pipes and connections may have changed over the years as a result of modernization and redevelopment. Presumably, the risk of potential discharges would be higher in these older subwatersheds. By contrast, a recently developed subwatershed may have a lower discharge risk due to improved construction materials, codes and inspections. Therefore, high Illicit Discharge Potential (IDP) may be indicated when subwatershed development is more than 50 years old, with medium IDP for 20 to 50 year old development, and low IDP if fewer than 20 years old". The intent of this requirement is to identify and eliminate potential significant source of pollutants contributing to poor dry weather water quality.
- 3) The Draft Ventura MS4 Permit requires Permittees to conduct field screening of their storm drain systems in accordance with procedures described in, The Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments.

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The manual was developed as part of a cooperative agreement with the USEPA, to serve as a comprehensive up to date guidance manual for illicit connection/illicit discharge elimination programs. The manual was developed from surveys of Phase 1 MS4s serving multiple population sizes with the goal of coming up with cost effective methods for screening and eliminating illicit connections/illicit discharges. The goal of specifying the manual is to provide guidance and ensure effective methods are used for screening storm drain systems. The provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual.

- 4) The Draft Ventura MS4 Permit requires Permittees to upon discovery or upon receiving a report of a suspected illicit connection, to complete an investigation within 21 days, to determine the source of the connection, the nature and volume of discharge through the connection, and identify the responsible party for the connection. The Order requires Permittees upon confirmation of an illicit storm drain connection, to ensure the termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection. The intent of this requirement is to ensure the timely elimination of illicit connections upon discovery and their contributions to the degradation of storm water quality.
- 5) The Draft Ventura MS4 Permit requires Permittees to maintain records of all illicit/ illegal discharge discoveries, reports of suspected illicit/ illegal discharges, their response to the illicit/ illegal discharges and suspected illicit/ illegal discharges, and the formal enforcement taken to eliminate all illicit/ illegal discharges. The intent of this documentation provision is to facilitate the recognition of trends to assist in the discovery of unidentified illicit connections and identify areas where illicit connections and discharges have a greater probability of occurring.

#### I. Reporting Program

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The Reporting Program requires an Annual Report that is a Public Document Required under Federal Regulations

The Annual Report is composed of:

- 1) A Monitoring Report that contains the results that are to be used to refine BMPs for the reduction of pollutant loading, & for the protection & enhancement of the beneficial uses of the receiving waters within Ventura County.
- 2) A Program Report to track and oversee the progress each Permittee is making towards full compliance with the various requirements of the MS4 Permit.

## VI. MONITORING PROGRAM

### Background

Board based monitoring data collected through the Countywide Storm Water Monitoring Program provides a quantitative, statistically valid estimate of the impaired water segments within Ventura County. This water quality monitoring program has become a high priority, because of the number of water segments not supporting their beneficial uses due to constituent exceedances and therefore being placed on the State's 303(d) list of impaired waters. Monitoring has taken on a large role in determining compliance with the Total Maximum Daily Loads (TMDLs) developed within the Ventura waterbodies. Water quality issues have become more complex than in the past were monitoring focused mainly on conventional, bacteriological, and nutrient constituents. Now monitoring focuses on legacy pollutants, new and complex constituents such as synthetic organic compounds like pesticides and volatile organic compounds (VOCs) in solvents, which have been introduced into the environment and were not water quality issues in the past.

Water quality monitoring and assessments help prioritize water segments within a watershed that have the most degraded waters and to assess which stressors such as nutrients, sedimentation, and habitat disturbances are the most important in that watershed. Monitoring is a useful and cost-effective method for getting a broad picture of whether there is a problem and how big the problem is within a watershed. From this board based monitoring follows targeted monitoring that focuses on the associations between water quality conditions and the natural and human factors that contribute to the impaired conditions. Targeted monitoring establishes relations between water quality, and the natural and human factors that affect water quality. In general, a comprehensive monitoring program (board based and targeted) can supply a wealth of data that can be used in a wide range of applications for improving water quality.

#### Storm Water Monitoring History

The Ventura County Watershed Protection District has been conducting storm water monitoring within Ventura County pursuant to the 2000 Board Order No. 00-108. Over the last 8 years, the storm water monitoring program has consisted of 2 main components: water chemistry and aquatic toxicity monitoring at Mass Emission, Receiving Water (tributaries), and Land Use stations. It also has had a bioassessment monitoring component within the Ventura River. The pertinent parts of the Storm Water Monitoring Program include the following:

Mass Emission stations were designed to identify pollutant loads to the ocean, and long term trends in pollutant concentrations, and characterize surface water quality in major receiving waters. The 3 Mass Emission stations are located in the major Ventura County watersheds: Calleguas Creek (ME-CC), Ventura River (ME-VR), and Santa Clara River (ME-SCR). Stations ME-CC and ME-VR were installed and monitored for the first time during the 2000/01 monitoring season, while ME-SCR was first installed and monitored during the 2001/02 monitoring season. High flows during January and February of 2005 resulted in the relocation of the ME-VR due to landslide activity and associated safety concerns to approximately one mile downstream from the historical ME-VR site to the Ojai Valley Sanitation District's Treatment Plant above the POTW outfall. The relocated station on the Ventura River (ME-VR2) was first monitored using portable sampling equipment in May 2005; and by September 2005 a permanent station was established. Stations ME-CC, ME-SCR, and ME-VR/ ME-VR2 were required to

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sample 6 station events per year, including a minimum of 2 dry weather samples during the permit term. The stations ME-CC and ME-VR/ ME-VR2 samples are composed of flow-based composite and toxicity grab samples, and station ME-SCR samples are composed of time-based composite samples and toxicity grab samples. All 3 Mass Emission stations collected wet and dry weather water quality samples and analyzed for chronic toxicity.

Land Use stations were designed to characterize storm water runoff (discharges to receiving waters) from 3 specific land use types: agricultural, industrial, and residential. The 3 Land Use stations are located at: Wood Road (A-1, agricultural), Ortega Street (I-2, industrial), and Swan Street (R-1, residential). Monitoring at these sites was first implemented during the 1992-93 monitoring season and was designed to capture storm water runoff from a specific type of land use. Station A-1 was required to sample a maximum of 5 storm events during the permit term, stations I-2 and R-1 were required to sample 3 storm events during the permit term. The stations' samples are composed of time-based composite samples and toxicity grab samples. All 3 Land Use stations collected wet weather water quality samples and analyzed for acute toxicity.

Receiving Water (tributaries) stations were designed to characterize the quality of receiving waters rather than discharges to receiving waters. This monitoring evaluated smaller tributaries to the main river systems. The 2 Receiving Water stations are located in the Revolon Slough watershed at: La Vista (W-3), upper Revolon Slough, and Revolon Slough (W-4), lower Revolon Slough. Monitoring at these sites was first implemented during the 1997-98 season and captures storm water runoff from the Revolon Slough sub basin. Stations W-3 and W-4 were required to sample a maximum of 5 storm events during the permit term. The stations' samples are composed of time-based composite samples and toxicity grab samples. All 2 Receiving Water stations collected wet weather water quality samples and analyzed for acute toxicity.

Biological assessment (bioassessment) monitoring of the Ventura River watershed was designed to analyze the community structure of the in-stream benthic macroinvertebrate (BMI) assemblages in urban runoff-impacted stream segments at experimental sites. In bioassessment monitoring, a set of biological measurements (metrics), each representing a different aspect of the community, was calculated for each monitoring site. A total score was then calculated for the monitoring site, as the sum of the individual metric scores. Monitoring sites were then

ranked according to their score, and then classified into groups (poor, fair, good and very good). The system of scoring and ranking sites is an Index of Biotic Integrity (IBI). The IBI used during 2001/02 though 2003/04 was the San Diego IBI; and the IBI used during 2004/05 through 2006/07 was the Southern California IBI (So CA IBI). There were fifteen BMI monitoring sites located in the Ventura River watershed, monitoring at these sites was implemented from the Fall of 2001 through 2005. A biological and physical/habitat assessment program within the Ventura River watershed was developed during the Spring of 2001.

New requirements

The new provisions of the monitoring program consist of:

- 1) Outfall monitoring (12 major outfalls)
- 2) Submittal of monitoring data electronically within 90 days from sample collection date & transmitted in standardized formats.
- 3) MS4 TMDL WLA Monitoring that incorporates the adopted storm water WLAs
- 4) Mass Emission stations' monitor storms that produce a 20% or greater increase in baseflow
- 5) Expanded toxicity testing
- 6) Special Studies
  - (a) Expanded Bio-assessment monitoring (Southern California Regional Bioassessment)
  - (b) Pyrethroid Insecticide
  - (c) Hydromodification Control
  - (d) Low Impact Development
  - (e) Beach Water Quality Monitoring

**VII. FINAL QUESTIONS AND CHANGES**

The draft permit has several changes. These changes have been proposed based on the nearly 17 years of experience of controlling municipal storm water discharges within the Regional Water Board's region.

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**California Regional Water Quality Control Board, Los Angeles Region  
Ventura County Municipal Storm Water Discharge Permit  
Response to Comments on the December 27, 2006 Draft**

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made	
Permit Development Process	General	Permit development was not an inclusive process unlike the Basin Plan.	Oxnard 2, 4	This permit development process has been inclusive. The Water Board has held more than nine meetings (October 2005 through February 2009) with permittees their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIA/GLA/VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Collation for Practical Regulation (CPR), Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government Commission, Los Angeles City; Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper, and Charles Abbott Associate. On April 5, 2007, September 20, 2007, and July 10, 2008 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the permittees and the public regarding proposed changes.	The most recent draft reflects revisions to the permit in most major sections. The revisions are summarized in this table below.

<sup>1</sup> BILDF = Building Industry Legal Defense Foundation; Caltrans = State of California Department of Transportation; Camarillo = City of Camarillo; Carson = City of Carson; CASQA = California Stormwater Quality Association; CICWQ = Construction Industry Coalition on Water Quality; Building Industry Association of Southern California; CONTECH = CONTECH Stormwater Solutions, Inc.; Countywide Program = Ventura Countywide Stormwater Quality Management Program; CSDs of LA = County Sanitation Districts of Los Angeles County; LA County Stormwater = Stormwater Program - County of Los Angeles; Fillmore = City of Fillmore; Heal the Bay = Heal the Bay; Inglewood = City of Inglewood; LA County PW = Department of Public Works, County of Los Angeles; LGC = Local Government Commission; Long Beach = Stormwater Management Division, City of Long Beach; Moorpark = City of Moorpark; NRDC = Natural Resources Defense Council; Ojai (Carol Smith) = City of Ojai; Oxnard = City of Oxnard; Oxnard Chamber of Commerce = Oxnard Chamber of Commerce; Port Hueneme (Carrie Mattingly) = City of Port Hueneme; Port Hueneme (Maricela Morales) = City of Port Hueneme; Maricela P. Morales; Signal Hill = City of Signal Hill; Signal Hill Coalition PR = City of Signal Hill, Coalition for Practical Regulations; Simi Valley = City of Simi Valley; TECS = Environmental Compliance Services; Theresa Jordan = Theresa Jordan (citizen); Thousand Oaks = City of Thousand Oaks; Various Citizens (Alyson Austin) = Various Residents B; Various Citizens (Christine Shimane) = Various Residents D; Various Citizens (Karen Conlon) = Various Residents A; Various Citizens (Karen Zieba) = Various Residents E; Various Citizens (Odie Duggan) = Various Residents C; Ventura = City of Ventura; Ventura County PWA = County of Ventura Public Works Agency; Ventura County RCD = Ventura County Resource Conservation District; Ventura County WPD = Ventura County Watershed Protection District

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
General	Permit developed with many prescriptive practices, few chances for flexibility.	Simi Valley 2; Ventura 3; Thousand Oaks 2; Signal Hill Coalition PR 1; Various Citizens (Karen Conlon) 1; CONTECH 1-2; Heal the Bay 2; Fillmore 1	The Permit was written in a way to allow maximum flexibility. However, we have provided direction/clarity wherever necessary to help ensure that there is no ambiguity. Also, there is a BMP substitution provision that allows the RB Executive Officer to substitute a program for one of the Permittee's request.	The most recent draft reflects revisions to the permit in most major sections. The revisions are summarized in this table below.
General	Science and studies on which the permit was based are incomplete and aren't applicable to Ventura County.	Various Citizens (Karen Zieba) 1	There have been many studies and land use studies across the country that are consistent at identifying pollutants of concern for different land uses and activities. Many requirements in the draft permit are management controls that are far less expensive to implement than it is to implement studies that will show what other studies have already shown.	The most recent draft reflects revisions to the permit in most major sections. The revisions are summarized in this table below.
Phase I vs. Phase II	No distinction between Phase I and Phase II community requirements exists.	Port Hueneme (Carrie Mattingly) 2; Moorpark 1; Countywide Program 3; Fillmore 2	There is no need for a distinction between Phase I and Phase II as all municipalities in the County of Ventura are or have been designated as Phase I in the 1994 Ventura MS4 Permit issuance. Regional Board staff are open to alternative timelines or programs but no specific request has been received. Within the Permit there is a provision for implementation of alternative programs and/or BMPs.	The most recent draft reflects revisions to the permit in most major sections. The revisions are summarized in this table below.
Consistency with Other Regulations and Requirements	Not coordinated with previous legislation and regulations, which makes it unreasonable and confusing.	Simi Valley 2; Signal Hill Coalition PR 1	This draft permit is consistent with all laws, regulations, and established waste load allocations in approved TMDLs.	The most recent draft reflects revisions to the permit in most major sections. The revisions are summarized in this table below.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Consistency with Other Regulations and Requirements	Must consider balancing factors required in Porter Cologne Section 13241 when exercising discretion to achieve MEP.	BILDF 3-11	Porter –Cologne Section 13241 sets out Factors to be considered by a Regional Board in establishing water quality objectives, not when determining whether the MEP standard has been met.	No changes are required to address this comment. State Board has conducted an economic analysis of the probable costs of implementing this permit, and the analysis shows reasonable costs of implementation.
Consistency with Other Regulations and Requirements	Many provisions are more stringent than those required by federal law.	Countywide Program 10; Signal Hill 2-3	The commenter gives no specific example of inconsistency. This draft permit is consistent with federal law and regulations and is reasonable based upon a progressive regulatory approach.	Finding has been revised to address this comment.
<i>Discharge Prohibitions</i>				
General Prohibitions	Exceedances of water quality standards are already occurring (303(d)-listed waters) so provisions cannot be complied with. The permit should not prohibit discharges into the MS4.	LA County PW 4,5	When an exceedance occurs, the iterative process begins. The Permittees must make progress during the iterative process to prevent further exceedances. The purpose of the MS4 permit is to require implementation of programs that will achieve water quality standards. Federal Regulations at 40 CFR 122.26 XXXXX includes a requirement that all non storm water discharges shall be effectively prohibited. The prohibition is into the MS4.	No changes required to address this comment.
General Prohibitions	The permit should not prohibit discharges into the MS4.	BILDF 1-3		No changes required to address this comment.
Non-Storm Water Prohibitions	The Order only applies to the MS4, not to natural watercourses, so the prohibition of non-storm water discharges into watercourses should be removed.	LA County PW 5	The definition of an MS4 includes any conveyance of storm water, natural or manmade.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Non-Storm Water Prohibitions	Permittees should be allowed to conditionally exempt discharges that are considered a violation of local ordinances, providing additional authority to enforce and prohibit discharges considered a nuisance.	LA County PW 5	The Permittees already had this authority. However, some non-storm water discharges have been determined to either be a source of pollutants or whose existence causes flows of pollutants already in/on streets and/or the rest of the storm drainage system to flow to waters of the U.S. unabated contrary to the required effective prohibition on non storm water discharges.	No changes required to address this comment
Non-Storm Water Discharges	Recreation and Parks Dept empties pond water into the city sewer system. Is a permit required for this?	Teresa Jordan	This Order does not regulate discharges of pond water (or other waters) into the sanitary sewer system. Discharges into the sanitary sewer system are regulated by the sewer agency or by a city/county discharging into the sewer system via an industrial waste program. However, if this (pond) discharge is into the storm sewer system, the discharge is not authorized under the current draft permit. The municipality would need to find alternative means to discharge of the potentially bacteria laden water.	No changes required to address this comment
<i>Receiving Water Limitations</i> Public Role in Reporting RWL violations	The permit, in stating that the public can offer documentary evidence of a violation of RWLs, wrongly encourages members of the public to conduct their own monitoring. It also forces permittees to address potentially incorrect allegations.	LA County PW 5	The provision has been eliminated.	The provision has been eliminated.



Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
<p><i>Storm Water Quality Management Program Implementation</i></p> <p>Fiscal Resources</p>	<p>The requirements are cost-prohibitive for many municipalities.</p>	<p>Ventura 3; Camarillo 1; Moorpark 1; Thousand Oaks A2; Ventura County PWA 1; Countywide Program 2; Signal Hill 2; Ojai (Carol Smith) 1-2; Port Hueneme (Maricela Morales) 1</p>	<p>The requirements in the Ventura Draft permit have been conscientiously thought out and were developed to be consistent with other storm water programs across the state and within the Los Angeles Region specifically while also considering local communities needs and land use patterns. The cost is comparable to other cities of similar size and population. However, the draft permit also includes a BMP Substitution provision that allows a Permittee to implement a different program to achieve the same goal.</p>	<p>No changes required to address this comment.</p>
<p>Fiscal Resources</p>	<p>The permit does not reach goals cost effectively.</p>	<p>Ventura 3; Camarillo 1; Thousand Oaks 2; Ventura County PWA 1; Countywide Program 12,13; Various Citizens (Karen Conlon) 1</p>	<p>The requirements in the Ventura Draft permit have been conscientiously thought out and were developed to be consistent with other storm water programs across the state and within the Los Angeles Region specifically while also considering local communities needs and land use patterns. The cost is comparable to other cities of similar size and population. However, the draft permit also includes a BMP Substitution provision that allows a Permittee to implement a different program to achieve the same goal.</p>	<p>No changes required to address this comment</p>
<p>Fiscal Resources</p>	<p>More information is needed regarding how costs were considered.</p>	<p>LA County PW 4</p>	<p>Although not required under federal mandates, an economic analysis has been prepared by SWRCB staff.</p>	<p>No changes required to address this comment.</p>
<p>Fiscal Resources</p>	<p>Fiscal reporting requirements are onerous.</p>	<p>Long Beach 1</p>	<p>The fiscal reporting requirements are nearly identical to that in the Los Angeles MS4 Permit.</p>	<p>No changes required to address this comment</p>

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Required BMPs	Requirements for BMP substitution are unclear.	CSDs of LA 2	<p>Regional Board Staff disagree with the commenter. The requirements for BMP substitution are in fact very clear. Permittees need only identify the following:</p> <p>That the proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants;</p> <p>The fiscal burden of the original BMP or program is substantially greater than the proposed alternative and does not achieve a substantially greater improvement in storm water quality; and</p> <p>The proposed alternative BMP or program will be implemented within a similar period of time.</p>	No changes required to address this comment.
<i>Development Construction Program</i> Grading Prohibitions	Eliminate or add flexibility to the wet season grading prohibition.	Thousand Oaks A9,11; Ventura County RCD 1; Countywide Program B15,B21	The wet season grading restriction is only applicable to certain sites meeting certain conditions. As an alternative to the restriction, the MS4 Permittee may issue a waiver if the developer can demonstrate that their plans will protect water quality.	The permit has been revised to include requirements for enhanced BMPs to account for increased threat to water quality from rain events and hillside construction.
Grading Prohibitions	Ensure that agricultural grading and clearing is exempt from the grading prohibition.	Ventura County RCD 1	Agriculture is exempted from the NPDES program under federal law.	No changes required to address this comment.

Section/Topic	Comment	Committer(s) & Page Numbers	Response	Change Made
Grading Prohibitions	The grading prohibition adversely affects housing construction and is onerous and inappropriate. The grading prohibition will cause construction work force to idle for months. Provision can increase cost of development and cause hardship for permittees, developers, and businesses.	LA County PW 3,4,13; Long Beach 2; Various Citizens (Christine Shimane) 1; Various Citizens (Alyson Austin) 1	The winter grading restriction requirement has been removed from the permit and replaced with a requirement for enhanced BMPs to address the areas of greatest vulnerability to erosion due to anthropogenic activities and thus, require a definitive suite of BMPs to be implemented to protect exposed soils from erosion during construction activity.	Revised to include requirements for enhanced BMPs to account for increased threat to water quality from rain events and hillside construction.
Grading Prohibitions	The cost/benefit of wet season grading restrictions is low. It is expected to benefit water quality only for 28 days, but the cost is expected to be \$62,500 to \$125,000 per acre over the 6-month wet season because of significant land carrying costs. The restriction is based on the unreasonable assumption that construction site operators do not comply with the General Construction Permit.	BILDF 55-58; CICWQ 21-22	Federal law requires compliance with water quality standards and for those sites with a State of California General Construction Storm Water Permit, compliance with BAT/BCT (Best Available Technology/Best Conventional Technology) standards. If compliance is achievable, as the commenter suggests, a variance can be requested by the permitting authority which allowed the construction, the local municipality.	Revised to include requirements for enhanced BMPs to account for increased threat to water quality from rain events and hillside construction.
Variances	Developers, not permittees, should be responsible for demonstrating conditions for variances.	LA County PW 13	Regional Board staff agree with the comment or and have changed the draft permit to reflect the change in responsibilities.	No changes are required to address this comment.
Variances	Requirements to meet numeric limits to obtain a wet season waiver go against Blue Ribbon Panel recommendations to determine baseline sediment loads in receiving waters.	BILDF 58-60	Federal law requires compliance with water quality standards and for those sites with a State of California General Construction Storm Water Permit, compliance with BAT/BCT (Best Available Technology/Best Conventional Technology) standards. If compliance is achievable, as the commenter suggests, a variance can be requested by the permitting authority which allowed the construction, the local municipality.	No changes are required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Erosivity Factor	The erosivity factor is not defined and may not be reasonable, implementable, or enforceable.	Long Beach 2	Regional Board uses USEPA's term (erosivity factor) as defined by USDA. For more info see - Renard, K.C., G.R. Foster, G.A. Weesies, D.K. McCool, and D.C. Yoder. 1997. <i>Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE)</i> , Agricultural Handbook 703, USDA-ARS, U.S. Government Printing Office, Washington, D.C.	A definition of erosivity factor has been added to the permit.
BMP Requirements	Minimum BMPs required for construction sites are too prescriptive, not flexible enough.	LA County PW 13-14	Minimum BMPs provide clarity and finality that these are the measures to be implemented at a given site. The Permittee is still responsible for approval of BMPs on a site specific basis. This provides for the flexibility that the commenter is requesting.	A BMP performance criterion includes flexibility for BMP implementation.
Inspection Requirements	Inspection requirements exceed federal CWA requirements.	LA County PW 14, 15	Inspection requirements are consistent with 40 CFR 122.26 (d)(2)(i)(A)-(F).	No changes are required to address this comment.
Enforcement	Enforcement requirement eliminates municipal discretion in enforcing local codes.	LA County PW 14	Lack of enforcement on the Permittee's part may be a violation of the municipal permit. The municipality always has discretion to undertake enforcement but to allow continued violations of permits, laws, or regulations cannot be allowed.	No changes are needed to address the comment.
Enforcement	Local staff cannot be compelled by the Regional Board to serve as witnesses unless subpoenaed.	LA County PW 9	Regional Board staff are available to assist municipalities in enforcement actions they pursue. Likewise, if a site operator is referred to the Regional Board staff for enforcement, there is an expectation that the referring city be cooperative with the enforcement proceeding and not require a subpoena for assistance as a witness.	No changes are needed to address the comment.
<i>Public Agency Activities Program</i> Sewage Maintenance, Overflow, and Spill Prevention	These requirements are duplicative of SWRCB's General Waste Discharge Requirements for Sanitary Sewer Systems.	Countywide Program B23; CSDs of LA 2; LA County Stormwater <sup>3</sup>	The draft has been changed to reflect the requirements of the Statewide Permit and Waste Discharge Requirements for Sanitary Sewer Systems. The new draft requirements are intended to protect water quality specific to storm water requirements.	Reflects the requirements of the Statewide Permit and Waste Discharge Requirements for Sanitary Sewer Systems.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Sewage Maintenance, Overflow, and Spill Prevention	Sanitary agencies should be required to notify the MS4 owner/operator within 2 hours.	LA County PW 15	Regional Board staff agree with the comment or and have changed the draft permit to reflect the change in responsibilities.	Reflects the requirements of the Statewide Permit and Waste Discharge Requirements for Sanitary Sewer Systems.
Public Construction	CASGP coverage for regular maintenance and CIPs should not be required.	Thousand Oaks A12-13; Countywide Program B23, B24, B26; LA County PW 15; Long Beach 2	Coverage for soil disturbing activities is a federal requirement. Regional Board staff have simplified compliance by allowing several soil-disturbing activities to be covered under a single NOI, if the municipality desires.	Compliance simplified by allowing several soil-disturbing activities to be covered under a single NOI, if the municipality desires.
Vehicle Maintenance, Materials Storage, Landscaping	The phase out of pesticides associated with the integrated pest management requirement are not feasible.	Simi Valley 2; Ventura County WPD 2; Countywide Program B24	The draft Permit has been revised to encourage the reduction in use of pesticides and the increase in use of integrated pest management.	Revised to encourage the reduction in use of pesticides and the increase in use of integrated pest management.
Storm Drain Operation and Management	Maintenance schedule and requirements for cleaning, updating, and trash are too onerous.	Thousand Oaks A13; Ventura County WPD 3; Countywide Program B24, B27; LA County PW 15	Schedules for compliance have been changed to a longer period.	Schedules for compliance have been changed to a longer period.
Storm Drain Operation and Management	There are concerns with prescribed numeric discharge limits for permittee-owned treatment control BMPs. Suggest providing a BMP prioritization process that defines appropriate disposal options.	CICWQ 4-6	The only option is to meet the prescribed limits or haul the water to where there is no discharge to the MS4.	No changes are needed to address the comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Storm Drain Operation and Management	Dewatering effluent limitations are not based on basin plan objectives or sound science.	BILDF 36-37	The Water Board has a General NPDS Dewatering Permit. Discharges of pollutants in Storm Water discharges that have not been reduced to the Maximum Extent Practicable (MEP) are prohibited.	No changes are needed to address the comment.
Storm Drain Operation and Management	Catch basin excluders pose a potential flood hazard, are cost-prohibitive, the requirement is excessive, and the 180-day time frame too short.	Simi Valley 2; Camarillo 2; Moorpark 1; Thousand Oaks A13; Carson 3; Inglewood 2-3; Signal Hill Coalition PR 3; LA County PW 15; Long Beach 2; CONTECH 7; TECS 3; Fillmore 1	Schedules for compliance have been changed to a longer period. Wherever the potential for flooding exists, the Permittee under the BMP Substitution provision of the draft permit may implement an alternative program that accomplished the same goal.	Revised to include a prioritization scheme for trash excluders, with provisions for use of other BMPs to eliminate trash.
Storm Drain Operation and Management	Requirement for trash receptacle distribution is too prescriptive, doesn't address design procurement issues, has unrealistic timelines, does not address operation and maintenance, doesn't incorporate a cost/benefit analysis, and doesn't guarantee trash reduction.	Carson 5; Inglewood 4; Long Beach 2; TECS 5	Schedules for compliance have been changed to a longer period. The requirement to install is only in areas subject to high trash generation, in commercial, industrial, and near educational institutions, except where flooding will occur. The Permittee under the BMP Substitution provision of the draft permit may implement an alternative program that accomplished the same goal.	Requirements for trash management have been revised in consideration of comments received.
Streets and Roads	CASGP coverage for road work is excessive and not cost effective.	Camarillo 1; Ventura County WPD 2; Carson 2; Inglewood 1-2; LA County PW 15; Long Beach 2; TECS 2	Coverage for soil disturbing activities is a federal requirement. Regional Board staff have simplified compliance by allowing several soil-disturbing activities to be covered under a single NOI, if the municipality desires.	Compliance simplified by allowing several soil-disturbing activities to be covered under a single NOI, if the municipality desires.
Streets and Roads	Minimum BMPs required for road repairs are too prescriptive, not flexible enough.	LA County PW 16	These BMPs are the same used by Caltrans statewide. However, a Permittee under the BMP Substitution provision of the draft permit may implement an alternative program that accomplishes the same goal.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Municipal Potable Water Supply System Discharges	NPDES limit on potable water discharges of 100,000 gallons/year should be removed; these discharges should remain conditionally exempt; volume limit should be based on the size of a municipality's water system and its discharge needs.	Simi Valley 2; Camarillo 2; Thousand Oaks A3, 13; Countywide Program B5, B26; LA County PW 16; Long Beach 2; TECS 8	The 100,000 gallons per year was a trigger for a separate permit not a limit. Nonetheless, the 100,000 trigger has been removed. In order to discharge from potable water systems, a separate NPDES permit must be obtained with that permit serving as authorization to discharge for that agency.	Revised to reflect the requirement for a separate NPDES permit for potable water discharges.
Emergency Procedures	Change submission date to 14 days instead of 7 days.	LA County PW 16	Regional Board staff disagree with a 14 day period and will keep the 7 day reporting period.	No changes required to address this comment.
Cost	Cost feasibility is not considered.	BILDF 3-11; Signal Hill 2-4.	Although not required under federal mandates, a cost summary has been prepared.	No changes to the permit are necessary to address this requirement. The cost analysis is included in the record for this permit.
<i>Permit Development Process</i>				
Implementation Time Frame	Most time frames are unrealistic and unreasonable.	Ventura 3; Thousand Oaks A4; Signal Hill Coalition PR 1; Long Beach 3	In response to comments received on the Permit, staff has evaluated the "Time Schedules for Permit Implementation" paper submitted by the Permittees at the June 13, 2007 meeting and have extended time schedules equitably between 6 months and 1 year.	Various places throughout Permit

Section/Topic	Comment	Committer(s) <sup>1</sup> & Page Numbers	Response	Change Made
Implementation Time Frame	Objects to the fact that requirements are allowed to be met within the 5-year permit term rather than having them be phased in.	Theresa Jordan 2	This is the third term of the Ventura County MS4 permit. The proposed permit fully incorporates the Water Boards mission "to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations." In order to meet water quality objectives the permit includes appropriate timelines to measure the progress towards those objectives.	The permit includes wasteload & load allocations, and implementation schedules from effective TMDLs in the watersheds covered by this Order.
<b>Watershed Ecological Restoration Planning</b> ERPs (Ecological Restoration Plans)	The Board does not have the authority to require ERPs.	Camarillo A1; Moorpark A1; Thousand Oaks A14; Countywide Program 15,16,B28; CSDs of LA 1	The Ecological Restoration Plan requirement has been eliminated from the Permit. The Permittees are required to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program that is currently being developed. The Principal Permittee participates in the SMC's Southern California Regional Bioassessment Monitoring Program. This new SMC program is expected to begin monitoring within the next year.	The Ecological Restoration Plan requirement has been eliminated from the Permit.
<b>Total Maximum Daily Load Provisions</b> Incorporating TMDLs into Permits	TMDLs should not be integrated into the permit.	LA County Stormwater 2	Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the wasteload allocations in the TMDL, 40 CFR § 122.44(d)(1)(vii)(B). NPDES-regulated storm water discharges must be addressed by the wasteload allocation component of a TMDL (40 CFR § 130.2(h)).	No changes are required to address this comment.
Incorporating TMDLs into Permits	TMDLs should be integrated into the permit.	Heal the Bay 3-4	TMDLs that have a WLA for the point source MS4 storm water (wet weather) and non-storm water (dry weather), and an approved/ effective date within the permit term are integrated into the permit.	Part 6, Part 7 & Attachment F



Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Current TMDL provisions	The permit should be consistent in supporting the TMDL provisions.	Simi Valley 2; Oxnard 3; Camarillo A1-A2,A6; Moorpark A1-A2,A6; Thousand Oaks 2, A16; Ventura County WPD 2; Countywide Program 15,B28	TMDL WLAs in NPDES permits have to be translated into effluent limits. "Effluent limits are not required to be expressed in a form that is identical to the form in which an available wasteload allocation for the discharge is expressed in a TMDL. Rather, permit limits need only be "consistent with the assumptions and requirements" of a TMDL's wasteload allocation. (40 CFR § 122.44(d)(1)(vii)).	No changes are required to address this comment.
Current TMDL provisions	The permit must include all required actions outlined in TMDL Implementation Plans.	Heal the Bay 4-6	U.S. EPA regulations require "Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the wasteload allocations in the TMDL." 40 CFR § 22.44(d)(1)(vii)(B). MS4 Permittees shall satisfy all applicable conditions stated in the TMDL including but not limited to: developing monitoring plans in receiving waters, developing workplans, writing reports, conducting and participating in studies, and developing and implementing programs (e.g., education, collection, and collection and disposal).	No changes are required to address this comment.
Dry Weather Discharge Restrictions	Limit on discharges from an MS4 during dry weather is impractical.	Oxnard 5; Camarillo A3; Moorpark A3; Countywide Program B6; LA County PW 6	TMDLs have WLAs for non-storm water (dry weather) that cause or contribute to the impairment of the beneficial uses of the receiving waters. "Effluent limits are not required to be expressed in a form that is identical to the form in which an available wasteload allocation for the discharge is expressed in a TMDL. Rather, permit limits need only be "consistent with the assumptions and requirements" of a TMDL's wasteload allocation. (40 CFR § 122.44(d)(1)(vii)).	Part 7
WLAs	Need to analyze whether efforts to attain WLAs would comply with the MEP standard.	LA County PW 2	Economic analysis is performed during TMDL development. Water Boards take into account "economic considerations", among other factors, when they establish water quality objectives (CWC § 13241). Reanalysis is not necessary.	No changes are required to address this comment.
WLAs	Incorporating WLAs into the permit is inappropriate and contrary to the Blue Ribbon Panel recommendations.	Long Beach 1	U.S. EPA regulations require "Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the requirements and assumptions of the wasteload allocations in the TMDL." 40 CFR §.122.44(d)(1)(vii)(B). State Water Resources Control Board has not yet acted on the Blue Ribbon Panel recommendations.	No changes are required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
WLA's	WLA's should be numeric effluent limits, not expressed as a suite of BMPs.	NRDC 17-18	U.S. EPA has issued a policy memorandum recommending that limitations for NPDES-regulated municipal and small construction storm water discharges effluent limits should be expressed as best management practices (BMPs) or other similar requirements, rather than as numeric effluent limits. See Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 61 Fed. Reg. 43761 (Aug. 26, 1996).	Part 6 & Part 7
WLA's	The permit does not specify the BMPs necessary for the permittees to meet WLA's.	BILDF 35-37	There is no approved TMDL Implementation Plan for BMPs to be specified in this permit, in lieu of numeric limits.	No changes required to address this comment. Review C. Ck. Basin Plan Amendments
Malibu Creek Bacteria TMDL	Field screening for illicit discharges related to the Malibu Creek Bacteria TMDL will require substantial time, effort, and funds and is not part of the TMDL Implementation Plan.	Thousand Oaks A14; Countywide Program B28	The TMDL provisions in the Permit have been rewritten. There is no longer a prohibition or an illicit connections/ discharge elimination requirement for the Malibu Creek Bacteria TMDL.	TMDL provisions have been rewritten to address this comment.
WLA's	All WLA discussions should include the effective dates of the numeric interim and final limits.	Thousand Oaks A14-15; Camarillo A5	In response to comments received on the Permit, TMDL WLA's effective dates are incorporated in the Order.	TMDL WLA's effective dates are incorporated in the Order.
Malibu Creek Bacteria TMDL	The single sample marine limits are incorrect and are currently set equal to the geometric mean limits. The limits table should be corrected and clarified to state that WLA's are the number of exceedance days and the targets are the values used to determine if an exceedance day results.	Thousand Oaks A14	The TMDL provisions in the Permit have been rewritten. The Malibu Creek Bacteria TMDL has a multi-part numeric target based on bacteriological water quality objectives for marine and fresh water to protect the water contact recreation use. The WLA's incorporated into the Permit are addressed as water quality-based effluent limits expressed as numerical limits in fresh water for both storm water (wet weather) and non-storm water (dry weather).	TMDL provisions have been rewritten to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Calleguas Creek Toxicity, Chlorpyrifos and Diazinon TMDL	WLAs included in the Toxicity TMDL apply during both dry and wet weather – the dry label should be removed from the tables. Regarding Toxicity WLAs as a trigger for conducting TIEs, the trigger language should be included in the discussion of numeric limits.	Thousand Oaks A14; Camarillo A5	The TMDL provisions in the Permit have been rewritten.	TMDL provisions have been rewritten to address this comment.
Calleguas Creek Toxicity, Chlorpyrifos and Diazinon TMDL	The final limits included in the OC Pesticides TMDL should not be included in this Order because the effective date is not within the permit term.	Thousand Oaks A14- A15; Camarillo A5	The NPDES permit incorporates TMDL WLAs, clarification of the WLAs is contained in the TMDL Basin Plan amendment.	TMDL provisions have been rewritten to address this comment.
Calleguas Creek OC, PCB, and Siltation TMDL	The final limits included in the OC Pesticides TMDL should not be included in this Order because the effective date is not within the permit term.	Thousand Oaks A15; Camarillo A5	The TMDL provisions in the Permit have been rewritten. For the Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon TMDL, compliance for both wet and dry weather final WLAs is March 24, 2026, and the final WLAs are <u>not</u> incorporated into the Permit due to their compliance dates being beyond the term of this Permit.	TMDL provisions have been rewritten to address this comment.
Calleguas Creek OC, PCB, and Siltation TMDL	Clarify that WLAs included in the OC Pesticides TMDL are annual average limits, not dry weather allocations.	Thousand Oaks A15; Camarillo A5	The TMDL provisions in the Permit have been rewritten. The Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon TMDL WLAs for pollutants in the water column for Minor Point Sources are addressed as water quality-based effluent limits expressed as numerical limits in the Permit for non-storm water (dry weather) and storm water (dry weather).	TMDL provisions have been rewritten to address this comment.
Calleguas Creek OC, PCB, and Siltation TMDL	The Siltation TMDL allocation is a reduction in sediment discharges, not a limitation on the amount of sediment that can be discharged. Change limits to reflect that it is a reduction.	Thousand Oaks A15; Camarillo A5	The TMDL provisions in the Permit have been rewritten. The TMDL Siltation WLA is not incorporated in the permit due to the compliance date exceeding the term of this permit. MS4 Permittees shall satisfy all applicable conditions stated in the TMDL including, but not limited to: developing monitoring plans in receiving waters, developing workplans, writing reports, conducting and participating in studies, and developing and implementing programs (e.g., education, collection, and collection and disposal).	TMDL provisions have been rewritten to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Malibu Creek Bacteria TMDL	The Malibu TMDL provisions require that there be no discharge from the MS4s during dry weather, which is not prescribed in the TMDL nor a part of the implementation plan.	Countywide Program B28	The TMDL provisions in the Permit have been rewritten. There is no longer a prohibition or an illicit connections/ discharge elimination requirement for the Malibu Creek Bacteria TMDL.	TMDL provisions have been rewritten to address this comment.
Malibu Creek Bacteria TMDL	Malibu TMDL provisions requiring no discharge from the MS4s during dry weather are impracticable because there are contributions from outside the permit area, other permitted NPDES discharges (e.g., underground utility box dewatering, water line flushing), and natural contributions to MS4 flows.	Countywide Program B28	The TMDL provisions in the Permit have been rewritten. There is no longer a prohibition or an illicit connections/ discharge elimination requirement for the Malibu Creek Bacteria TMDL.	TMDL provisions have been rewritten to address this comment.
Malibu Creek Bacteria TMDL	Monitoring requirements under the TMDLs for bacteria and toxicity will discourage other parties in participating in collaborative watershed monitoring.	Countywide Program B28, B32	The Water Board supports collaborative watershed monitoring by multiple stakeholders. NPDES permits require point source monitoring. In order to monitor compliance with the TMDL(s) MS4 WLAs each MS4 Permittee is required to monitor major outfalls to the receiving waters. The two monitoring plans (watershed monitoring and NPDES monitoring) are complementary programs.	TMDL provisions have been rewritten to address this comment.
Malibu Creek Bacteria TMDL	The discharge prohibition, monitoring, and implementation requirements related to the Malibu Creek Bacteria TMDL are extremely burdensome and are redundant with the monitoring plan and implementation plan.	Countywide Program B32	The TMDL provisions in the Permit have been rewritten. There is no longer a prohibition or an illicit connections/ discharge elimination requirement for the Malibu Creek Bacteria TMDL.	TMDL provisions have been rewritten to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Calleguas Creek OC, PCB, and Siltation TMDL	The City of Oxnard should be listed as a responsible party (MS4 permittee) in the Calleguas Creek Toxicity, Chlorpyrifos and Diazinon TMDL.	Countywide Program B29	In response to comments received on the Permit, the City of Oxnard has been listed as a MS4 Permittee for the Toxicity, Tributaries and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon TMDL.	City of Oxnard listed to address this comment.
Trash excluders requirement postpone pending outcome of the Calleguas Creek Trash TMDL	A trash TMDL is currently being developed for two reaches of Calleguas Creek with expected adoption at the end of 2007, so the order requirement should be postponed pending the outcome of the TMDL.	Simi Valley 2	In response to comments received on the Permit, the trash excluder requirement has been rewritten.  "In the December 27, 2007 draft permit, staff included a provision for installation of trash excluders at all catch basin inlets in the County of Ventura to prevent trash from entering the system and being discharged. The August 28, 2007 draft permit, limits the installation of trash excluders, or equivalent devices on catch basins to prevent the discharge of trash to the storm drain system, to areas subject to high trash generation, i.e., commercial areas, industrial areas, and near educational institutions. The Permit allows for site-specific Best Management Practice (BMP) substitution if a Permittee wants to consider an alternative approach to the trash excluder (see Part 5 A.2)	Part 5 A.2 & G.5(e).
Calleguas Creek Chloride and Salts TMDLs	The finding regarding salts (Finding 12) is inaccurate and inconsistent with the effective chloride TMDLs and the work being done to develop a salts TMDL in the Calleguas Creek Watershed.	Camarillo A1	In response to comments received on the Permit, the finding regarding salts (Finding 9) has been reworded.	B.9.
<b>Monitoring Program</b> General	Monitoring requirements inadequate to determine compliance with permit.	Heal the Bay 1-2; NRDC 13	In response to comments received on the Permit, monitoring requirements have been revised. Non-storm water (dry weather) mass emission, Total Suspended Solids, and Tributary monitoring requirements have been replaced by TMDL wet and dry weather monitoring requirements of MS4 discharges.	Attachment F.
Reporting	45-day time period for electronic submission of results is too short, particularly for TIEs.	LA County PW 18	Monitoring results from each monitoring station sent electronically to the Regional Board, has been lengthened to 90 days. In response to comments received on the Permit, the electronic submission of TIE/TRE testing results has been lengthened to 90 days from sample collection date.	Attachment F & Attachment H.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Mass Emissions	<p>Since mass emissions stations are monitored only 5 times per year, using non-detect status as specified (constituents not detected in more than 75% of the first 48 sampling events at a station) would take nearly 10 years to eliminate constituents from the monitoring program and does not account for parameters that are consistently below water quality standards but are detected. Recommend elimination based on a smaller sample number.</p>	CICWQ 23	<p>If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method in more than 75 percent of the first 48 sampling events at a station started from the 1<sup>st</sup> permit term and has continued forward, for most stations this means they have been sampled for at least 10 years.</p>	Attachment F.
Mass Emissions	<p>The scope of pollutants to be sampled via grab sample should be expanded to include volatile substances, analytes subject to biological activity such as phenols and DO, pH, temperature, and cyanide.</p>	LA County PW 18	<p>Volatile substances such as the mentioned MTBE are not listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)) and are not required to be sampled. In response to comments received on the Permit, conventional pollutants such as: oil and grease, total phenols, cyanide, pH, temperature, and DO can be sampled via grab sample.</p>	Attachment F.
Mass Emissions	<p>The requirement to correlate TSS monitoring with pollutants of concern should be eliminated because a previous analysis has shown a poor correlation.</p>	LA County PW 17; CICWQ 23	<p>In response to comments received on the Permit, total suspended solids (TSS) monitoring has been eliminated. Monitoring for TMDL compliance will provide MS4 data specific to assess the variability of storm water constituents and provide an accurate estimate of mass emissions.</p>	Attachment F.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Aquatic Toxicity Monitoring	Taking flow-weighted samples is onerous. Suggest requiring 3 grab samples taken at appropriate times during a runoff event (rising limb, at or near peak flow, descending limb of hydrograph).	LA County PW 19	In order to collect a representative sample of a constituent during an event, flow-weighted composites are required. The flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots taken in each hour of discharge for the entire discharge, or for the first 3 hours of the discharge, with each aliquot being separated by a minimum of 15 minutes, within each hour of discharge.	No changes required to address this comment.
Aquatic Toxicity Monitoring	Specify a toxicity testing methodology for each species.	LA County PW 19	Aquatic Toxicity Monitoring provisions in the Permit have been rewritten. The Permit discusses toxicity testing methodology.	Attachment F.
Aquatic Toxicity Monitoring	In lieu of acute toxicity tests, continue to require the use of EPA chronic toxicity tests to maintain data continuity.	LA County PW 19	The objective of aquatic toxicity monitoring is to evaluate if storm water (wet weather) discharges are causing or contributing to acute and/or chronic toxic impacts on aquatic life and identify the causes of toxicity. Chronic toxicity tests will continue to be required in accordance with U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms or to Marine and Estuarine Organisms.	Attachment F.
Aquatic Toxicity Monitoring	Specify how toxicity thresholds should be applied.	LA County PW 19	Aquatic Toxicity Monitoring provisions in the Permit have been rewritten. Aquatic Toxicity Monitoring at major outfall stations is intended to characterize runoff from a watershed into receiving waters. The Permit discusses toxicity requirements.	Attachment F.
Aquatic Toxicity Monitoring	Toxicity monitoring program requirements are arbitrary and will not provide a proper determination of whether storm water discharges are impacting wildlife.	Heal the Bay 2	Aquatic Toxicity Monitoring provisions in the Permit have been rewritten. Aquatic Toxicity Monitoring at mass emission stations has been eliminated. Aquatic Toxicity Monitoring at major outfalls is required.	Attachment F.
Aquatic Toxicity Monitoring	The most sensitive freshwater and marine species should be selected for screening.	Heal the Bay 2-3	Aquatic Toxicity Monitoring provisions in the Permit have been rewritten. A minimum of two sensitive species are required to be used to test each sample in order to address uncertainties in sample toxicant composition and test method sensitivity. It is recommended that one test species be a crustacean and the other test species include a sensitive invertebrate from a different phylum (e.g., mollusk or echinoderm).	Attachment F.

Section/Topic	Comment	Committer(s) <sup>1</sup> & Page Numbers	Response	Change Made
Tributary Monitoring	Require a dry weather sampling event in addition to wet weather sampling of tributaries.	Heal the Bay 3	In response to comments received on the Permit, monitoring requirements have been revised. Tributary Monitoring has been eliminated. With the implementation of TMDL "end-of-pipe" monitoring for both non-storm weather (dry weather) and storm water (wet weather), and Municipal Action Levels (MALs) monitoring, staff will be able to directly identify dry and wet weather MS4 discharges causing or contributing to exceedances of water quality objectives.	Attachment F.
Bioassessment	The five objectives may not be achievable even when subsequent requirements are met.	LA County PW 19	Bioassessment Monitoring performed by the MS Permittees alone has been eliminated. Instead, Permittees are required to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program that is currently being developed and will be monitoring within this Permit term.	Part 5.B. & Attachment F.
Bioassessment	Need to clearly define which parts of the MS4 are natural streams to exclude engineered portions from needing ERPs	LA County PW 19-20	The Watershed Ecological Restoration Program requirement and its associated Watershed Ecological Restoration Plans (ERP) have been eliminated from the permit.	Part 5 - Watershed Ecological Restoration Planning.
Bioassessment	Continue to use latest available Southern California IBI for regional evaluation and to support CA DFG and SWAMP efforts.	LA County PW 20	Permittees are required to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program, which will be using the Southern California IBI.	Part 5.B. & Attachment F.
Bioassessment	Use of the California Stream Bioassessment Procedure not appropriate. Suggest using the most recent state-approved methodology for bioassessment such as that being developed by the SWAMP.	CICWQ 22	Permittees are required to participate in the Southern California Regional Bioassessment Monitoring Program, which is an integrated regional watershed monitoring program with the Southern California Storm Water Monitoring Coalition (SMC) and the Surface Water Ambient Monitoring Program (SWAMP). The Southern California Regional Bioassessment Monitoring Program will use <i>SWAMP Bioassessment Procedures: Standard operating procedures for collecting benthic macroinvertebrate sample and associated physical and chemical data for ambient bioassessment in California.</i>	Part 5.B. & Attachment F.



Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Bioassessment	Include bioassessment monitoring as a core program, not as a special study.	Heal the Bay 3	Bioassessment Monitoring performed solely by the MS Permittees has been eliminated. Instead, Permittees are required to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program that is currently being developed and will be monitoring within this Permit term.	Part 5.B. & Attachment F.
Trash and Debris Study	Assessments should focus on storm water outfalls; areas of the beach where trash and debris are from nonpoint sources should be excluded.	LA County PW 20	In response to comments received on the Permit, the Trash and Debris Study has been eliminated.	Attachment F.
Trash and Debris Study	Control strategies are redundant with the trash TMDL process – monitoring should be used only to identify impairment.	LA County PW 20	In response to comments received on the Permit, the Trash and Debris Study has been eliminated.	Attachment F.
Trash and Debris Study	Objectives of the Trash and Debris Study may not be achievable; the requirement should be omitted.	LA County PW 20	In response to comments received on the Permit, the Trash and Debris Study has been eliminated.	Attachment F.
Pyrethroid Insecticides Study	Requirement is onerous, not based on sound science, and has no cost/benefit analysis.	Long Beach 2	In response to comments received on the Permit, the Pyrethroid study has been reduced in scope from monitoring three watersheds to one, the Calleguas Creek watershed. Permittees will be working with the Calleguas Creek Watershed Group on the focused Study for two years in the largest urban watershed within Ventura County. California Water Code § 13267 requires: "The burden, including costs, of these reports shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports." This is not merely a cost-benefit analysis. However, the cost of report generation is a consideration. Indeed even if the cost of generating the report is far greater than the financial economic benefits to be gained, that is not dispositive. It is entirely appropriate that the qualitative environmental benefits be weighed against the burdens as well. Furthermore, Cal. Water Code § 13267 does not require that an order under its provisions include written documentation of the analysis in a report. It requires only that the burdens of the order be justified by its need.	Attachment F.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Pyrethroid Insecticides Study	Requirement to collect sediment at each location may not be feasible in concrete channels. Suggest providing an EPA-approved sampling approach.	LA County PW 18-19	The Pyrethroid study has been written for Ventura County urban tributaries. The Ventura County Permittees select the major and secondary tributary monitoring sites.	Attachment F.
Pyrethroid Insecticides Study	The state should conduct this study because they authorized the use of these pesticides.	LA County Stormwater 2	In California the Department of Pesticide Regulation (DPR) is responsible for pesticide regulation. The Water Boards and California Stormwater Quality Association (CASQA) have been working with DPR during the process of registration of pesticides for urban use.	Attachment F.
Hydromodification Control Study	The Hydromodification Control Study should not be required.	LA County PW 21	The Hydromodification Control Study is to avoid the adverse impacts of flow associated with new development. The provisions in the tentative permit are to develop assessment tools and mitigation strategies to prevent adverse impacts.	Attachment F.
Jurisdictional boundaries	There is no MS4 in the open space areas of the County; to impose MS4 regulations there is folly.	County of Ventura 1	Federal Regulations, 40 CFR 122.26	No changes required to address this comment.
<i>Public Information and Participation</i>				
Time Frame	The 180-day period to formulate and implement the program is too short.	Thousand Oaks A5; Countywide Program B9	The time frame for all PIPP requirements has been amended for consistency and achievability to 365 days after adoption of the Order.	Part 5- C. Public Information and Participation Program.
Outreach and Education	Requirement for 10 million impressions is too many and unnecessary.	Thousand Oaks A5; Countywide Program B9	The latest revision(s) of the Order requires 5 million impressions which is consistent with the impression per resident requirement of existing mature PIPP programs.	Part 5- C. Public Information and Participation Program.
Outreach and Education	Requirement for educational outreach to children via schools is outside of the permittees' authority.	Thousand Oaks A5; Countywide Program B9	The Order requires Permittees to provide education materials on storm water pollution and prevention necessary to educate 50% of K-12 school children. Feedback from most municipalities that have conducted this outreach has been positive. Permittees may consider conferring with environmental groups such as Tree People, Heal The Bay, Generation Earth, and others that have developed K-12 storm water educational programs for guidance on working with school districts to develop an accepted and effective program.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Outreach and Education	Requirements as described are vague and do not indicate the required level of effort.	LA County PW 7	Order requirements have been written to encourage flexibility and avoid being overly prescriptive.	Part 5- C. Public Information and Participation Program
Businesses Program	Small developers should be added as a separate category of small business owners to provide outreach on infill and redevelopment requirements.	LGC 3	Municipalities may conduct outreach and training for small developers through New Development provisions. Many municipalities distribute storm water educational materials through their Building and Planning departments.	No changes required to address this comment.
<i>Industrial/Commercial Facilities Program</i>				
Required BMPs	Requiring mandatory BMPs eliminates flexibility and efficiency.	Thousand Oaks A 12; Ventura County WPD 2; Countywide Program B16	The BMPs required are commonly accepted source control BMPs including good house-keeping. The intent of requiring basic, cost effective source control BMPs was to provide clarity on expected BMP implementation at commercial industrial facilities. Several municipalities have asked the Regional Board to provide such guidance in the past. Permittees can still use the BMP substitution clause if they have alternative effective strategies to mitigate runoff from these sites.	No changes required to address this comment.
Required BMPs	Requiring treatment control BMPs at critical sources that discharge to a MS4 is not reasonable.	Countywide Program B10, B11	The Order has been revised to read may require the implementation of treatment control BMPs. The intent of the revised language gives discretion to municipalities to require the implementation of treatment control BMPs as they deem necessary.	Part 5- D. Industrial/Commercial Businesses Program.
Required BMPs	BMP effectiveness and comparison data are not available.	Countywide Program B10	The ASCE database contains BMP effectiveness and comparison data. <a href="http://www.bmpdatabase.org/">http://www.bmpdatabase.org/</a>	No changes required to address this comment.
Required BMPs	Requirements for BMP substitution are unclear.	CSDs of LA 2	The requirements for BMP Substitution as written in this tentative permit have been used successfully, as written in the LA MS4 Permit since 1996.	No changes required to address this comment.
Inspections	Inspection requirements are more stringent than federal CWA regulations.	LA County PW 3	Federal CWA regulations (40CFR122.26(d)(2)(i)(c)), requires the control of the contributions of pollutants to the municipal storm sewer and the control of the quality of storm water discharged from sites of industrial activity. The Ventura MS4 draft Order includes inspection requirements which help achieve compliance with these Federal requirements.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Inspections	Permittees should be reimbursed \$300 per inspection based on the fact that industrial facilities are required to pay permitting fees for coverage under the GIASWP and that the fees presumably cover the cost of inspection.	Carson 8; Inglewood 6-7; Long Beach 3; TECS 8	Permittees are required to inspect facilities for compliance with their own ordinances not for compliance with the GIASWP.	No changes required to address this comment.
Enforcement	Existing local government enforcement cases should not be compromised by Regional Board involvement.	LA County PW 8-9	The intent of this section of the Order is to clarify the Permittee's and Regional Board's responsibilities. The intent of this provision was not to interfere with local enforcement of municipal ordinances.	No changes required to address this comment.
Enforcement	Local staff cannot be compelled by the Regional Board to serve as witnesses unless subpoenaed.	LA County PW 9	The intent of this provision of the Order is to improve enforcement coordination between State and local municipalities.	No changes required to address this comment.
<i>Illicit Connections and Illicit Discharges Elimination</i>				
Screening	Field screening as performed in the first permit cycle was determined to be inefficient.	Countywide Program B27; Thousand Oaks A14	The Federal MS4 ROWD application guidance document requires illicit connection screening. The Order specifies the order of screening of potential high risk portions of the storm drain system to be completed over the term of the Permit.	No changes required to address this comment.
Screening	Requirement to follow procedures set forth in the Center for Watershed Protection's manual is too prescriptive, not flexible enough	LA County PW 16	The Center for Watershed Protection manual includes standard, effective methods to conduct field screening. The intent of this provision was to provide guidance for municipalities. If Permittees have a more effective way to conduct screening it would be reasonable to use the BMP substitution clause.	No changes required to address this comment.
Enforcement	Permittees should be allowed discretion in enforcing local codes.	Countywide Program B27; Thousand Oaks A14	The intent of this provision is to clarify the Permittee's responsibility in implementing the local program. The municipality has flexibility in the manner of enforcement.	No changes required to address this comment.
Complaints Website	Hosting a Website is extraneous in light of LA County's telephone reporting hotline.	LA County PW 16	The intent of this provision was to provide complementary means of reporting illicit discharges and spills. Permittees can utilize the BMP substitution clause if they have an equally effective reporting method(s).	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
<p><i>Municipal Action Levels</i></p> <p>General</p>	<p>MALs should not be discussed in the "Receiving Water Limitations" section because MALs relate to MEP, and MEP is a technology-based standard. MEP is not expressed in terms of a water quality outcome, which is what receiving water limits reflect.</p>	<p>NRDC 14-17</p>	<p>MALs have been moved from Receiving Water Limitation section.</p>	<p>Part 2- MALs.</p>
<p>General</p>	<p>Findings and provisions related to the implications of MALs are unclear and in conflict with each other. One finding (p. 23) says exceedance of MALs will be construed as a failure to implement adequate control measures and will be considered a violation of the MEP provisions, whereas another (p. 29) states that exceedances of MALs will create a presumption that the implementation of measures to reduce pollutants in the MS4 discharged to the MEP are inadequate, requiring the permittee to augment measures to reduce the discharge of pollutants to not violate the MEP. This conflict needs to be resolved.</p>	<p>CASQA 2</p>	<p>The Order has been revised to provide greater clarity for MALs.</p>	<p>Part 2- MALs &amp; Attachment C.</p>

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
General	The Draft Order lacks findings and rationale to support the use of MALs.	Countywide Program 11	The Order includes an additional MAL finding.	Findings section.
General	Not consistent with the State's Blue Ribbon Panel Findings. The MALs were not generated in a scientifically defensible way.	Ventura 2; Thousand Oaks A16; Countywide Program 9, 10, B30; Signal Hill Coalition PR 2; BILDF 24-25, 30-34, 59; LA County PW 1; CASQA 2-3; CICWQ 1-4; Caltrans 2	The State Board has not yet set policy based on the Blue Ribbon Panel's findings. MALs were based on actual nationwide MS4 sampling (compiled in the National Storm Water Quality Database) results of large (>36" pipes and outfalls). MALs were derived based on the sampling of over 3000 events, which included multiple land uses, multiple size drainage areas, multiple size rainfall events, and multiple intensity level rain events.	No changes required to address this comment.
General	MALs are a non-flexible, non-iterative approach.	Ventura 2; BILDF 31; CASQA, 2	MALs represent performance standards. They do not limit Permittees flexibility to implement programs to reduce pollutants to the MEP. *	No changes required to address this comment.
General	MALs have not been properly adopted as water quality objectives.	LA County PW 4	MALs are not water quality standards and have not been set to protect beneficial uses. They represent performance standards.	No changes required to address this comment.
General	MALs result in numeric effluent limitations, which EPA strongly discourages.	Thousand Oaks A2; Countywide Program 5,6; Signal Hill Coalition PR 1; BILDF 24-29, 59; LA County Stormwater 3; CASQA 2	MALs are not water quality standards and have not been set to protect beneficial uses. They represent performance standards.	No changes required to address this comment.
General	Requiring additional BMPs when MALs are not met ignores the fact that cause/effect relationship of BMPs and receiving water quality is unknown. No requirement for assessment of BMP performance relative to baselines to judge whether corrective BMPs are more effective.	LA County PW 1-2,8; CONTECH 2; Caltrans 1	Compliance with MALs is determined at large outfalls greater than 36". The receiving waters are a default for MAL compliance if Permittees choose not to conduct outfall monitoring.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) & Page Numbers	Response	Change Made
General	The permit equates violations of end-of-pipe MALs with exceedances of receiving water limitations even if receiving water data do not show a violation. Also exceedances of receiving water limitations should not be considered violations of the MS4 permit because they cannot be conclusively linked to MS4 discharges.	BILDF 22-26; CICWQ 2-3	Exceedances of MALs are expressed as non-compliance of MEP provisions. Exceedances of MAL values presume that Permittees have not complied with MEP provisions and shift the burden of proof to the Permittees to demonstrate compliance with MEP provisions.	No changes required to address this comment.
General	The inclusion of MALs in the Order will require treatment BMPs on all outfalls 36" or greater.		MALs have been developed from nationwide sampling data of outfalls 36" or greater, none of which are reported to have treatment BMPs installed at the point of discharge.	No changes required to address this comment.
Cost	Cost feasibility is not considered.	BILDF 3-11; Signal Hill 2-4	MALs have been developed from nationwide sampling data, which includes the practicability and program costs incurred by the municipalities in achieving the numbers.	No changes required to address this comment.
Consistency with Other Regulations and Requirements	Inconsistent with MEP as specified in federal CWA requirements.	Oxnard 4; Thousand Oaks A1; Countywide Program 7; BILDF 11-19, 37, 41; LA County PW 1; Long Beach 1	The Order no longer uses MALs to define MEP. MALs are used in the Order as Action Levels, consistent with Blue Ribbon Panel recommendation.	Part 2- MALs & Attachment C.
Consistency with Other Regulations and Requirements	More stringent than federal regulations.	Simi Valley 1; Camarillo 1; Countywide Program 10; BILDF 31	The Order no longer uses MALs to define MEP. MALs are used in the Order as Action Levels, consistent with Blue Ribbon Panel recommendation.	Part 2- MALs & Attachment C.
Consistency with Other Regulations and Requirements	More restrictive than the Basin Plan and TMDLs.	Simi Valley 1; Ventura 2; Camarillo 1; Countywide Program 11; LA County PW 1	MALs represent performance expectations that have been achievable based on nationwide data.	No changes required to address this comment.
Table of MALs	Determination of MALs using median values does not account for natural variability in storm water runoff.	Caltrans 2	MALs were developed using the coefficient of variation to account for the variability of storm water runoff across the nation.	Part 2- MALs & Attachment C.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Table of MALs	Object to using median concentrations and CoVs derived from an outdated and regionally inappropriate data set.	CICWQ 2	The large population dataset of the National Storm Water Quality Dataset leads to statistically more valid numbers. Sampling events included in the dataset were conducted using practices and equipment that are currently used. The dataset includes sampling information specific to California.	No changes required to address this comment.
Table of MALs	It will be impossible for permittees to meet the identified CoVs because they are a characteristic of the samples and analytical methods.	LA County Stormwater 4	The coefficient of variability accounts for variability within the sampling population.	No changes required to address this comment.
Table of MALs	Delete bacteria counts and pH since MALs aren't appropriate.	LA County Stormwater 4	Bacteria has been eliminated from MALs.	Attachment C.
Table of MALs	Include MALs for additional storm water POCs (mercury and organics such as OP, halogenated pesticides, and PAHs).	Heal the Bay 6	The intent of MALs was to include common storm water pollutants which had sufficient data available to develop MAL values. MALs are used to numerically express MEP, which is applicable to the comprehensive storm water program, with the intent to reduce pollutants in storm water. The Order includes a mercury MAL value.	Part 2- MALs & Attachment C.
<i>Treatment BMP Performance</i>				
General	There is no basis for allowing BMPs to be installed that perform worse than the median value for a specific BMP.	Heal The Bay	The Order requires treatment BMPs that are installed to perform at the median value.	No changes required to address this comment.
General	Order should establish design criteria for Treatment BMPs rather than performance standards.	Countywide Program	The intent of the provision is to ensure that treatment BMPs required to be implanted appropriately address the pollutants expected to be discharged from a project. Design criteria is another important and separate component of treatment BMP implementation.	No changes required to address this comment.
General	Treatment BMP performance should be developed for BMP categories instead of BMP performance per pollutant.	Countywide Program	The Order requires treatment BMP performance for BMP categories.	No changes required to address this comment.



Section/Topic	Comment	Committer(s) <sup>1</sup> & Page Numbers	Response	Change Made
<i>Planning and Land Development Program</i> Required Parties	The requirement should be less stringent than "all new development and redevelopment projects."	Thousand Oaks A7; Ventura County PWA 2; Countywide Program B11,B13	New development and redevelopment projects have the potential to impact water quality and the intent of the provision is to be protective of water quality.	No changes required to address this comment.
Undermines Local Land Use Authority	The requirement to implement LID, hydromodification, and impervious area limitation strategies undermines local land use authority	Countywide Program 17-18	The permit provisions are intended to reduce post construction changes in hydrology and pollutant loads in a cost effective manner without infringing on local government land use authority. The CA Court of Appeal has upheld these type of controls in MS4 Permits ( <i>County of Los Angeles v. California State Water Resources Control Board (2006) Cal. App. LEXIS 1546</i> ).	No changes required to address this comment.
Size Thresholds	Clarify whether requirement in Part 4 E.III for implementation of post-construction BMPs for industrial parks and commercial strip malls with 5,000 square feet or more of surface area refers to total area or impervious area. Does this apply to both new and redevelopment? Suggest a threshold of 5,000 square feet of <u>new impervious surface</u> for <u>all types</u> of industrial and commercial projects.	CICWQ 18	The new development post-construction requirements for industrial parks and commercial strip malls apply to the disturbance of 5,000 square feet or more of total area. The redevelopment post-construction requirements apply to land disturbing activity that results in the creation, addition, or replacement of 5000 square feet or more of impervious surface area.	No changes required to address this comment.
Size Thresholds	Justify why the permit limits post-construction BMP requirements to commercial strip malls, not to other commercial development.	BILDF 62; CICWQ 18	The 5,000 square foot lower threshold for post-construction BMPs apply to certain types of commercial projects, including strip malls, which are associated with high vehicular traffic. All commercial development projects that disturb one or more acre of land are already subject to the controls.	No changes required to address this comment.
Size Thresholds	Justify the tiered numeric water quality design criteria based on 50-acre project size threshold.	Carson 6; Inglewood 5; CICWQ 18-19; TECS 6	The 50 acre tiered criterion is set to distinguish large construction projects ( $\approx$ top 10th percentile of projects in Southern California). It is also the sub-drainage area size for a major MS4 outfall as defined by the U.S. EPA.	No changes required to address this comment.

Section/Topic	Comment	Committer(s) <sup>1</sup> & Page Numbers	Response	Change Made
Size Thresholds	The 5,000 square foot requirement for BMPs for redevelopment projects is excessive.	Oxnard Chamber of Commerce 1	The redevelopment threshold criterion for redevelopment is the same as in the 2000 MS4 permit.	No changes required to address this comment.
Size Thresholds	The "catch-all" category threshold for post-construction mitigation requirements should be lowered to 5,000 square feet rather than 1 acre.	NRDC 11	The 5,000 square foot threshold for post-construction mitigation is set to address pollutants from commercial development projects which generate pollutants associated with high vehicular traffic.	No changes required to address this comment.
Impervious Area	The maximum effective impervious area requirement of less than 5% of total project area is excessive, inhibits smart growth, and discourages infill/redevelopment in favor of greenfield development. Suggest a flexible approach that sets different thresholds for different areas depending on proximity to sensitive waters, restoration goals, redevelopment districts, etc.	Ventura 2; Thousand Oaks A7; Countywide Program B12; Signal Hill Coalition PR 2; BILDF 41,49-52; LA County PW 9; LGC 2-4; Long Beach 1; Various Citizens (Odie Duggan) 1; CICWQ 6-12; CONTECH 3; County of San Bernardino	The 5% EIA requirement is set to avoid the adverse stream habitat effects associated with increases in flow volume with new and redevelopment. Alternative provisions have been incorporated to allow for infill redevelopment, and other smart growth considerations.	No changes required to address this comment.
Impervious Area	When LID techniques are required, the EIA requirement is redundant	County of San Bernardino	The LID and EIA requirements complement each other by ensuring that post development discharge of pollutants are minimized at the site scale.	No changes required to address this comment.
Impervious Area	The maximum effective impervious area requirement should be lowered from 5% to 3%.	NRDC 11	See response above.	No changes required to address this comment.
Impervious Area	Pervious areas should be required to be engineered to handle runoff from impervious areas.	NRDC 12	Text has been added to clarify that pervious areas may be engineered to infiltrate storm water.	Part 5- Planning and Land Development Program.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
LID	LID requirements are excessive, more costly on many projects, and technically infeasible.	Carson 5; Inglewood 4; BILDF 40; TECS 5	LID and better site design strategies are supported by the State of California and the USEPA as a cost-effective approach to land development that will protect the environment.	No changes required to address this comment.
LID	LID principles and terminology should be explicitly defined.	Countywide Program 16,B13; Signal Hill Coalition PR 2; LA County PW 10; Long Beach 2	The Water Boards and the Southern California MS4s are implementing a project to develop LID measures and training for Southern California. The LID terminology and principles are better addressed in the technical guidance.	No changes required to address this comment.
LID	The time frame for developing LID guidelines should be extended beyond 18 months to 24 months.	Ventura 2	Some LID measures and specifications are already included in the Ventura County Technical Guidance Manual for Water Quality. Eighteen months is adequate time to update the manual.	No changes required to address this comment.
LID	Time frame for developing LID guidelines should be shortened to 3 months.	NRDC 12	See response above.	No changes required to address this comment.
LID	No evidence exists that project-specific LID BMPs are necessary to avoid water quality impacts or are more effective than larger scale, regional facilities.	BILDF 39-43	LID and better site design strategies are supported by the State of California and the USEPA as a cost-effective approach to land development that will protect the environment. LID is a source control strategy that may avoid the need for regional facilities.	No changes required to address this comment.
LID	The permit should allow phasing of LID compliance according to development type and incentives offered for LID strategies.	LA County PW 9; Long Beach 2	LID is a cost-effective approach to land development that will also protect the environment. MS4 Permittee has the flexibility to decide on appropriate strategies and incentives.	No changes required to address this comment.
LID	Permittees should be able to choose their own order of preference for controls; it is unclear why the first options are better than latter options.	LA County PW 10, CICWQ 18; CONTECH 4	The order of preference of BMP selection is to promote source control, cost-effectiveness, multiple benefits, and public acceptance.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
LID	Smart growth considerations should be added to the integrated approach list: integrated watershed and general plans that direct growth and preservation, and subwatershed or district plans and designs to manage resources.	LGC 4	This is in the area of land planning, which is under the municipality's jurisdiction.	No changes required to address this comment.
LID	Clarify the relationship between LID requirements and post-construction storm water requirements and how they apply to different development projects.	LA County PW 10,11	The section has been reformatted to clarify the relationship between LID and post-construction storm water requirements.	Part 5- E. Planning and Land Development Program.
LID	Address potential groundwater/drinking water impacts stemming from LID infiltration requirements.	Carson 4-5; Inglewood 4; TECS 4-5; Fillmore 1	LID measures promote pre-development hydrology and soil function that allows for the percolation of water. It does not involve the construction of infiltration basins, which when inappropriately sited or designed, may potentially present risks to drinking water sources.	No changes required to address this comment.
Erosion Potential	Object to Ep=1 standard. There is no basis for the Ep=1 requirement. It does not allow for consideration of local factors affecting channel stability and it mandates that land be set aside for hydromodification control BMPs for all projects regardless of the BMPs' expected ability to mitigate adverse impacts.	BILDF 51-53; CICWQ 13-14	The Ep of one is established to ensure that post-development changes in flow do not result in excess erosion and damage to stream habitat. The text has been revised to allow for an Ep greater than 1 if local factors support a higher value while still being protective of the stream habitat.	No changes required to address this comment.
Erosion Potential	Proposed erosion potential limits would effectively halt development.	Thousand Oaks A9; Countywide Program B14, B21; BILDF 55-58	See response above.	No changes required to address this comment.

Section/Topic	Comment	Committer(s) <sup>1</sup> & Page Numbers	Response	Change Made
Hydromodification	More science is needed for determining a 2-year storm event.	Countywide Program B15	The choice of the up to the 2-year 24-hour storm is based on the literature and is considered generally protective of the adverse impacts of hydromodification based on increases in flow, frequency and duration.	No changes required to address this comment.
Hydromodification	The one-size-fits-all hydromodification approach does not consider soil, drainage, topographic, precipitation, or runoff characteristics of the region, including variability.	CICWQ 12-13	SCCWRP/ SMC Study	No changes required to address this comment.
Hydromodification	Clarify to which projects the hydromodification requirements apply.	LA County PW 11;	The requirements apply to all projects subject to the new development/ redevelopment section that drain to natural drainage systems.	No changes required to address this comment.
Hydromodification	Characterization of erosion potential for a natural stream off the project site is burdensome.	LA County PW 11	SCCWRP/ SMC Study	No changes required to address this comment.
Hydromodification	The choice of the 2-year 24-hour storm should be clarified and the storm event defined in the glossary.	LA County PW 11; Ventura Co WPD	The choice of the up to the 2-year 24-hour storm is based on the literature and is considered generally protective of the adverse impacts of hydromodification based on increases in flow, frequency and duration.	No changes required to address this comment.
Hydromodification	Permittees can't be required to participate in the SMC hydromodification Phase II study.	LA County PW 11	Southern California MS4 Programs have a cooperative agreement to work together to address regional issues such as hydromodification and find common solutions. The VCWPD already participates in the study.	No changes required to address this comment.
Hydromodification	The standard for matching the pre- and post-development hydrographs is infeasible.	Thousand Oaks A9; Countywide Program 19,B13,B14; Signal Hill Coalition PR 2; BILDF 43-49; CICWQ 16-17; CONTECH 5-6	The Order no longer requires the matching of pre- and post-development hydrographs.	Requirement eliminated in Tentative Order.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Hydromodification	Hydromodification requirements should not be applied to areas adjacent to downstream sections of major rivers.	Fillmore 2	The hydromodification criteria is to protect tributaries and not downstream areas of major rivers.	No changes required to address this comment.
Hydromodification	Proposed interim criteria to maintain peak outflow at pre-development levels may result in less sediment outflow.	Countywide Program	This is possible and a desired effect in most receiving waters within the Region.	No changes required to address this comment.
Post-Construction Storm Water Mitigation Criteria	Tiered design criteria are burdensome to private and public developers.	LA County PW 12	Tiered design criteria have been selected to account for the complexity of larger projects, while providing for a simple approach for smaller projects.	No changes required to address this comment.
Post-Construction Storm Water Mitigation Criteria	The requirement to inspect before issuing a certificate of occupancy exceeds federal CWA requirements and is onerous.	LA County PW 12,13	The purpose of the inspection is to ensure that post-construction BMPs as approved have been properly installed.	No changes required to address this comment.
Post-Construction Storm Water Mitigation Criteria	Development of a GIS tracking system for BMPs is burdensome.	LA County PW 12; Long Beach 2	The purpose of a tracking system is to ensure that the location of BMPs are known, and for follow-up maintenance	No changes required to address this comment.
Post-Construction Storm Water Mitigation Criteria	Expansion of SUSMP requirements to include transportation infrastructure construction and industrial/commercial development $\geq$ 5,000 square feet is onerous and inappropriate.	Long Beach 2	The 5,000 square foot lower threshold for post-construction BMPs have been expanded to include select commercial projects, which are associated with high vehicular traffic and are known source of urban storm water pollutants.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
Post-Construction Storm Water Mitigation Criteria	Clarify underlined terminology from the following passage from the bottom of page 55: "Each permittee shall require that post-construction treatment control BMPs incorporate, at a minimum, a volumetric and/or hydrodynamic (flow based) treatment control design standard...to mitigate <u>(infiltrate, filter or treat) storm water.</u> "	Carson 4; Inglewood 3; CICWQ 19; CONTECH 6; TECS 4	This language has been eliminated from the Order.	The provision has been eliminated.
Post-Construction Storm Water Mitigation Criteria	Specify BMP performance criteria.	CONTECH 1,5; Heal the Bay 6-7	A new table for BMP performance criteria is proposed in the tentative.	Attachment "C", Table 3 and Table 4.
Post-Construction Storm Water Mitigation Criteria	Set numeric treatment criteria for post-construction BMPs for development greater than 50 acres.	NRDC 12	New text has been added in the Order.	Part 5- E. Planning and Land Development Program.
Post-Construction Storm Water Mitigation Criteria	Requirement for developments 50 acres or more to evaluate treatment BMPs using HSPF or SWMM is infeasible because of limited expertise.	Ventura Co. WPD	The capability to do the modeling for large developments to predict and mitigate adverse water quality impacts exists and is a common practice in the State.	No changes required to address this comment.
Post-Construction Storm Water Mitigation Criteria	The 72-hour drain down requirement eliminates many effective treatment BMPs; a provision should be added to allow for BMPs with permanent pool if mosquito breeding habitat is eliminated. Emphasize the importance of pretreatment.	CONTECH 2-3	The 72 hour drain time for proprietary devices is to avoid standing water pools that may support the breeding of vectors, which is a concern for the California Department of Health.	No changes required to address this comment.

Section/Topic	Comment	Commenter(s) <sup>1</sup> & Page Numbers	Response	Change Made
RPAMPs	Develop criteria to assess what level of additional BMPs are needed for redevelopment districts.	LGC 5	The Order Contains an Alternative Post Construction Storm Water Mitigation Programs section that species criteria and requirements for RPAMPs.	Part 5- E. Planning and Land Development Program.
RPAMPs	Provide Permittees 24 months to work with the LGC to develop RPAMP criteria	Ventura	This requirement has been eliminated. The Order Contains an Alternative Post Construction Storm Water Mitigation Programs section that species criteria and requirements for RPAMPs.	Part 5- E. Planning and Land Development Program.
RPAMPs	Consider allowing RPAMPs for <u>new</u> development projects to encourage compact growth that might have a higher impervious area threshold.	LGC 4	The intent of the RPAMP provision is to allow flexibility for redevelopment projects, which have either limited space for or can not implement onsite BMPs. Under most circumstances, appropriate site planning for new development projects allows for compliance with post construction, Hydromodification, and LID requirements due to greater flexibility in placement of onsite controls.	No changes required to address this comment.
RPAMPs	The permits alternative compliance programs are unlawfully vague.	NRDC	The Order contains an Alternative Post Construction Storm Water Mitigation Programs section that species criteria and requirements for RPAMPs.	Part 5- E. Planning and Land Development Program.
Inconsistent with CEQA	There are too many inconsistencies and incompatibility with existing CEQA legislation.	Thousand Oaks A10; Countywide Program 18,B20; BILDF 20-22	The CA Court of Appeal has ruled that the new development requirements in MS4 Permits do not conflict with CEQA ( <i>County of Los Angeles v. California State Water Resources Control Board (2006) Cal. App. LEXIS 1546</i> ,	No changes required to address this comment.



**Item Number 8**

**ITEM SUMMARY**

**Public Hearing to Receive Comments on the  
Tentative Ventura County Municipal Separate Storm Sewer System (MS4) Permit  
May 7, 2009**

**NPDES Permit No. CAS004002**

- Item:** 8
- Subject:** The Reissuance of Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges, within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein.
- Purpose:** A National Pollutant Discharge Elimination System (NPDES) permit is mandated by the Clean Water Act for discharges from MS4 systems. Permit requirements for County and Cities in Ventura County include implementation of best management practices, control of pollutants in storm water discharges to the maximum extent practicable, and compliance with receiving water objectives, and waste load allocations in effective TMDLs.
- The objective of this Board Hearing is to adopt the Tentative permit and discuss critical issues arising from the Tentative Ventura County Municipal Separate Storm Sewer System (MS4) NPDES Discharge Permit. A first draft of the MS4 Permit was issued for comment in December 2006, a second draft MS4 Permit was issued on August 28, 2007, and a third draft Tentative MS4 Permit was issued on April 29, 2008. The current Tentative MS4 Permit is based on comments received on the three previous drafts and was issued for review on February 24, 2009.
- This item is being presented for purpose of adoption of the permit after receiving comment from Permittees, interested parties, and the public.
- Background:** The Ventura County Watershed Protection District (Principal Permittee), County of Ventura, Cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa

Paula, Simi Valley and Thousand Oaks (Permittees) have formed the Ventura Countywide Storm Water Quality Management Program to discharge wastes. The Permittees discharge or contribute to discharges of pollutants in storm water from municipal separate storm sewer systems (MS4s), also called storm drain systems, from the associated Watershed Management Areas into the Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek and Miscellaneous Ventura Coastal waters all within Ventura County and a small area of Los Angeles County.

**Regulatory History:** Storm water discharges from the Ventura County MS4 are presently covered under countywide waste discharge requirements contained in Order No. 00-108, adopted by the California Water Quality Control Board, Los Angeles Region (Regional Water Board) on July 27, 2000, which replaced Order No. 94-082, adopted by the Regional Water Board on August 22, 1994. Order No. 00-108 also serves as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of municipal storm water.

**Current Status:** The existing permit expired on July 27, 2005 and continues administratively to be in effect until a new permit is reissued. The Permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by Permittees will meet the requirements of the federal NPDES regulations at 40 CFR 122.26.

**Comments Received:** Forty-four comments were received from Permittees, storm water Permittees in Los Angeles County, Non Governmental Organizations (NGOs), US EPA, the Building Industry, US EPA and private citizens. Most comments were submitted electronically and some contained attachments which were technical papers and memoranda regarding Low Impact Development. There were also comments submitted after the deadline which are not included in the Board Package. Some agencies and NGOs submitted several comment letters offering alternative sets of comments and proposals for Board consideration. The background to this unusual situation of multiple comment letters from single stakeholders is described below:

In October, 2008, Regional Board staff initiated a series of meetings between Permittees and other stakeholders to discuss the comments received over the past 2 years on 3 drafts of the Permit dating back to 2007. Key stakeholders, including the NGOs were informed of and invited to these meetings. Attendees at the meeting included Ventura Cities and County staff, NGOs, BIA, the US EPA and

CASQA and the result of these discussions was the Tentative Permit that was release for public comment on February 24, 2009 with a due date for comments of April 10, 2009. The Permittees and NGOs submitted comments on the Tentative Order which are included in the Board package.

At the same time that Regional Board staff were meetings with stakeholders, the NGOs and Ventura County Permittees were in separate, confidential meetings to discuss the permit. At the time when comments were due, the NGOs and Ventura County Permittees reached agreement on several provisions of the Tentative Order developed by Regional Board staff. They had reached agreement on four sections of the permit and proposed an alternative to the staff-developed Tentative Order. The alternative proposal, hereinafter termed "Agreement" was submitted in a comment letter signed by all parties that Board staff ere attended several of the meetings. The same entities had also submitted comment letters individually on the Tentative Order. Thus, there are two sets of comments from most of the Permittees.

A summary of the key issues regarding the Tentative Order are described below, including Land Development, Monitoring, TMDL Implementation, and Construction. Staff also provides a review of the Agreement proposed by Heal the Bay, NRDC, and the Ventura County Permittees.

#### Land Development

Land Development requirements remain one of the most controversial requirements in the Tentative Permit. In brief, since the previous permit was renewed in 2000, there is a growing recognition of the effects of land development on the integrity of watersheds and water quality. In brief, land development generally increases the degree of imperviousness of the land surface which increases the volume of runoff and peak flows to the streams during storm events. Unless unabated, stormwater runoff from urban areas can increase pollutant loading, streambed destabilization, erosion, and habitat destruction. To address these impacts, there is a growing consensus that low-impact development (LID) principles can offset the storm water caused pollution.

The underlying principles of LID are reduction of pollutant load reduction and storm flow to surface waters through infiltration, capture-on-site- for reuse. LID technologies include stormwater detention and reuse, infiltration of captured stormwater, and

biofiltration. US EPA has supported the incorporation of LID principles into stormwater permit and has developed several guidance documents describing implementing technologies and relevant case studies. On a local level, Los Angeles County developed a LID ordinance in 2008.

There is little controversy regarding the merits of LID, the controversy lies in the expression of LID requirements in the permit and how compliance is attained. Staff agrees that with most stakeholders that there is an advantage to using a numeric standard for LID, and several numeric standards are available including Effective Impervious Area (EIA) and volume matching. EIA pertains to the amount of impervious area on a particular site that is contiguous with stormdrain systems or receiving waters. By limiting the EIA of a site, stormwater runoff from the site is reduced. Volume matching attempts to limit the offsite flow of stormwater from a site to the amount of runoff from the site prior to its development. Whichever standard is used in a permit, alternative compliance for sites that cannot feasibly capture or infiltrate sufficient volumes of stormwater is required.

The Tentative Order uses an EIA standard which is favored by NGOs. However, the NGOs commented that the EIA standard has been weakened from the standard that was in previous drafts of the permit. The “weakening” alleged by the NGOs primarily pertains to the alternative compliance options which is a volumetric treatment requirement for sites that cannot capture, infiltrate the volume equivalent to a fixed percentage EIA due to technical infeasibility standards.

Staff disagrees that the Tentative Order was “weakened.” The revisions from the third draft of the permit to the Tentative Order must be considered in whole. The 3<sup>rd</sup> draft of the permit lacked a volumetric sizing component to EIA, meaning that very small buffer strips could be used to “disconnect” pervious areas to adjacent waterbodies and stormdrain inlets. Staff finds that undersized BMPs would be ineffective in disconnecting pervious areas in all but the very smallest storms. The NGOs commented on this critical flaw in the 3<sup>rd</sup> draft, and staff responded by including sizing language for the EIA Standard in the Tentative Order.

The inclusion of the sizing language requires meaningful alternatives to address sites where it is infeasible to infiltrate or capture the required volume of water. In short, staff believes that the range of site conditions through Ventura County to implement the required LID components is unknown and consequently, imposing a fixed

criterion of LID on sites which can demonstrate infeasibility is inappropriate. It appears that the Permittees and the Building Industry support the alternative options for compliance in the Tentative Order, but made suggestions for clarity in the Order.

Staff has revised the Tentative Order in Land Development in light of the suggestions of the NGOs as well as suggestions for greater clarity by the Permittees and US EPA. Some of the changes in the Revised Tentative include changes to the applicability criteria (i.e. which sites are required to implement LID), adding a new finding regarding staff's rationale for using EIA as a LID criterion, requiring Regional Board Executive Officer approval for four critical reports that are required to be developed by Permittees to implement LID, and removal of flexibility for Permittees to alter the requirements for Interim Hydromodification Control because it is not needed. Staff assesses that the Revised Tentative Order for Land Development has greater clarity and oversight by the Regional Board relative to the Tentative Order.

#### Municipal Action Levels

Municipal Action Levels have been a cornerstone of the permit since the first draft. MALs address one of the fundamental concerns of stormwater management nationwide: the lack of numeric metrics for evaluating stormwater program performance. The application of MALs was precedent-setting in the First Draft of the Ventura Permit, and the inclusion of MALs in this Order has been controversial since that time. Two major concerns regarding MALs were the derivation of the numeric values for the chemical constituents, and the language expressing how they were to be used: either as enforceable permit limits or action levels to identify watersheds that require further additional BMPs. As background to these issues, the State Board convened a Blue Ribbon Panel of statewide and nationwide stormwater experts to evaluate the issue of numeric metrics for stormwater discharges. The Blue Ribbon panel concluded that:

The first draft of the permit contained MALs that were expressed as effluent limits at end of pipe monitoring. The first draft MALs were calculated based on a national dataset of stormwater data compiled by the University of Alabama under US EPA sponsorship. A statistical analysis of the data was used to derive the numeric values of 16 constituents. Permittees argued that a nationwide data set was not applicable to Mediterranean climates such as Ventura County and that it was inappropriate to set effluent limits in the absence of effluent data from the Ventura MS4 system.

The second and third drafts generally revised the statistical analysis and values of MALs so that they were less stringent, but they were still set as enforceable limits. The Permittees retained the same views on the MALs whereas the NGOs commented that the MALs were becoming less relevant because they had been “weakened.”

The Tentative Permit retained MALs but limited the number of constituents and used a subset of the National Data Set because the Ventura dataset is a relatively small data set that may not be “statistically significant.” Also, the use of industrial and agricultural chemicals in the county could potentially bias the data set to yield meaningless values. The Tentative Permit also has been revised to indicate that MALs will be used to identify areas requiring additional BMPs and the mechanism for implementing these BMPs into the stormwater programs. The Tentative Permit also clarifies that MALs are one component of evaluation of MEP and provides a mechanism to revise the numeric values by the Executive Officer as more data become available.

Most Permittees and stakeholders support MALs as being in line with the Blue Ribbon Panel, except for the NGOs. In general, the comments from NGOs are that the MALs are no longer useful and violate the standards for MEP. Specific responses to comments are provided in the response to comments, but generally staff feels that the MALs remain a cornerstone of the Tentative Order and the updated Ventura Stormwater program. First, they are one of the first metrics to be applied to effluent from MS4 systems nationwide. Second, they provide a numeric metric to drive implementation of performance based BMPs to reduce contaminant loads from the MS4. Third, they allow prioritization of BMP for best use of public resources to reduce waste loading. Fourth, and perhaps most importantly, the Tentative Order they can be revised by the Executive Officer as additional data become available so that they remain a practical indicator or areas that need attention for stormwater BMPs. For these reasons, staff has not made revisions to the MAL section of the Tentative Order that was released for public review.

### Monitoring

The focus of the existing stormwater monitoring program is on “mass emission” sites that are located in receiving waters in the three major watersheds: Ventura River, Santa Clara River, and Calleguas Creek. The data from these stations were useful in identifying contaminants of concern, but they yielded little information on the pollutant loadings from the stormwater system or the effectiveness of

the stormwater program. Although there have been several TMDLs established in Ventura County, the monitoring programs for these TMDLs is also receiving water based.

The Tentative Order requires monitoring of "representative" outfalls; one of the first permits in the state to monitor throughout the MS4 system. Permittees and Regional Board staff worked on identifying representative outfalls for each Permittee for a total of eleven outfalls throughout the county. The eleven outfalls will be monitored in both wet and dry weather to determine the pollutant loading from the MS4 from urban runoff as well as stormwater.

The tentative Permit also includes Bioassessment monitoring and beach monitoring for bacteria. Bioassessment monitoring is in accordance with a protocol developed by SCCWRP for all of southern California and includes rotating sites to characterize the greatest number of watersheds over a five year period. All southern California regional Boards are participating in the SCCWRP program. In order to also determine whether habitats are improving or deteriorating, the Tentative Permit includes a fixed site in each of the three major Ventura County watersheds.

The major comment regarding the monitoring program is from the NGOs who note that the monitoring program is insufficient number of sites and that Beach monitoring should be conducted year-round directly in front of stormdrains as in Los Angeles County. Staff notes that the current AB 411 sampling addresses monitoring during the dry season and that monitoring is currently conducted at locations determined by the County to be representative of the different beaches. Staff notes that a requirement for year round monitoring is duplicative of monitoring other programs and should only be conducted in the dry season.

Staff notes that one of the largest resource components for the stormwater program is monitoring costs, and the monitoring requirements associated with this permit are significantly greater than the costs associated with the existing permit. The new information required by the Revised Tentative Order will be able to address many of the unanswered questions regarding pollutant loading from the MS4 and its effect on water quality and stream habitat integrity.

### Total Maximum Daily Loads

Federal Regulations require that Wasteload allocations from established Total Maximum Daily Loads (TMDLs) are included in NPDES permits. Most of the TMDLs in Ventura County have compliance provisions that are part of the TMDL Implementation Plan that is established as a Basin Plan Amendment. The provisions for each established TMDL are summarized in the permit.

US EPA, NGOs, and Permittees commented on this issue. The major comment by the NGOs is that all of the relevant, established TMDLs pertaining to Ventura County need to be included in the permit. Staff agrees and has added five more TMDLs to the Revised Tentative Order.

EPA suggested additional language is needed as a prelude to the entire TMDL section of the permit. NGOs commented that the TMDLs must be implemented into the permit as enforceable, and Permittees commented that the Tentative Order expressed the TMDLs appropriately. In response to these comments, Staff has added a sentence in the TMDL section that states:

“The Permittees shall comply with the following Wasteload Allocations consistent with the assumptions and requirements of the Wasteload Allocations as documented in the Implementation Plans, including Compliance Schedules, associated with the State adoption and approval of the TMDL at compliance monitoring points established in each TMDL (40CFR122.44(d)(1)(vii)(B).”

Staff assesses this sentence provides the clarity requested by Stakeholders.

### Development Construction Program

Mitigation of impacts during construction has been a controversial issue from the First Draft through the third draft of the Permit. Those drafts sought to mitigate the significant impacts to waters from erosion during significant storm events by restricting construction during the rainy season subject to several permit restrictions. This approach was mostly interpreted as a construction ban by Permittees and the building industry that would cause significant economic harm to Ventura County and was opposed vehemently.



During the time that the draft permits were under development, the State Water Quality Control Board was developing the general construction permit. The approach taken in that permit to account for increased sediment loads during precipitation event is one of “enhanced BMPs”, including check dams and sediment basins when necessary. That approach has been included in the Tentative Permit and there have been no significant comments from stakeholders on this issue.

#### NGO-Ventura County Permittees’ Agreement

In addition to individual comment letters. Heal the Bay (“HTB”) and the Natural Resources Defense Council (“NRDC”), three cities within Ventura County and the Ventura County Department of Public Works (“Ventura County Permittees”) submitted a consensus proposal (referred to throughout this summary as the “Agreement”) to revise four sections of the Tentative Permit: Land Development, Municipal Action Levels, Monitoring, and BMP Performance. The Agreement is presented as a “package,” and as stated plainly in the document “if the Board were to eliminate or alter the approach...the signatories would no longer be bound by terms of the agreement. In that scenario, [the] individual positions on the matters ... would thus remain intact as detailed in [the] respective comment letters.”

Staff’s comments on each of the provisions of the Agreement are presented below. In addition, staff provides observations on the process under which the Agreement was developed and the policy under which the Board is being asked to consider it.

#### Tentative Order and Agreement Development Processes

The Agreement was developed in an exclusive series of meetings between the Parties who signed onto the Agreement. Staff notes that it is not clear as to which municipalities and agencies are parties to the Agreement. The Agreement states that the parties are Ventura County Stormwater Permittees, but only three of the eleven municipalities that are permittees signed the Agreement. It is unclear as to whether the Agreement represents the view of all of the Permittees. Staff notes that the process under which the Agreement was fashioned was open only to Ventura County stakeholders and HTB and NRDC. Staff requested several times to meet the HTB-NRDC technical expert and was denied this opportunity. Staff understands that other stakeholders requested to be part of the process and were also denied access.

In contrast, the Board conducted an open process and circulated three drafts on which comments were solicited, held two Board workshops at which the Board heard testimony, a 2-day roundtable with Board staff that was open to stakeholders, and a series of eight open meetings to which all key stakeholders provided input that the Board staff considered in the permit drafts. The development of the Tentative Order benefited from the meaningful input from widespread interests that was carefully considered by Staff in developing the Tentative Order. Specifically, Board Staff's process benefited from program and technical experts from all of the Ventura County cities, statewide agencies, interested stakeholder groups such as BIA, discussions with Senior Stormwater staff at other Regional Boards, the State Board, and the US EPA. They all provided input on the feasibility and effectiveness of the various requirements of the permit. The result is a permit that is reasonable, effective, and will clearly advance the quality of stormwater discharges to waterbodies through Ventura County.

#### Land Development

Although both the Agreement and the Tentative Order use a numeric metric of 5% EIA sized to an 85<sup>th</sup> percentile-24 hour storm, there is a fundamental difference in how EIA can be achieved. The Agreement mandates that EIA can only be achieved by technologies that infiltrate, store or retain stormwater on site; the Tentative Order allows biofiltration in addition to technologies that infiltrate, store or retain stormwater. Biofiltration allows some off-site release of stormwater after it is treated on site.

Both the Agreement and Tentative Order allow alternatives for complying with the EIA limit on sites where it is infeasible to attain the 5% EIA limit. The alternatives include off site mitigation and payment into a "in lieu" fund. However, on sites where it is infeasible to retain the volume of stormwater required by a 5% EIA limit, the Agreement prescribes the volume that the volume retained or infiltrated on site must meet the volume prescribed by a 30% EIA standard. The Agreement further requires off-site mitigation or payment of in lieu fees for the difference in volume between the 30% and 5 % EIA limits. The Agreement prescribes a detailed list of criteria for determining infeasibility, whereas the Tentative Order allows the Permittees to determine infeasibility.

The Agreement is focused on maximizing the retention or infiltration of stormwater onsite and limits the flow that can be released from the site, whereas the Tentative Order allows flows that mimic the predevelopment hydrology, if they are treated for water quality

before release. This difference between the Agreement and Tentative Order is that under the Agreement, more stormwater will be retained on site with a strict limitation as to the amount to be discharged into the surface waters of Ventura County. The potential environmental effects of reduced flow on impacts to aquatic and riparian habitats might be significant and have not been analyzed. California Fish and Game staff have contacted Board staff by phone inquiring about this provision of the Agreement and expressed concerns about habitat destruction from this requirement. Further, potential health and safety effects from ponded water that may accumulate on site have also not been analyzed. A further effect from eliminating biofiltration as a potential BMP is that the Agreement may increase pollutant loading to the groundwater, as biofiltration is the only technology prescribed for LID that reduces pollutant loading. By limiting BMPs to infiltration and storage, greater pollutant loads are likely to be transferred to groundwater. The Tentative Order provides important alternatives so that these reasonably potential effects can be mitigated.

Staff also have specific technical concerns regarding the Agreement's Land Development provisions: (1) the list of criteria for justifying infeasibility appears to lack the most important criteria for determining the feasibility of infiltration and retention on site: site slope and soil conductivity. Other criteria lack requisite specificity to be useful in regulating water quality. For example, the criterion "...where pollution mobilization is a documented concern" can be problematic. Oftentimes, there is significant dispute at sites with known pollution regarding whether the pollution can be mobilized. (2) the Agreement's criterion "locations where seasonal high groundwater is within 5 feet of the surface"; Staff finds the minimum requirement of 5 feet separation between groundwater and the surface may be highly inadequate to protect groundwater resources from pollutant loading by infiltrated stormwater (3) the Agreement's language for the land development portion of the Tentative Order requires that the entire Land Development section of the Tentative Order be replaced "wholly." The whole replacement of the Land Development section of the Tentative Permit would remove any requirements for hydromodification protection of creeks, streams and rivers of Ventura County that the Tentative Order provides. (4) The Agreement has not been finalized in that the provision for Timing and Reporting Requirements of Offsite Mitigation Projects contains a comment that "The NGOs and permittees did not reach consensus on this number" ...number of years that will be permitted for completing mitigation projects. (5) There is no provision for Regional Board approval of key plans that will be developed by the Permittees which effectively strips the

Regional Board of one of its important regulatory tools (plan approval) for protecting and restoring the Region's waters.

For these reasons, staff cannot recommend that Attachment A of the Agreement wholly replace the Low Impact Development (LID) – Tentative Order, Section E. III. New Development/Redevelopment Performance Criteria

#### Municipal Action Levels

The Agreement requests that the Regional Board eliminate entirely from the Tentative Order all of Part 2, Municipal Action Levels. According to the Agreement, HTB and NRDC have agreed that, given their opinion of the weaknesses of the MALs in the Tentative Order, they will not object to the removal of MALs.

MALs have been an important element of Tentative Order and the previous drafts of the Ventura MS4 Permit. With the growing nationwide controversy regarding the performance of the stormwater program, there is a growing recognition of the need for numeric metrics to evaluate the effectiveness of stormwater programs. Municipal Action Levels are numeric benchmarks which are used to evaluate the MS4 effluent quality. In the existing permit, as in most MS4 programs, evaluations of the MS4 systems are based on receiving water quality, rather than end of pipe data. It is difficult to determine the pollutant loading from the MS4 system from receiving water data.

MALs have evolved from the first draft when they were expressed as effluent limits that were to be applied to the end-of-pipe, i.e. Permittees could be fined for exceedances of the MALs. Due to a number of factors, including the variability of stormwater, the regulatory scheme of applying numeric values as effluent limits has not been promoted by US EPA or the State Board at this time. Federal regulations support a regulatory scheme that is based on BMP implementation to achieve a standard of Maximum Extent Practicable ("MEP"). It is important to note that this Board has the discretion to go beyond MEP should it find necessary to achieve water quality.

In recent years, the subject of how these numeric metrics were to be expressed in MS4 permits was the subject of an intense debate nationwide. The State Water Resources Control Board convened a panel of experts to evaluate this issue ("Blue Ribbon Panel" or "Panel"). In 2006, the Panel released its report which stated that numeric metrics were appropriate as action levels for municipal

discharges, but not as effluent limits. The key to the rationale of the Blue Ribbon Panel's recommendation is that stormwater programs have been characterized by a lack of data characterizing stormwater quality at the "end-of-pipe." This data gap did not allow the development of numeric values that could be used for enforceable effluent limits. However, the Blue Ribbon Panel stated that, used as action levels: to identify areas and drainages that require additional BMPs, MALs could be useful in the implementation of a stormwater program.

The Tentative Order incorporates MALs in accordance with the Blue Ribbon Panel Recommendations. MALs can be very useful in identifying areas that require additional BMPs. Through the extensive stakeholder meetings Board Staff conducted, MALs were developed that are contained in the Tentative Permit. Thus, from the first draft of the permit to the Tentative Order, MALs have changed from being expressed as effluent limits to being expressed as benchmarks for taking action to implement additional BMPs. HTB and NRDC have argued that MALs that are used as action levels are substantially weaker than the MALs in the previous drafts.

Staff disagrees with the HTB and NRDC position and finds that the HTB and NRDC analysis of the MALs is critically flawed. In their draft comment letter, HTB and NRDC compare the MAL values to values in the CTR values and note that the MAL values are a 10 to 100 times greater than the CTR values. What is missing from the HTB and NRDC comment letter is the fact that MALs and CTR levels are based on two different criteria; they cannot be properly compared to each other: MALs are based on the total concentration of the constituent in water whereas the CTR values are based on dissolved concentration of those constituents in water. Because many pollutants associated with stormwater appear as particulates, the total concentrations typically greatly exceed the dissolved concentrations. Staff finds that the MAL values are far more equivalent to the CTR values than the discrepancy mischaracterized by HTB and NRDC.

HTB and NRDC's flawed analysis of MALs underlies the misguided Agreement condition for removing them from the Tentative Order. Staff maintains that the MALs will provide critical information on how to best expend the resources necessary to improve water quality. Staff also notes that the Tentative Order is one of the first MS4 permits nationwide to incorporate MALs coupled with one of the first MS4 monitoring programs that includes representative end of pipe monitoring. Staff believes that MALs will add an objective

measure to the Ventura County stormwater permit implement watershed-wide and effective BMPs.

### Monitoring

The Agreement proposes to replace the current monitoring program of the Tentative Order with a different Beach Monitoring Program. The Tentative Order Program Beach Monitoring program was developed in consideration of the loss of State funding through AB 411 for monitoring beaches during the winter months. The Tentative Order requires Beach Monitoring at the 10 sites currently monitored under AB 411 during seasons when the AB 411 program is inoperative. The Tentative Order also specifies that sampling be in accordance with the procedures used in the AB 411 program. The Agreement requires year round monitoring with monitoring protocols used for Beach monitoring in Los Angeles County. The key difference in the monitoring protocol required by the Agreement is that the samples are collected directly in front of storm drains or streams at ankle depth. Conversely, the Tentative Order states that the existing AB 411 locations are maintained.

Staff finds that both protocols provide different advantages: the Tentative Order would maintain the historical record that has been established at Ventura County beaches, whereas the Agreement comports the Ventura procedures with beach monitoring in Los Angeles County. However, staff understands that AB 411 monitoring will be conducted in the summer months, so the year-round monitoring in the Agreement appears to be duplicative, and therefore a wasteful expenditure of public monies. However, staff has revised the Tentative Order to allow the Permittees to request and the Executive Officer to approve a change in the monitoring locations.

### BMP Performance

The Agreement supports the use of BMP performance criteria currently in the Tentative Order, but requires the use of a sizing standard to those criteria. This issue was submitted separately in a letter from HTB, and staff agrees with this comment: the issue is incorporated in the Revised Tentative Permit. Thus, there is little difference between the Agreement and the Revised Tentative Order before the Board.

### Staff Conclusion on NGO-Ventura County Permittees' Agreement

Staff appreciates the opportunity to provide comments on the policy implications of adopting a permit that is the result of closed meetings between the Permittees and two stakeholders. Staff respectfully believes that this is contrary to the mission of the Board, the requirements of the Porter Cologne Act under which the Board derives its authorities, and more than 50 years of water quality protection in an open and inclusive process in the Los Angeles Region. A protocol in which Permittees and stakeholders draft permits without the input of Board staff establishes a precipitous precedent.

#### **Conclusion:**

The Revised Tentative Ventura County MS4 permit fully incorporates the Water Boards mission "to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations." To restore water bodies to their highest beneficial use or potential beneficial use, the permit includes Total Maximum Daily Loads (TMDL) provisions for storm water. The Planning and Land Development Program of this permit includes Hydromodification Control and Low Impact Development (LID) provisions and the Development Construction Program includes Best Management Practices (BMPs) during the wet season that are intended to prevent water quality and habitat degradation. The permit provides clarity and certainty in compliance expectation by identifying default BMPs measures for construction and industry, and defining the maximum extent practicable" (MEP) criterion.

The MS4 monitoring program has been expanded to assess compliance with effluent limitations and water quality objectives by requiring end-of-pipe monitoring of MS4 major outfalls with aquatic toxicity monitoring. Several studies to assess the chemical, physical, and biological impacts of receiving waters resulting from storm water discharges have been incorporated into the MS4 monitoring program. These studies include: a Pyrethroid insecticide study to establish baseline data for major watersheds, development of hydromodification control tools to predict and mitigate adverse impacts, low impact development implementation to document the effectiveness of its techniques, and participation in the Southern California Bight Project to assess the ecological disturbances and conditions of regional waters.

**Alternatives:**

- I. Adopt the Revised Tentative Order as proposed by Staff
- II. Modify and adopt the Revised Tentative Order as a result of a logical outgrowth from comments the Hearing
- III. Adopt the Agreement proposed by NGOs and Ventura County Permittees
- IV. No action

**Recommendation:**

Staff proposes that the Regional Board adopt the Tentative Ventura County MS4 permit as proposed by Staff.

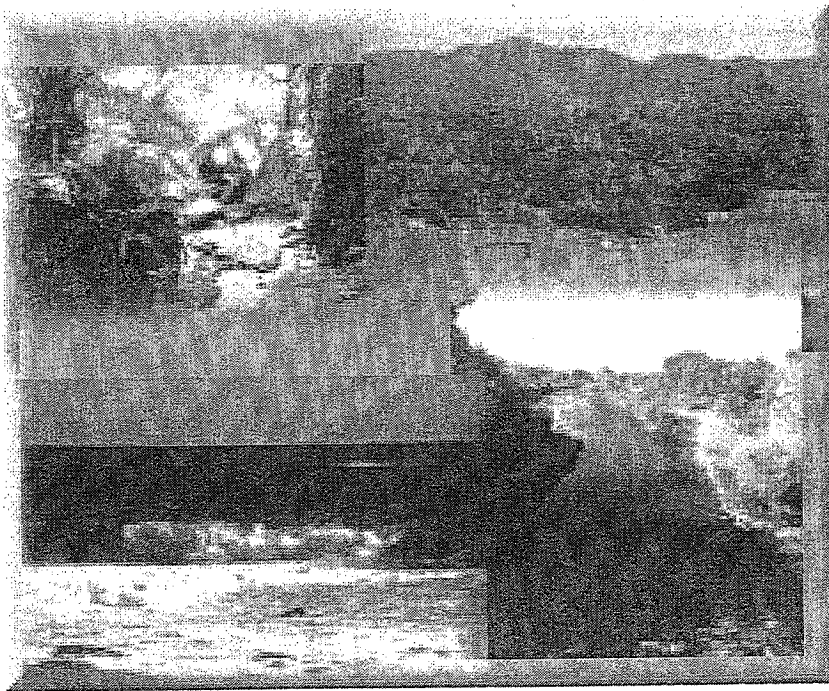


STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 09-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR

STORM WATER (WET WEATHER) AND NON-STORM WATER (DRY WEATHER)  
DISCHARGES FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS WITHIN THE VENTURA  
COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND  
THE INCORPORATED CITIES THEREIN.

May 7, 2009



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May 7, 2009

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 08-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR

STORM WATER DISCHARGES FROM THE MUNICIPAL SEPARATE STORM  
SEWER SYSTEM WITHIN THE VENTURA COUNTY WATERSHED PROTECTION  
DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN

FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter called Regional Water Board), finds that:

A. **Permit Parties and History**

1. Ventura County Watershed Protection District (Principal Permittee), County of Ventura, cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura (Ventura), Santa Paula, Simi Valley and Thousand Oaks (hereinafter referred to separately as Permittees) have joined together to form the Ventura Countywide Storm Water Quality Management Program to discharge wastes. The Permittees discharge or contribute to discharges of storm water and non-storm water from municipal separate storm sewer systems (MS4s), also called storm drain systems, into the Watershed Management Areas of Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek and Miscellaneous Ventura Coastal all within Ventura County and Los Angeles County (see Attachment "A").
2. Prior to the issuance of this permit, storm water discharges from the Ventura County MS4 were covered under the countywide waste discharge requirements contained in Order No. 00-108, adopted by the Regional Water Board on July 27, 2000, which replaced Order No. 94-082, adopted by the Regional Water Board on August 22, 1994. Order No. 00-108 also served as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of municipal storm water.
3. The Ventura County Board of Supervisors approved the concept of a countywide NPDES permit program and the use of the Flood Management District (presently the Watershed Protection District) benefit assessment authority to finance it on April 14, 1992. On June 30, 1992, the Ventura County Board of Supervisors adopted a benefit assessment levy for storm water and flood management in the unincorporated areas of Ventura County and the cities within the County, to be used in part to finance the implementation of a countywide NPDES municipal storm water

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permit program. The Ventura County MS4 Permittees have entered into an agreement with the Watershed Protection District to finance the activities related to the Ventura County MS4 Permit for shared and district wide expenses. The Permittees are also given the option to use the Benefit Assessment Program to finance their respective activities related to reducing the discharge of storm water pollutants under the MS4 Permit.

- 4. The Regional Water Board may require a separate NPDES permit for any entity that discharges storm water into the watersheds of Ventura County. Such an entity can be any State or Federal facility, special district or other public or private party.

**B. Nature of Discharge**

- 1. Storm water discharges consist of surface water runoff generated from various land uses in all the hydrologic drainage basins, which discharge into Waters of the State. The quality of these discharges varies and is affected by geology, land use, season, hydrology, and sequence and duration of hydrologic events. Based on the Ventura Countywide Storm Water Monitoring Program's Water Quality Monitoring Reports which were required under Order No. 00-108, the dry weather and wet weather Pollutants of Concern (POC) in urban stormwater include an anion, bacteria, conventional pollutants, metals, a nutrient, organic compounds, and pesticides. The POC are identified in Attachment "B" of this Order. Many of the POC listed are causing impairments identified on the federal Clean Water Act (CWA) § 303(d) list of impaired waterbodies.

The State Water Board submits a report (a list of water quality limited segments (§ 303[d] list)) on the State's water quality to the U.S. EPA pursuant to § 305(b) of the 1972 CWA, and Title 40, CFR 130.7, every 2 years. The Report provides water quality information to the general public and serves as the basis for the U.S. EPA's National Water Quality Inventory Report to Congress. Section 303(d) requires that all waters that are not attaining standards after the implementation of those controls required by 1977, shall be included on the list. Title 40 CFR 130.7(b)(3) defines "water quality standard applicable to such waters" as "those water quality standards established under § 303 of the Clean Water Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements."

- 2. Common pollutants in urban storm water and their respective sources are: bacteria from animal droppings and illegal discharges; Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications and from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints and automotive parts; copper

Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; trash and dioxins as products of combustion.

- 3. In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems. In addition, the high volumes and high velocities of storm water discharged from MS4s into receiving waters can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed hydromodification. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California.
- 4. Ammonia as Nitrogen, and Nitrate plus Nitrite as Nitrogen are biostimulatory substances that can cause or contribute to eutrophic effects such as low dissolved oxygen and algae growth impairing warm freshwater and wildlife habitats. Ammonia is highly toxic to fish and other aquatic life. Excessive ammonia can cause aquatic life toxicity.
- 5. Elevated bacterial indicator densities impair the water contact recreation (REC-1) beneficial use at beaches, creeks, estuaries, lagoons, and marinas. Swimming in waters with elevated bacterial indicator densities has been associated with adverse health effects. Specifically, local and national epidemiological studies indicate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities (*REFERENCE?*). Sources of elevated bacteria to marine and fresh waters may also include illegal discharges from improperly maintained standard septic systems, onsite wastewater treatment systems (OWTS) and illicit discharges from private drains.
- 6. Pesticides are substances used to prevent, destroy, repel or mitigate pests such as insects, weeds, and microorganisms. Their effects can be direct (e.g. fish die from exposure to a pesticide entering waterways, or birds do not reproduce after ingesting contaminated fish), or indirect (a hawk becomes sick from eating a mouse dying from pesticide poisoning). Pesticide categories include: Organochlorine, Organophosphorus, Organophosphate, and Pyrethroid.
- 7. Polychlorinated Biphenyls (PCBs) are a subset of the synthetic organic chemicals known as chlorinated hydrocarbons. Concern over PCBs toxicity, persistence (chemical stability) in the environment and bioconcentration in aquatic organisms has led to prohibitions on PCBs.
- 8. Rising groundwater and swimming pool water have been found to be sources of pollutants such as salts (chloride). Salts increase the salinity of otherwise freshwater systems and disrupt physiological processes. The Regional Water Board has

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waterbodies listed on the CWA § 303(d) list for impairment due to salts and has adopted Basin Plan amendments to include Total Maximum Daily Loads (TMDLs) for salts. This Order includes provisions to control the discharges from these activities in order to directly or indirectly reduce or eliminate the discharge of salts to fresh water systems where salts may impair water quality and beneficial uses.

- 9. Trash and debris are pervasive pollutants which accumulate in streams, rivers, bays, and ocean beaches throughout Southern California. They pose a serious threat to our oceans and coasts, navigation, biological resources, recreation, human health and safety, aesthetics, and economies.
- 10. Municipal storm water (wet weather) and non-storm water (dry weather) discharges may contain pollutants that cause or threaten to cause an exceedance of the water quality standards, as outlined in the Los Angeles Region's Basin Plan. Wet weather and dry weather discharges from the MS4 are subject to conditions and requirements established in the Basin Plan for point source discharges. Discharges from the MS4 may not cause or contribute to exceedances of water quality standards.
- 11. Biological communities act to integrate the effects of water quality conditions in a stream by responding with changes in their population abundances and species composition over time. These populations are sensitive to multiple aspects of water and habitat quality, and provide expressions of ecological health easier to understand than the results of chemical and toxicity tests. Biological assessments and criteria address the cumulative impacts of all stressors, especially habitat degradation, and chemical contamination, which result in a loss of biological diversity. Biological information can help provide an ecologically based assessment of the status of a waterbody. Bioassessment is a cost-effective tool and protocol for assessing the biological and physical habitat conditions of streams and rivers for evaluation of the overall health of a watershed. The Principal Permittee consents to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program.
- 12. The increased volume, increased velocity, and discharge duration of storm water runoff from developed areas has the potential to accelerate downstream erosion and impair stream habitat in natural drainages. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters (*Managing Runoff to Protect Natural Streams: The Latest Development on Investigation and Management of Hydromodification in California*; Stein, E. et al, December 2005; *Effect of Increase in Peak Flows and Imperviousness on the Morphology of Southern California Streams*; Coleman, D., April 2005). Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces in a subwatershed. Percentage

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impervious cover is a one indicator and predictor of potential water quality degradation expected from a new development.

13. Studies indicate that facilities with paved surfaces subject to frequent motor vehicular traffic (such as: strip malls, parking lots, commercial business parks, and fast food restaurants), or facilities that perform vehicle repair, maintenance, or fueling (automotive service facilities) are potential sources of POC in storm water (*California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Municipal, January 2003*).
14. Retail Gasoline Outlets (RGOs) are points of convergence for vehicular traffic and are similar to parking lots and urban roads. Studies indicate that storm water discharges from RGOs have high concentrations of hydrocarbons and heavy metals (*California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Municipal, January 2003*).
15. The industries and businesses listed in this Order that are to be inspected by Permittees have the potential to discharge contaminated storm water into the MS4. This storm water is an environmental threat because it can adversely impact public health and safety, and the quality of receiving waters. For example, pretreatment program compliance inspections and audits performed in the Los Angeles and Ventura Counties indicate that automotive service and food service facilities sometimes discharge polluted storm water to the MS4s. The POC in such wash waters include oil and grease, toxic chemicals, and food waste. Spills from clogged sanitary sewer lines have a high likelihood to reach the receiving waters via MS4s. Overall, the most common POC identified in storm water discharge to the MS4s are: (i) heavy metals, (ii) oil and grease/ PAHs, (iii) sediments, (iv) oxygen demanding substances, (v) litter/ trash/ debris, (vi) nutrients, (vii) other toxic materials, such as pesticides. Municipal storm water monitoring data and industrial storm water monitoring data indicate that industrial and commercial sites continue to contribute significant quantities of pollutants in storm water runoff.
16. Development and urbanization increase pollutant loads, volume, and discharge velocity. First, natural vegetated pervious ground cover is converted to impervious surfaces (paved) such as highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, impervious surfaces (such as pavement and concrete) can neither absorb water nor remove pollutants, and thus the natural purification characteristics are lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants. Development and urbanization especially threaten environmentally

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sensitive areas. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. These environmentally sensitive areas (ESAs) designated by the State in the Ventura County watershed are defined in Part 7 (Definitions).

- 17. The implementation of Low Impact Development (LID) techniques across the United States and Canada has demonstrated that the proper implementation of LID techniques not only results in water quality protection benefits and in a reduction of the cost of land development and construction but also bears other positive attributes that go beyond economic benefits such as enhanced property values, improved habitat, aesthetic amenities, and improved quality of life. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, USEPA Doc No. EPA 841-F-07-006, December 2007. Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse affects of hydromodification on stream habitat. A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption, Low Impact Development Center and State of California, State Water Resources Control Board, December 2007. The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to benefit from these additional enhancements.
- 18. The Regional Water Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R4-2005-0080) on November 3, 2005. The objective of the program is to monitor runoff from irrigated agriculture facilities in the coastal watersheds of Ventura and Los Angeles Counties. The Basin Plan, which designates beneficial uses and establishes water quality objectives for the Region, recognizes that agricultural activities can generate pollutants such as sediment, pesticides, and nutrients that upon discharge to receiving water, can degrade water quality and impair beneficial uses. A category identified by the Conditional Waiver as a source of pollutants is nursery operations. This Order includes requirements for the municipal operator to confirm that nursery operators implement pollutant reduction and control measures with the objective of reducing pollutants in storm water runoff discharges.
- 19. Staff finds there is a growing acceptance by stormwater professionals to integrate LID principles into stormwater management programs and MS4 permits. However, there remains significant controversy regarding the appropriate requirements and metrics for LID. At the heart of this controversy is a dispute regarding the feasibility and effectiveness of requiring a fixed volume of stormwater to be captured and retained onsite for infiltration, reuse, and evapotranspiration, as opposed to permitting a

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portion of the stormwater to be released off site after it is treated, when it is infeasible to retain the required stormwater on site due to site specific conditions.

Staff has reviewed extensive technical literature regarding this issue (e.g. R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County* (February 2007); E. Strecker, A. Poresky, D. Christsen, *Memorandum: Rainwater Harvesting and Reuse Scenarios and Cost Consideration*, (April, 2009). Staff finds that there is consensus in the technical community that site conditions and the type of development can limit the feasibility of retaining, infiltrating, and reusing stormwater at sites due to a variety of site specific conditions. Factors that affect the feasibility of a fixed volume capture standard include, but are not limited to: soils infiltration capacity, subsurface pollution, and locations in urban core centers.

Regarding the effects of capturing a fixed stormwater volume on site, Staff finds the fixed volume approach may be ignoring basic hydrological principles that relate the feasible infiltration volume to the infiltration capacity of local soils. Requirements to capture a fixed volume on site could disturb the natural water balance and lead to unintended engineering and hydrologic consequences. For example, a typical hydrological condition in Ventura County is one of successive storms during the winter which may exceed the stormwater capacity that can be retained on site. This may result in ponded water on site with attendant health and safety risks, saturation of the near surface soils, and reduction of water resources in Regional waterbodies. These effects could damage site structures, increase groundwater pollution by forcing enhanced pollution spreading, or destroy aquatic habitat. Staff finds these reasonably potential effects are not well evaluated scientifically. Finally, staff cannot find that a fixed retention volume versus a standard that attempts to release surface flows at a predevelopment level would result in a greater reduction of stormwater pollution.

20. Research conducted on the contribution of aerial deposition of trace heavy metals in Los Angeles County watersheds indicates that dry indirect deposition may account for a significant load of pollutants into surface waters. Similar patterns of aerial deposition likely occur in Ventura County. Of the atmospherically deposited pollutants on the watersheds, ten to twenty percent may account for the total load for copper, zinc, nickel, lead, and chromium to the waterbodies. Land reservoirs and sequestration may account for the remaining eighty to ninety percent of the atmospherically deposited pollutants on the watersheds. Emissions of semi-volatile organics such as polycyclic aromatic hydrocarbons (PAHs) and pesticides and their subsequent deposition may contribute to the contamination of receiving waters but appear to be less significant. The remaining percentage is stored in land reservoirs and eventually shows up in receiving waters.

### C. Permit Background

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1. The essential components of the Storm Water Management Program, as required by the Code of Federal Regulations (CFR) [40 CFR122.26(d)] are:
  - (a) Adequate Legal Authority.
  - (b) Fiscal Resources.
  - (c) Storm Water Quality Management Program (SMP)
    - (1) Public Information and Participation Program
    - (2) Industrial/ Commercial Facilities Program
    - (3) Planning and Land Development Program
    - (4) Development Construction Program
    - (5) Public Agency Activities Program
    - (6) Illicit Connection and Illicit Discharges Elimination Program
  - (d) Reporting Program (Monitoring Report and Program Report)
  
2. The Ventura County SMP, dated November 2001 (revision 2) identifies seven program areas, which are listed below and were previously approved under Board Order No. 00-108. For purposes of consistency, they are titled as follows:
  - (a) Ventura County SMP.
    - (1) Program Management
    - (2) Programs for Residents
    - (3) Programs for Industrial/ Commercial Businesses
    - (4) Programs for Planning and Land Development
    - (5) Programs for Construction Sites
    - (6) Programs for Public Agency Activities
    - (7) Programs for Illicit Connections/ Illegal Discharges
  - (b) For purposes of region-wide consistency, the program titles are revised and consolidated into the six areas listed in the preceding C.1(c). All Permittee storm water documents submitted to the Regional Water Board are to follow the organization enumerated in C.1(c).
  
3. The Permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The Permittees applied for renewal of their waste discharge requirements for a 5-year period, which serves as an NPDES permit to discharge wastes to surface waters.
  
4. The Regional Water Board reviewed the ROWD and determined it to be partially complete under the reapplication policy for MS4s issued by the United States Environmental Protection Agency (U.S. EPA) (61 Fed. Reg. 41697). The Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by Permittees will meet the requirements of the federal NPDES regulations at 40 CFR122.26.
  
5. The Permittees ROWD contained a proposed Storm Water Management Program and a Monitoring Program to be considered by the Regional Water Board for

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incorporation into an MS4 NPDES Permit as permit conditions and to demonstrate compliance with federal law.

- 6. To-date, the monitoring program has consisted of mass emission, receiving water (tributaries), and land-use monitoring stations, toxicity testing, special studies for bioassessment of the Ventura River and hydrology, identification of ESAs, implementation of the Storm Water Quality Urban Impact Mitigation Plan (SQUIMP), and has provided support for volunteer monitoring programs. This Order requires a monitoring program consisting of mass emission, toxicity, TMDL storm water (wet weather) MS4 water quality-based effluent limits, TMDL non-storm water (dry weather) MS4 water quality-based effluent limits, Pyrethroid assessment study, continuation of the hydromodification study, low impact development study, and participation in the Southern California Regional Bioassessment Program and Southern California Bight Project (SCBP).
- 7. The Principal Permittee is a member of the Southern California Coastal Water Research Project (SCCWRP) Commission. The Principal Permittee also participates in the Regional Monitoring Programs and research partnerships, such as the Southern California Storm Water Monitoring Coalition (SMC) and the Bioassessment Working Group.

**D. Permit Coverage**

- 1. The area covered by this Order includes all areas within Ventura County boundaries and all areas within each co-permittee's boundaries (see Figure 1) that drain into the MS4.
- 2. The Permittees covered under this Order were designated on a system-wide basis under Phase I of the CWA § 402(p)(3)(B)(i). The action of covering all Ventura County municipalities under a single MS4 permit on a system-wide basis was consistent with the provisions of 40 CFR122.26(a)(3)(iv), which states that one permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems; and the Regional Water Board may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.
- 3. Federal, State, Regional, or local entities within the Permittees' boundaries or in jurisdictions outside the Ventura County Watershed Protection District, and not currently named in this Order, may operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters covered by this Order. The Permittees may lack legal jurisdiction over these entities under State and Federal constitutions. The Regional Water Board will coordinate with these entities to

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implement programs that are consistent with the requirements of this Order. The Regional Board may consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations. Permittees have expressed their intention to work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system. Permittees shall make good faith efforts to control the contribution of pollutants to the MS4 from non-permittee dischargers such as Caltrans, the U.S. Department of Defense, and other state and federal facilities.

- 4. TMDLs are numerical calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (Waste Load Allocation (WLA) and non-point sources (Load Allocation (LA))). Discharges from the MS4s are considered point sources discharges, because the MS4 is a point source.
- 5. This Order incorporates applicable WLAs that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA. The TMDL WLAs in the Order are expressed as water quality-based effluent limits in a manner consistent with the assumptions and requirements of the TMDL from which they are derived.
- 6. The CWA and the California Water Code contain specific provisions on how wastewater discharges from point sources are to be permitted. Stormwater discharges (both dry weather and wet weather) are considered point source discharges.
- 7. Permittees should work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system through inter-agency agreements or other formal arrangements.

**E. Federal, State and Regional Regulations**

- 1. The Water Quality Act of 1987 added § 402(p) to the CWA (33U.S.C. § 1251-1387). This section requires the U.S. EPA to establish regulations setting forth NPDES requirements for storm water discharges in 2 phases.
  - (a) U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase 1 Final Rule was published on November 16, 1990 (55 Fed. Reg. 47990).
  - (b) U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (population of less than 100,000), small construction projects (less than 5 acres), municipal facilities with delayed

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coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the U.S. The Phase II Final Rule was published on December 8, 1999 (64 Fed. Reg. 68722).

2. The U.S. EPA published an 'Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits on August 9, 1996 (61 Fed. Reg. 41697). This policy requires that MS4 reapplication for reissuance for a subsequent five-year permit term contain certain basic information and information for proposed changes and improvements to the storm water management program and monitoring program.
3. The U.S. EPA has entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service for enhancing coordination regarding the protection of endangered and threatened species under section 7 of the Endangered Species Act, and the CWA's water quality standards and NPDES programs. Among other actions, the MOA establishes a framework for coordination of actions by the U.S. EPA, the Services, and CWA delegated States on CWA permit issuance under § 402 of the CWA [66 Fed. Reg. 11202-11217].
4. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is a delegated State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of wastese that could affect the quality of waters of the State, including waters of the United States, and tributaries thereto.
5. Under CWA § 303(d) of the CWA, States are required to identify a list of impaired water-bodies and develop and implement TMDLs for these waterbodies (33 USC § 1313(d)(1)). The most recent 303(d) list's U.S. EPA approval date was June 28, 2007. The U.S. EPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monica BayKeeper on March 22, 1999, under which the Regional Water Board must adopt all TMDLs for the Los Angeles Region within 13 years from that date. This Order incorporates provisions incorporating approved WLAs for municipal storm water discharges and requires amending the SMP after subsequent pollutant loads have been allocated and approved.
6. Collectively, the restrictions contained in the TMDL Provisions for Storm Water (Wet Weather) Discharges and Non-Storm Water (Dry Weather) Discharges of this Order on individual pollutants are no more stringent than required to implement the

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provisions of the TMDL, which have been adopted and approved in a manner that is consistent with the CWA. Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the assumptions and requirements of the available WLAs in TMDLs (40 CFR122.44(d)(1)(vii)(B)).

7. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. This Order implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B)) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass'n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 CFR122.44(d)(1)(vii)(B)).

Second, the local agency Permittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California*

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(1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4<sup>th</sup> 1351, 1358-1359.). The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. (See finding 5., supra.) To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, where MS4 Permittees are regulated under a Best Management Practices (BMP) based storm water management program rather than end-of-pipe numeric limits, there exists no compulsion of a specific regulatory scheme that would violate the 10<sup>th</sup> Amendment to the United States Constitution. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local

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agencies' voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

8. Under § 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Coastal States with approved coastal zone management programs are required to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: 1) agriculture; 2) silviculture; 3) urban; 4) marinas; and 5) hydromodification. This Waste Discharge Requirement addresses the management measures required for the urban category and the hydromodification category, with the exception of septic systems.
9. The Regional Water Board addresses septic systems through the administration of non-Chapter 15 regulatory programs and the implementation of Regional Water Board Order No.R4-2004-0146. Septic systems are also addressed under State Assembly Bill (AB) 885 (2000). The Regional Water Board will implement and enforce regulations issued by the State Board pursuant to AB 885. Taken together, these State and Local agency requirements when imposed on septic system operators are expected to reduce the bacterial contamination of storm water from improperly maintained septic systems.
10. The State Water Board has issued waste discharge requirements for discharges from utility vaults (CAG990002). The Regional Water Board has issued waste discharge requirements for discharges from well heads and hydrostatic pipe testing (CAG674001). These discharges to the MS4 shall be conducted under coverage of a separate NPDES permit specific to that activity.
11. On May 18, 2000, the U.S. EPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR) 65 Fed. Reg. 31682 (40 CFR131.38) for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays and estuaries.
12. The State Water Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) in 2005. The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's coastal waters. It applies to point and nonpoint source discharges. The Ocean Plan identifies the applicable beneficial uses

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of marine waters that include preservation and enhancement of designated Areas of Special Biological Significance (ASBS) (now called "State Water Quality Protection Areas") and establishes a set of narrative and numerical water quality objectives designed to protect beneficial uses. The SWRCB adopted the California Ocean Plan, and both the SWRCB and the six coastal Regional Water Quality Control Boards (RWQCBs) implement and interpret the California Ocean Plan.

13. This Regional Water Board adopted a revised Water Quality Control Plan (Basin Plan) for the Los Angeles Region on June 13, 1994. The Basin Plan specifies the beneficial uses of Ventura County waterbodies and their tributary streams, and contains both narrative and numerical water quality objectives for these receiving waters. The following beneficial uses identified in the Basin Plan apply to all or portions of each watershed covered by this Order:
- (a) Municipal and domestic supply
  - (b) Agricultural supply
  - (c) Industrial service supply
  - (d) Industrial process supply
  - (e) Ground water recharge
  - (f) Freshwater replenishment
  - (g) Navigation
  - (h) Hydropower generation
  - (i) Water contact recreation
  - (j) Non-contact water recreation
  - (k) Ocean commercial and sport fishing
  - (l) Warm freshwater habitat
  - (m) Cold freshwater habitat
  - (n) Preservation of Areas of Special Biological Significance
  - (o) Saline water habitat
  - (p) Wildlife habitat
  - (q) Preservation of rare and endangered species
  - (r) Marine habitat
  - (s) Fish migration
  - (t) Fish spawning
  - (u) Shellfish harvesting
14. On March 22, 1999 the Consent Decree in Heal the Bay, Inc.; Santa Monica BayKeeper, Inc. v. Browner, Case No. 98-4825 SBA was approved. Under Establishment of TMDLs- The parties understand that California has the initial opportunity pursuant to § 303(d) of the CWA to adopt and submit to U.S. EPA for approval TMDLs to be established under this Consent Decree. TMDLs developed by Regional Water Boards are generally adopted through Basin Plan amendments. Basin plan amendments adopted by the State Board pursuant to Water Code section 13246, and the regulatory portions must be approved by the Office of Administrative Law

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pursuant to Government Code section 11353(b). TMDLs established pursuant to CWA section 303(d)(1) must be submitted to U.S. EPA for approval pursuant to section 303(d)(2), and incorporated into the state's water quality management plan

15. The Regional Water Board has adopted amendments to the Basin Plan, to incorporate TMDLs for the following:
  - (a) The following TMDLs have been or will be incorporated into the Basin Plan within the term of the Order.
    - (1) Santa Clara River - Nitrogen Compounds
      - (A) Regional Water Board Resolution No. 2003-011
      - (B) State Water Board Resolution No. 2003-0073
      - (C) OAL file No. 04-0123-35
      - (D) U.S. EPA approval date March 18, 2004
      - (E) Final fee exemption date March 23, 2004 (effective date).
      - (F) Compliance is 1 year after effective date (March 23, 2005)
    - (2) Malibu Creek and Lagoon - Bacteria.
      - (A) Regional Water Board Resolution No. 2004-019
      - (B) State Water Board Resolution No. 2005-0072
      - (C) OAL file No. 05-1018-03 S
      - (D) U.S. EPA approval date January 10, 2006
      - (E) Final fee exemption date January 24, 2006 (effective date)
      - (F) Compliance for Summer Dry is 3 years after effective date (January 24, 2009)
      - (G) Compliance for Winter Dry is 6 years after effective date (January 24, 2012)
      - (H) Compliance for Wet Weather is 10 years after effective date (January 24, 2016), which is beyond the term of this Order
    - (3) Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, Its Tributaries and Mugu Lagoon.
      - (A) Regional Water Board Resolution No. 2005-009
      - (B) State Water Board Resolution No. 2005-0067
      - (C) OAL file No. 05-1110-02 S
      - (D) U.S. EPA approval date March 14, 2006
      - (E) Final fee exemption date March 24, 2006 (effective date)
      - (F) Compliance for Toxicity and Interim WLA is effective date (March 24, 2006)
      - (G) Compliance for Final WLA is 2 years after effective date (March 24, 2008)
    - (4) Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation in Calleguas Creek, Its Tributaries and Mugu Lagoon.

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- (A) Regional Water Board Resolution No. 2005-010
- (B) State Water Board Resolution No. 2005-0068
- (C) OAL file No. 05-1206-03 S
- (D) U.S. EPA approval date March 14, 2006
- (E) Final fee exemption date March 24, 2006 (effective date)
- (F) Compliance for Interim WLA is effective date (March 24, 2006)
- (G) Compliance for Final WLA is 20 years after effective date (March 24, 2026), which is beyond the term of this Order

(5) Calleguas Creek Watershed Metals

- (A) Regional Water Board Resolution No. 2006-012
- (B) State Water Board Resolution No. 2006-0078
- (C) OAL file No. 06-1222-015 S
- (D) U.S. EPA approval date March 26, 2007
- (E) Final fee exemption date March 27, 2007 (effective date)
- (F) Compliance for Interim WLA is effective date (March 27, 2007)
- (G) Compliance for Final WLA is Within 15 years after the effective date (March 27, 2022), which is beyond the term of this Order

(6) Revolon Slough & Beardsley Wash Trash TMDL

- (A) Regional Water Board Resolution No. 2007-007
- (B) State Water Board Resolution No 2007-0076
- (C) OAL file No 2007-1227-05 S
- (D) U.S. EPA approval date February 27, 2008
- (E) Final fee exemption date March 6, 2008 (effective date)
- (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
- (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)

(7) Ventura River Estuary Trash TMDL

- (A) Regional Water Board Resolution No. 2007-008
- (B) State Water Board Resolution No 2007-0072
- (C) OAL file No 2007-1227-01 S
- (D) U.S. EPA approval date February 27, 2008
- (E) Final fee exemption date March 6, 2008 (effective date)
- (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
- (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)

(8) Harbor Beaches of Ventura County Bacteria TMDL

- (A) Regional Water Board Resolution No. 2007-017
- (B) State Water Board Resolution No 2008-0072

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- (C) OAL file No 2007-1023-01 S
- (D) U.S. EPA approval date December 18, 2008
- (E) Final fee exemption date January 17, 2009 (effective date)

16. The Regional Water Board adopted and approved requirements for new development and significant redevelopment projects in Ventura County to control the discharge of storm water pollutants in post-construction storm water, on January 26, 2000, in Board Resolution No. R-00-02. The Regional Water Board Executive Officer issued the approved Standard Urban Storm Water Mitigation Plans (SUSMPs) on March 8, 2000 for Los Angeles County and the Cities in Los Angeles County. Since 2000, new development and redevelopment water quality criteria have been implemented by the Permittees to be consistent with SUSMP. The State Board affirmed the Regional Water Board action and SUSMPs in State Board Order No. WQ 2000-11, issued on October 5, 2000.
  - (a) A statewide policy memorandum (dated December 26, 2000), which interprets the Order to provide broad discretion to Regional Water Boards and identifies potential future areas for inclusion in SUSMPs and the types of evidence and findings necessary. Such areas include ministerial projects, projects in environmentally sensitive areas, and water quality design criteria for Retail Gasoline Outlets (RGOs, see part 7 for definition). The Regional Water Board properly justified the extensions of SUSMPs and water quality criteria to ministerial projects, projects in environmentally sensitive areas, and RGOs, during the adoption of Regional Water Board Order 01-182. The Regional Water Board's action was upheld by the County of Los Angeles Superior Court (In Re: *County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4<sup>th</sup> 985).
  - (b) The State Water Board's Chief Counsel interpreted the Order to encourage regional solutions and endorsed a mitigation fund or "bank" as alternatives for new development and significant redevelopment. The Regional Water Board has included provisions for regional solutions and the establishment of a mitigation bank in this Order.
  
17. The Regional Water Board supports Watershed Management planning to address water quality protection in the region. The objective of the Watershed Management planning is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with available resources.

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- 18. To facilitate compliance with federal regulations, the State Water Board has issued the following 4 Statewide General NPDES Permits associated with storm water:
  - (a) Industrial General Permit (IASGP- Industrial Activities Storm Water General Permit), NPDES No. CAS000001, issued on November 19, 1991, reissued on September 17, 1992 and April 17, 1997, currently under review for reissuance.
  - (b) Construction General Permit (CASGP- Construction Activities Storm Water General Permit), NPDES No. CAS000002, issued on August 20, 1992, reissued August 19, 1999, currently under review for reissuance.
  - (c) Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), NPDES No. CAS000005, issued on June 18, 2003.
  - (d) Small MS4 Permit WQ Order No. 2003-0005-DWQ, NPDES No. CAS000004, adopted on April 30, 2003.
  
- 19. Facilities discharging storm water associated with industrial activities, construction projects that disturb one or more acres of soil, or construction projects that disturb less than one acre but are part of a larger common plan of development or sale that in total disturbs 1 or more acres; and construction activities associated with small linear underground/ overhead projects that result in land disturbances greater than one acre, but less than five acres (small LUPs), are all required to obtain individual NPDES permits for storm water discharges, or be covered by the statewide General Permits by completing and filing a Notice of Intent (NOI) with the State Board. The U.S. EPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in storm water discharges to the MS4.
  
- 20. State Water Board Resolution No. 68-16 contains the state Antidegradation Policy, titled "Statement of Policy with Respect to Maintaining High Quality Waters in California" (Resolution 68-16), which applies to all waters of the state, including ground waters of the state, whose quality meets or exceeds (is better than) water quality objectives. Resolution No. 68-16 is considered to incorporate the federal Antidegradation Policy (40 CFR131.12) where the federal policy applies, (State Water Board Order WQO 86-17). Administrative policies that implement both, federal and state antidegradation policies acknowledge that an activity that results in a minor water quality lowering, even if incrementally small, can result in violation of Antidegradation Policies through cumulative effects, for example, when the waste is a cumulative, persistent, or bioaccumulative pollutant.
  - (a) Federal Antidegradation Policy (40 CFR131.12) states that the State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:
    - (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

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(2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

(b) State Water Board Resolution No. 68-16 establishes essentially a 2-step process for compliance with the policy.

(1) Step 1- if a discharge will degrade high quality water, the discharge may be allowed if any change in water quality:

(A) Will be consistent with maximum benefit to the people of the State.

(B) Will not unreasonably affect present and anticipated beneficial use of such water.

(C) Will not result in water quality less than that prescribed in state policies (e.g., water quality objectives in Water Quality Control Plans).

(2) Step 2- any activities that result in discharges to high quality waters are required to:

(A) Meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to avoid a pollution or nuisance.

(B) Maintain the highest water quality consistent with the maximum benefit to the people of the State.

21. The State Water Board on June 17, 1999, adopted Order No. WQ 99-05, which specifies standard receiving water limitation language to be included in all municipal storm water permits issued by the State and Regional Water Boards.

22. Cal. Water Code § 13263(a) requires that waste discharge requirements issued by Water Boards shall implement any relevant water quality control plans that have been adopted; shall take into consideration the beneficial uses to be protected and the water

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quality objectives reasonably required for that purpose; other waste discharges; and the need to prevent nuisance.

23. Clean Water Act section 402(p)(3)(B)(iii) requires municipal separate storm sewer system (MS4) operators to control pollution in storm water to the “maximum extent practicable” (MEP). The MEP requirement is analogous to a technology-based requirement in that it focuses upon the feasibility of pollutant reduction measures rather than achievement of water quality standards in the receiving waters to achieve improvements in the quality of the storm water that is discharged. Compliance with the MEP requirement can range from implementation of structural and nonstructural best management practices to installation of end-of-pipe treatment systems. MEP generally provides the MS4 operators the flexibility to determine what controls should be implemented through the development of a storm water management plan, subject to the Regional Board’s approval. Nevertheless, MEP does not define the limits of pollution control measures that may be required of MS4 operators, and the requirement to implement controls that reduce pollutants to the MEP is not limited by the goal of attaining water quality standards. In some circumstances, compliance with MEP may result in controls more stringent than applicable WQS, and in others, less stringent. The Regional Board may use its discretion to impose other provisions beyond MEP, as it determines appropriate for the control of pollutants, including ensuring strict compliance with water quality standards. (*Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1168.)
24. The California Supreme Court has ruled that although Water Code section 13263 requires the Water Boards to consider the factors set forth in Water Code section 13241 when issuing an NPDES permit, the Water Boards may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613). However, when the pollutant restrictions in an NPDES are more stringent than federal law requires, Water Code section 13263 requires that the Water Boards consider the factors described in section 13241 as they apply to those specific restrictions.
25. The City of Burbank case related to NPDES permits for publicly owned treatment works, not permits for municipal separate storm sewer systems (MS4s). Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the storm sewers, in addition to requiring controls to reduce the discharge of pollutants to the maximum extent practicable. Therefore, a 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4, or for practicable controls to reduce the discharge of pollutants to the maximum extent, as those requirements are mandated by federal law.

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- 26. The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR122.26 or in U.S. EPA guidance. However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA § 402(p)(3)(B)(ii) and (iii) and the related federal regulations. Consistent with federal law, all of the conditions in this permit could have been included in a permit adopted by U.S. EPA in the absence of the in lieu authority of California to issue NPDES permits.
- 27. The Board finds that all requirements in this order are practicable. Moreover, while commenters have alleged that the permit requirements are “beyond MEP,” no commenter has presented evidence that demonstrates that any particular permit requirement is not actually practicable.
- 28. Notwithstanding findings 23 through 27, the Regional Board has developed an economic analysis of the permit’s requirements, consistent with Water Code section 13241. That analysis is contained in the “Economic Considerations of the Proposed Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein , June 2, 2008, which is contained in the administrative record for this Order. The Regional Board has considered all of the evidence that has been presented regarding the 13241 factors in adopting this permit, both as contained in the economic analysis and as reflected in the fact sheet and comments (and responses thereto) submitted to the many drafts of this permit. The Regional Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan, and the economic information related to costs of compliance and other 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, additional time to implement certain measures and achieve water quality objectives can be provided through the iterative storm water management plan process.

**F. Implementation**

- 1. The California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code § 2100 et seq.) requires that public agencies consider the environmental impacts of the projects they approve for development. CEQA applies to projects that are considered discretionary (a governmental agency can use its judgment in deciding whether and how to carry out or approve a project, § 15357) and does not apply to ministerial projects (the law requires a governmental agency to act on a project in a set way without allowing the agency to use its own judgment, § 15369). A ministerial project may be made discretionary by adopting local ordinance provisions

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or imposing conditions to create decision-making discretion in approving the project. In the alternative, Permittees may establish standards and objective criteria administratively for storm water mitigation for ministerial projects. For water quality purposes regardless of whether a project is discretionary or ministerial, the Regional Water Board considers that all new development and significant redevelopment activity in specified categories, that receive approval or permits from a municipality, are subject to storm water mitigation requirements in a manner that is consistent with and complies with the provisions of CEQA.

2. The objective of this Order is to ensure that discharges from the MS4 in Ventura County comply with water quality standards, including protecting the beneficial uses of receiving waters. To meet this objective, the Order requires that Best Management Practices (BMPs) will be implemented to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and achieve water quality objectives and standards. The U.S. EPA envisioned that municipal storm water programs would be implemented in an iterative manner and improved with each iteration by using information and experience gained during the previous permit term (*Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits* - 61 Fed. Reg. 41697). Municipalities are required to evaluate what is effective and make improvements in order to protect beneficial uses of receiving waters. This Order requires implementation of an effective combination of pollution control and pollution prevention measures, education, public outreach, planning, and implementation of source control BMPs and Structural and Treatment Control BMPs. The better-tailored BMPs combined with the performance objectives outlined in this Order have the purpose of attaining water quality objectives and standards (*Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*- 61 Fed. Reg. 43761). Where WLAs have been adopted for storm water (wet weather) and non-storm water (dry weather) discharges from MS4s, this Order requires Permittees to implement controls to achieve the WLAs within the compliance schedule provided in the TMDLs.
3. The implementation of measures set forth in this Order are reasonably expected to reduce the discharge of pollutants conveyed in storm water discharges into receiving waters, and to meet the TMDL WLAs for discharges from MS4s that have been adopted by the Regional Water Board.
4. The U.S. EPA has recommended that all future TMDLs and TMDL amendments be expressed as daily increments consistent with a federal court ruling (*Friends of the Earth, Inc. v. EPA, et al.* No. 05-5015 (D.C. Cir. 2006)). However, this interpretation does not affect the discretionary authority of the Regional Water Board to express NPDES permit limits and conditions in non daily terms because there is no express or implied statutory limitation (CWA §502(11)) (*Establishing TMDL "Daily Loads" in Light of the Decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of*

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*the Earth, Inc. v. EPA, et al. (April 2006) and Implications for NPDES Permits*, U.S. EPA Office of Water, memorandum, Nov 15, 2006). This Order translates MS4 TMDL WLAs adopted by the Regional Water Board into forms “consistent with the assumptions and requirements of the TMDL”.

5. During the term of the Order, the Permittees shall implement all necessary control measures to reduce pollutant(s) which cause or continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, to eliminate the water quality impairment(s). Successful efforts to reverse the wet weather impairments during the permit term for such pollutants, may avoid the need for a WLA for wet weather or the need to develop a TMDL in the future.
6. This Order promotes land development and redevelopment strategies that consider water quality and water management benefits associated with smart growth techniques. Such measures may include hydromodification mitigation requirements, minimization of effective impervious area, integrated water resources planning, and low impact development guidelines. (Reference: *Protecting Water Resources with Smart Growth*, EPA 231-R-04-002, U.S. EPA 2004; *Using Smart Growth Techniques as Storm Water Best Management Practices*, EPA 231-B-05-002, U.S. EPA 2005; *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*, EPA 231-K-06-001, U.S. EPA 2006; *Protecting Water Resources with Higher-Density Development*, EPA 231-R-06-001, U.S. EPA 2006.)
7. The implementation of an effective Public Information and Participation Program is a critical component of a storm water management program. While commercial and industrial facilities are traditionally subject to multiple environmental regulations and receive environmental protection guidance from multiple sources, the general public, in comparison, receives significantly less education in environmental protection. An effective Public Information and Participation Program is required because:
  - (a) Activities conducted by the public such as vehicle maintenance, improper household waste materials disposal, improper pet waste disposal and the improper application of fertilizers and pesticides have the potential to generate a significant amount of pollutants that could be discharged in storm water.
  - (b) An increase in public knowledge of storm water regulations, proper storage and disposal of household wastes, proper disposal of pet wastes and appropriate home vehicle maintenance practices can lead to a significant reduction of pollutants discharged in storm water.
8. This Order also provides flexibility for Permittees to seek authorization from the Regional Water Board Executive Officer to substitute a BMP under this Order with an alternative BMP, if they can provide information and documentation on the effectiveness of the alternative, equal to or greater than the prescribed BMP in meeting the objectives of this Order.

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9. This Order contemplates that the Permittees are responsible for considering potential storm water impacts when making planning decisions in order to fulfill the Permittees' CWA requirement to reduce the discharge of pollutants in municipal storm water to the MEP and attain water quality objectives from new development and redevelopment activities. However, the Permittees retain authority to make the final land-use decisions and retain full statutory authority for deciding what land uses are appropriate at specific locations within each Permittee's jurisdiction. This Order and its requirements are not intended to restrict or control local land use decision-making authority.
  
10. The State Water Board amended the Policy for the Implementation of Toxics Standards In Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy – SIP) on February 24, 2005. The SIP does not apply directly to the stormwater discharges. However, this Order includes a Monitoring Program that incorporates Minimum Levels (MLs) established under the State Implementation Policy. The MLs represent the lowest quantifiable concentration for priority toxic pollutants that is measurable with the use of proper method-based analytical procedures and factoring out matrix interference. The SIP's MLs therefore represent the best available science for determining MLs and are appropriate for a storm water monitoring program. The use of MLs allows the detection of toxic priority pollutants at concentrations of concern using recent advances in chemical analytical methods.
  
11. This Order establishes Municipal Action Levels (MALs) for selected pollutants based on regional Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were computed using one of three approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). MALs are identified in Attachment "C". Permittees shall utilize the MALs to identify subwatersheds that require additional action to reduce the discharge of pollutants.
  
12. The International Storm Water Best Management Practices (BMP) Database was established in 1996 as a cooperative initiative between the U.S. EPA and the American Society of Civil Engineers (ASCE) to provide scientifically sound information to improve the design, selection and performance of storm water BMPs. The BMP database includes standardized BMP monitoring and reporting protocols, a storm water BMP database, BMP performance evaluation protocols, and BMP monitoring guidance. The storm water BMP database is updated approximately semi-annually to add new BMP studies and performance data. The International Storm Water Database is now maintained by the Water Environment Research Foundation (WERF).



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13. This Order is not intended to prohibit the inspection for or abatement of vectors by the State Department of Public Health or local vector agencies in accordance with CA Health and Safety Code, § 116110 et seq. Certain Treatment Control BMPs if not properly designed, operated or maintained may create habitats for vectors (e.g. mosquitoes and rodents). This Order contemplates that the Permittees will closely cooperate and collaborate with local vector control agencies and the State Department of Public Health for the implementation, operation, and maintenance of Treatment Control BMPs in order to minimize the risk to public health from vector borne diseases.
14. This Order contemplates that Permittees will ensure that implemented Treatment Control BMPs will not pose a safety or health hazard to the public. This Order contemplates that Permittees will ensure that the maintenance of implemented Treatment Control BMPs will comply with all applicable health and safety regulations, such as, but not limited to requirements for worker entry into confined spaces under OSHA Safety and Training education, § 1926.21(b)(6)(i).
15. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from construction sites to the MEP. The BMPs are identified in Table 6 (BMPs at Construction sites less than 1 acre), Table 7 (BMPs at Construction Sites 1 acre or greater but less than 5 acres), and Table 8 (BMPs at Construction sites 5 acres or greater). These BMPs include erosion control, sediment control, and construction site waste management practices. The BMPs listed in part 5.F of the Order were selected based on the Water Boards' experience of regulating such sites since 1992, and are referenced in the *California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Construction (January 2003)* and from the *Stormwater Quality Handbooks, Project Planning and Design Guide, Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Plan (WPCP) Preparation Manual, Construction Site Best Management Practices (BMPs) Reference Manual, March 2007* (Caltrans Document Number CTSW-RT-06-171.11-1) which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable on a particular site, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.
16. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from commercial and industrial sites to the MEP. The BMPs are identified in Table 2 (BMPs at Restaurants), Table 3 (BMPs at Automotive Service Facilities), Table 4 (BMPs at Retail Gasoline Outlets), and Table 5 (BMPs at Nurseries). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste

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management practices, and implement control practices to keep pollutants away from any entrance to the storm drainage system. The BMPs listed in part 5.D of the Order were selected based on the Water Boards' experience of regulating such sites since 1992 and referenced in the California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Commercial/Industrial Activity (January 2003) and from the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

- 17. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from Public Agency Activities to the MEP. The BMPs are identified in Table 9 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste management practices, implement control practices to keep pollutants away from any entrance to the storm drainage system and from being deposited or discharged directly into waters of the U.S. The BMPs listed in part 5.G of the Order were selected based on the Water Boards' experience of regulating such sites since 1990, and are referenced in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serves as a statewide standard for the California Department of Transportation (Caltrans). The BMPs identified in the Table are technically feasible, practicable, and cost-effective, and are the standard of practice for Caltrans sites statewide. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

- 18. This Order incorporates BMPs to ensure that authorized Non-Storm Water Discharges are not a source of pollutants to the MS4, Table 1 (Required Conditions for Non-Storm Water Discharges). The BMPs included are for the purpose of dechlorination and/or for prevention of erosion and sediment loss, or to reduce other harmful pollutants during the discharge of authorized non-storm water discharges to the MS4. The BMPs listed in part 1.B of the Order were selected from the *American Water Works Association AWWA Guidelines For The Development Of Your Best Management Practices (BMP) Manual For Drinking Water System Releases Developed by the CA-NV AWWA Environmental Compliance Committee (2005)* which serves as an industry standard for California, from the results of studies directed by the Los Angeles Water Board, - *Evaluation of Non-Storm Water Discharges to California Storm Drains and Potential Policies for Effective Prohibition Methods, Final Report*, University of California, Los Angeles, Contract No. 5-104-140-0 (1997), and *Water Quality Concerns and Regulatory Controls for*

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*Non Storm Water Discharges to Storm Drains*, Duke L.D. and M. Kihara, Journal of the American Water Resources Association, Vol. 34: 661-676, (1998), and from the Water Boards' experience of controlling authorized non-storm discharges to the MS4 since 1990. The BMPs identified in the Table are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

19. In accordance with Federal regulations at 40 CFR 124.8, a Fact Sheet has been prepared to explain the principal facts and the significant factual, legal, methodological, policy, and economic matters considered in preparing the Tentative Order. This Fact Sheet has been made a part of the Administrative Record.
20. The State Water Board adopted statewide General Waste Discharge Requirements for Sanitary Sewer Systems, (WQ Order No. 2006-0003) on May 2, 2006, to provide a consistent, statewide regulatory framework to address sanitary sewer overflows ("SSO Orders"). The SSO Order establishes requirements for public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and to report SSOs. SSOs that enter MS4s have the potential to impair the recreational use of receiving waters, and to harm public health. This Order establishes coordination, response, and notification requirements for MS4 Permittees when SSOs result in a discharge to the MS4 system.
21. This Order takes into consideration the housing needs in the area under the Permittees' jurisdiction by balancing the implementation of Smart Growth and Low Impact Development techniques with the protection of the water resources of the region. Although not required, the Regional Water Board considered the need for housing and the appropriate techniques to allow for reasonable development while protecting the receiving waters from degradation.
22. This Order may have an effect on costs required for compliance with the provisions contained herein. Although not required, the Regional Water Board has considered costs in preparing this Order. Though also not required, the Regional Water Board has also considered the factors set forth in Water Code section 13241.

#### G. Public Notification

1. The issuance of waste discharge requirements pursuant to California Water Code section 13370 et seq. is exempt from the California Environmental Quality Act in accordance with California Water Code section 13389. *County of Los Angeles et al., v. California Water Boards et al.*, (2006), 143 Cal.App.4<sup>th</sup> 985.

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- 2. The Regional Water Board has notified the Permittees, and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to make statements and submit their comments.
- 3. The Regional Water Board staff has conducted more than 35 meetings from February 9, 2007 through December 19, 2008, with Permittees, their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIAGLA/ VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Collation for Practical Regulation (CPR), Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government commission, Los Angeles City; Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper). On April 5, 2007 and September 20, 2007 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the Permittees and the public regarding proposed changes.
- 4. This Order shall serve as a NPDES permit, pursuant to CWA § 402, and shall take effect 90 days from Order adoption date provided the Regional Administrator of the U.S. EPA has no objections.
- 5. Pursuant to Cal. Water Code § 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board within 30 days of the date of adoption of the Order by the Regional Water Board. A petition must be sent to:  
  
State Water Resources Control Board  
Office of the Chief Counsel  
P.O. Box 100  
Sacramento, CA 95812-0100
- 6. This Order may be modified or alternatively revoked or reissued prior to its expiration date or any administrative extension thereto, in accordance with 40 CFR122.41(f) and 122.62.

**IT IS HEREBY ORDERED** that the Permittees, in order to meet the provisions contained in Division 7 of the Cal. Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, shall comply with the following:

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**PART 1 - DISCHARGE PROHIBITIONS****A. Prohibitions - Non-Storm Water Discharges**

1. The Permittees shall, within their respective jurisdictions, effectively prohibit non-storm discharges into the MS4 and receiving waters, except where such discharges:
  - (a) Originate from a State, Federal, or other source for which they are pre-empted from regulating by State or Federal law; or
  - (b) Are covered by a separate individual or general NPDES permit, or conditional waiver for irrigated lands; or
  - (c) Flows from fire fighting activities.
  - (d) Fall within one of the categories below, are not a source of pollutants that exceed water quality standards, and meet all conditions where specified by the Regional Water Board Executive Officer:
    - (1) Category A – Natural flows
      - (A) Stream diversions authorized by the State Water Board
      - (B) Natural springs and rising ground water
      - (C) Uncontaminated ground water infiltration [as defined by 40 CFR35.2005(20)]<sup>1</sup>
      - (D) Flows from riparian habitats or wetlands
    - (2) Category B – Flows incidental to urban activities, providing conditions listed in table below:
      - (A) Discharges from potable water sources<sup>2</sup>
      - (B) Gravity flow from foundation, footing and crawl space drains.
      - (C) Air conditioning condensate
      - (D) Reclaimed and potable landscape irrigation runoff
      - (E) Dechlorinated/ debrominated swimming pool discharges [see def. part 7]
      - (F) Non-commercial car washing by residents or non-profit organizations
      - (G) Sidewalk rinsing
      - (H) Pooled non-storm water from treatment BMPs<sup>3</sup>

Table 1 – Required Conditions for Non-Storm Water Discharges

<sup>1</sup> NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County.

<sup>2</sup> The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro-testing or flushing of water supply and distribution mains and incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

<sup>3</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Stream diversions permitted by the State Board;	Authorization by the State Water Board	Permittees shall comply with all conditions in the authorization.
Natural springs and rising ground water	1. Ground water dewatering requires a separate NPDES permit. 2. Segregate flow to prevent introduction of pollutants.	Permittees shall comply with all conditions in the authorization.
Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)] (Utility vault dewatering requires a separate NPDES permit.)	NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Flows from riparian habitats or wetlands	Provided that all necessary permits or authorizations are received prior to diverting the stream flow.	Permittees shall comply with all conditions in the authorization.
Discharges from potable water sources <sup>1</sup>	See Footnote #1.  Provided discharges from water lines and potable water sources shall be dechlorinated, pH adjusted if necessary, reoxygenated, and volumetrically and velocity controlled to prevent resuspension of sediments.	See Footnote #2. To be discharged, this type of water shall be dechlorinated using aeration and/ or sodium thiosulfate and/ or other appropriate means and/or be allowed to infiltrate to the ground. BMPs such as sand bags or gravel bags, or other appropriate means shall be utilized to prevent sediment transport. All sediments shall be collected and disposed of in a legal and appropriate manner.
Drains for foundation, footing and crawl drains	Dewatering requires a separate NPDES permit.	Permittees shall comply with all conditions in the authorization.
Air conditioning condensate	Segregation of flow to prevent introduction of pollutants. Percolation whenever possible.	Permittees shall comply with all conditions in the authorization.
Water from crawl space pumps	Dewatering requires a separate NPDES permit within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Reclaimed and potable landscape irrigation runoff	Segregation of flow to prevent introduction of pollutants.	Implement conservation programs to minimize this type of discharge by using less water.
Dechlorinated/ debrominated swimming pool discharges [see definition Part 8]	<p>Where the discharge is not excepted by the sanitary sewer operator. Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments.</p> <p>Cleaning waste water and filter back wash shall not be discharged to municipal separate storm sewers.</p> <p>No discharges are allowed containing salts in excess of Water Quality Standards.</p> <p>Chlorine residual in discharge shall not exceed 0.1mg/L.</p>	Pool water may be dechlorinated using time, aeration, and/ or sodium thiosulfate.
Non-commercial car washing by residents or non-profit organizations	Preferably at a commercial carwash or designated area where wash water can percolate. Pumps or vacuums may be used to direct water to pervious areas.	Permittees shall comply with all conditions in the authorization.
Sidewalk rinsing	This may be undertaken only if high pressure low volume is used as described in the	

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Pooled storm water from treatment BMPs <sup>1</sup>	<p>glossary under "Sidewalk Rinsing".</p> <p>All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer. All storm water BMPs shall be designed to drain within 72 hours of the end of the rain event to avoid the breeding of vectors. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. The discharge shall cease before the discharge has become a source of a pollutant(s), (bottom sediment included). Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.</p>	

2. If the Regional Water Board Executive Officer determines that any of the preceding categories of non-storm water discharges are a source of pollutants that exceed water quality standards, the Permittee(s) shall either:
  - (a) Prohibit the discharge from entering the MS4; or
  - (b) Authorize the discharge category and require implementation of appropriate or additional BMPs to ensure that the discharge will not be a source of pollutants; or
  - (c) Require or obtain coverage under a separate RWQCB or SWRCB permit for discharge into the MS4.

**PART 2 – MUNICIPAL ACTION LEVELS**

1. This Order establishes Municipal Action Levels (MALs) to identify subwatersheds requiring additional Best Management Practices (BMPs) to reduce pollutant loads and prioritize implementation of additional BMPs. MALs for selected pollutants based on a Climate Zone 6 subset of nationwide Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were obtained by computing the 80<sup>th</sup> percentile for selected pollutants. MALs are identified in Attachment "C".
2. Under this Order, the Municipal Action Levels (MALs) shall be utilized by Permittees to identify subwatersheds discharging pollutants at levels in excess of the MALs. Within

<sup>1</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.



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those subwatersheds where pollutant levels in the discharge are in excess of the MALs, Permittees shall implement controls and measures necessary to reduce the discharge of pollutants.

3. In order to determine if MS4 discharges are in excess of the MALs, Permittees shall conduct outfall monitoring as required in the Monitoring and Reporting Program (MRP). A MAL Assessment Report shall be submitted to the Executive Officer as part of the Annual Report. The Report shall present the monitoring data in comparison to the applicable MALs, and identify those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs listed in Attachment "C" in discharges of storm water from the MS4 to waters of the U.S..
4. At the beginning of Year 3 after Order adoption date, each Permittee shall submit a MAL Action Plan with the Annual Report (first MAL Action Plan due with 2011/2012 Annual Report) to the Executive Officer, for those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in any discharge of storm water from the MS4 to waters of the U.S.. The plan is to include an assessment of the sources responsible for the MAL exceedances, the existing stormwater programs and BMPs that address those sources, an assessment of potential program enhancements, alternative BMPs and actions the Permittee shall implement to reduce discharges to a level that is equivalent to or below the MALs, and an implementation schedule for such actions for Executive Officer approval. The MAL Action Plan shall provide the technical rationale to demonstrate the proposed measures and controls will attain the MALs. If the MAL Action Plan is not approved within 90 days of the due date, the Executive Officer may establish an appropriate plan with at least 90 day notification and consultation to the Permittees.
5. Within 90 days of the plan approval by the Regional Board Executive Officer, the Permittee shall initiate the BMPs and actions proposed in the MAL Action Plan, together with any other practicable BMPs or actions that the Executive Officer determines to be necessary to meet the MALs. The Permittee shall complete the proposed actions in accordance with the approved implementation schedule.
6. Upon completion of the actions specified in the approved MAL Action Plan, the Permittee shall re-monitor the subject subwatershed in accordance with the MRP, and submit a Post-Project MAL Assessment Report to the Executive Officer. Upon Executive Officer approval, Permittees may coordinate MAL Action Plans and TMDL Implementation Plans, subject to the compliance timeline of the earliest date.
7. As additional data become available through the MRP or from the Regional Subset of the National Dataset, MALs may be revised annually by the Executive Officer in accordance with an equivalent statistical method as that used to establish the MALs in Attachment C of this order with at least 90 day notification and consultation to the Permittees.

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**PART 3 – RECEIVING WATER LIMITATIONS**

1. Discharges from the MS4 that cause or contribute to a violation of water quality standards are prohibited.
2. Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible, shall not cause or contribute to a condition of nuisance.
3. The Permittee shall comply with Receiving Water Limitations 1 and 2 through timely implementation of control measures and other actions to reduce pollutants in the storm water discharges in accordance with the requirements of this Order including any modifications. The Permittees' Program shall be designed to achieve compliance with Receiving Water Limitations 1 and 2. If exceedance(s) of water quality objectives or water quality standards (collectively WQS) persist, notwithstanding implementation of this permit, the Permittees shall ensure compliance with Receiving Water Limitations 1 and 2 by complying with the following procedure:
  - (a) Upon determination by either the Permittees or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee(s) upstream of the point of discharge shall promptly notify and thereafter submit a report to the Regional Water Board Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be included with the Annual Report, unless the Regional Water Board Executive Officer directs an earlier submittal. The Regional Water Board Executive Officer may require modifications to the report.
  - (b) Submit any modifications to the report required by the Regional Water Board Executive Officer within 30 days of notification.
  - (c) Within 30 days following approval of the Report described above by the Regional Water Board Executive Officer, the Permittees shall revise their Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.
  - (d) Implement the revised Program and monitoring program according to the approved schedule.
4. Permittees shall annually report the effectiveness of BMPs in reducing exceedances of receiving water limitations. The Regional Board Executive Officer may direct implementation of additional BMPs if there are continuing or recurring exceedances of the same receiving water limitation.

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**PART 4 - STORM WATER QUALITY MANAGEMENT PROGRAM**  
**IMPLEMENTATION**

**A. General Requirements**

1. Each Permittee shall, at a minimum, adopt and implement applicable terms of this Order within its jurisdictional boundary. The Principal Permittee shall be responsible for program coordination as described in this Order as well as compliance with applicable portions of the permit within its jurisdiction. This Order shall be implemented no later than (90 days after Order adoption date), unless a later date has been specified for a particular provision in this Order and provided the Regional Administrator of the U.S. EPA has no objections.
2. Each Permittee shall comply with the requirements of 40 CFR122.26(d)(2) and implement programs and control measures so as to reduce the discharges of pollutants in storm water to the MEP and achieve water quality standards.
3. Each Permittee shall require that treatment control BMPs being implemented under the provisions of this Order shall be designed, at a minimum, to achieve the BMP performance criteria for storm water pollutants likely to be discharged as identified in Attachment "C", Table 3 for an 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998). Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database. Permittees shall select Treatment BMPs based on the primary class of pollutants likely to be discharged from the site/facility (e.g. metals from an auto repair shop). Permittees may develop guidance for appropriate Treatment BMPs for project type based on Attachment "C". For the treatment of pollutants causing impairments within the drainage of the impaired waterbody, permittees shall select BMPs from the top three performing BMP categories or alternative BMPs that are designed to meet or exceed the performance of the highest performing BMP for the pollutant causing impairment.
4. Each Permittee shall implement programs and measures to comply with the TMDLs' WLAs for the MS4 as specified in Part 6.
5. If TMDL requirements, including Implementation Plans and Reports, address substantially similar requirements as the MS4 permit, the Executive Officer may approve the applicable reports, plans, data or submittals under the applicable TMDL as fulfilling requirements under the MS4.

**B. Legal Authority**

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1. Permittees shall possess the necessary legal authority to prohibit, including, but not limited to:
  - (a) Illicit connections and illicit discharges, and to remove illicit connections.
  - (b) The discharge of non-storm water to the MS4 from:
    - (1) Washing or cleaning of gas stations, auto repair garages, or other types of automotive service facilities
    - (2) Mobile auto washing, carpet cleaning, steam cleaning, sandblasting and other such mobile commercial and industrial operations
    - (3) Areas where repair of machinery and equipment which are visibly leaking oil, fluid or antifreeze, is undertaken
    - (4) Storage areas for materials containing grease, oil, or other hazardous substances, and uncovered receptacles containing hazardous materials
    - (5) Swimming pools<sup>1</sup> that have a concentration greater than:
      - (A) Chlorine/ bromine- 0.1mg/L
      - (B) Chloride- 250mg/L
    - (6) Swimming pool filter backwash
    - (7) Decorative fountains and ponds
    - (8) Industrial/ Commercial areas, including restaurant mats
    - (9) Concrete truck cement, pumps, tools, and equipment washout
    - (10) Spills, dumping, or disposal of materials other, such as:
      - (A) Litter, landscape and construction debris, garbage, food, animal waste, fuel or chemical wastes, batteries, and any other materials which have the potential to adversely impact water quality; and
      - (B) Any pesticide, fungicide or herbicide
    - (11) Stationary and mobile pet grooming facilities
    - (12) Trash container leachate
2. The Permittees shall possess adequate legal authority to:
  - (a) Control through interagency agreement, the contribution of pollutants from one portion of the MS4 to another portion of the MS4.
  - (b) Require persons within their jurisdiction to comply with conditions in the Permittees' ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows).
  - (c) Utilize enforcement measures (e.g., stop work orders, notice of violations, fines, referral to City, County, and/ or District Attorneys, referral to strikeforces, etc.) by ordinances, permits, contracts, orders, administrative authority, and civil and criminal prosecution.<sup>2</sup>

<sup>1</sup> MS4s discharging directly to the ocean are not subject to this prohibition.

<sup>2</sup>In the case of private responsible parties such as, HOAs, the Permittee must retain enforcement authority.

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- (d) Control pollutants, including potential contribution<sup>1</sup> in discharges of storm water runoff associated with industrial activities, including construction activities to its MS4, and control the quality of storm water runoff from industrial sites, including construction sites.
  - (e) Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges to the MS4.
  - (f) Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality objectives.
  - (g) Require that Treatment Control BMPs be properly operated and maintained.
3. Each Permittee has adopted a Storm Water Quality Ordinance based upon a countywide model. Each Permittee shall ensure, no later than (two years after Order adoption date), that its Storm Water Quality Ordinance authorizes the Permittee to enforce all requirements of this Order.
  4. Each Permittee shall submit no later than two years after Order adoption date, a statement by its legal counsel that the Permittee has obtained and possesses all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.

**C. Fiscal Resources**

1. The Permittees shall implement the activities required to comply with the provisions of this Order.<sup>2</sup> Each Permittee shall:
  - (a) Submit an Annual Budget Summary that shall include:
    - (1) Budgets for the upcoming report year (estimated expenditure) for the following specific categories (estimated percentages and written explanations where necessary):
      - (A) Program Management Activities.
        - (i) Overall Administrative costs
      - (B) Program Implementation Activities (permit related activities only).  
Provide figures breakdown of expenditures for the categories below:
        - (i) Illicit connection/ illicit discharge program.
        - (ii) Development planning and approval
        - (iii) Construction program including inspection activities
        - (iv) Industrial/ Commercial program including inspection activities
        - (v) Public Agency Activities
      - (I) Maintenance and inspection of Treatment Control BMPs

<sup>1</sup> "Potential contributions" and "potential to discharge," means adequate legal authority to prevent an actual discharge of pollutants to the municipal separate storm sewer system.

<sup>2</sup> The sources of funding may be the general funds, and/or Benefit Assessment, plan review fees, permit fees, industrial/ commercial user fee, revenue bonds, grants or other similar funding mechanism.

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- (II) Municipal Street Sweeping
- (III) Municipal Drainage Maintenance including catch basin clean-outs
- (IV) Other costs associated with storm water management (describe)
- (vi) Public Information and Participation.
- (vii) Monitoring Program
- (viii) Miscellaneous Expenditures (describe)

**D. Modifications/ Revisions**

- 1. No later than two years after the Order adoption date, each Permittee shall modify its storm water management programs, protocols, practices, and municipal codes to make them consistent with the requirements herein.

**E. Designation and Responsibilities of the Principal Permittee**

- 1. The Ventura County Watershed Protection District is hereby designated as the Principal Permittee. The Principal Permittee shall:
  - (a) Participate in the County Environmental Crimes Task Force
  - (b) Coordinate and facilitate activities necessary to comply with the requirements of this Order, but the Principal Permittee is not responsible for ensuring compliance of any other individual Permittee
  - (c) Coordinate permit activities among Permittees and act as liaison between the Permittees and the Regional Water Board on permitting issues
  - (d) Provide technical and administrative support for committees that will be organized to implement this Order and its requirements
  - (e) Evaluate, assess, and synthesize the results of the monitoring program and the effectiveness of the implementation of BMPs
  - (f) Convene the Committee Meetings constituted pursuant to subpart 4.F.1., below, upon designation of representatives
  - (g) Implement the Countywide Monitoring Program required under the Order and evaluate, assess and synthesize the results of the monitoring program
  - (h) Provide personnel and fiscal resources for the collection, processing and submittal to the Regional Water Board of monitoring and annual reports, and summaries of other reports required under this Order

**F. Responsibilities of the Permittees**

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- 1. Each Permittee is required to comply with the requirements of this Order applicable to discharges within its boundaries (see Findings- Permit Coverage D.1 and D.2). Permittees are not responsible for the implementation of the provisions applicable to the Principal Permittee or other Permittees. Each Permittee shall:
  - (a) Comply with the requirements of this Order and any modifications thereto
  - (b) Coordinate among its internal departments and agencies, as necessary, to facilitate the implementation of the requirements of this Order applicable to such Permittees in an efficient and cost-effective manner
  - (c) Participate in intra-agency coordination (e.g., Planning Department, Fire Department, Building and Safety, Code Enforcement, Public Health, Parks and Recreation, and others) necessary to successfully implement the provisions of this Order
  - (d) Report, in addition to the Budget Summary, any supplemental dedicated budgets for the same categories
  - (e) Participate in Committee Meetings, as necessary

**PART 5 - SPECIAL PROVISIONS (BASELINE)**

**A. General Requirements**

- 1. This Order and the provisions herein, are intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the MEP and not cause or contribute to exceedances of water quality standards for the permitted areas in the County of Ventura.
- 2. Best Management Practice Substitution
  - (a) The Regional Water Board Executive Officer may approve any site-specific BMP substitution upon written request by a Permittee(s) and after public notice, if the Permittee can document that:
    - (1) The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants.
    - (2) The fiscal burden of the original BMP or program is greater than the proposed alternative and does not achieve a greater improvement in storm water quality.
    - (3) The proposed alternative BMP or program will be implemented within a similar period of time.

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- (4) BMP substitution will be in accordance with the public review provisions of the Order (Part 8C.1 and Part 8C.2).

**B. Watershed Initiative Participation**

- 1. The Principal Permittee shall participate in water quality meetings for watershed management and planning, including but not limited to the following:
  - (a) Southern California Stormwater Monitoring Coalition (SMC)
  - (b) Other Watershed planning groups as appropriate
- 2. The Principal Permittee shall participate in the following regional water quality programs, and projects for watershed management and planning:
  - (a) SMC Regional Monitoring Programs
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six
        - (ii) Integrator sites per watershed
          - (I) Ventura River - One
          - (II) Santa Clara River - One
          - (III) Calleguas Creek - One
        - (iii) Fixed bioassessment sites
          - (I) The Permittees shall perform bioassessment at one fixed urban site in each major watershed. Site selection shall be determined by the results of the first year SMC results, as approved by the Executive Officer.
    - (b) Southern California Bight Projects
      - (1) Regional Monitoring Survey – 2008, and successive years.

**C. Public Information and Participation Program (PIPP)**

- 1. The Principal Permittee shall implement a Public Information and Participation Program (PIPP) that includes, but is not limited to, the requirements listed in this part. The Principal Permittee shall coordinate with Permittees to implement specific PIPP requirements. The objectives of the PIPP are as follows:
  - (a) To increase the knowledge of the target audience about the MS4, the adverse impacts of storm water pollution on receiving waters and potential solutions to mitigate the impacts
  - (b) To change the waste disposal and storm water pollution generation behavior of target audiences by encouraging implementation of appropriate solutions

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- (c) To involve and engage communities in Ventura County to participate in mitigating the impacts of storm water pollution

2. Residential Program

(a) "No Dumping" Message

Each Permittee shall label all storm drain inlets that they own with a legible "no dumping" message. In addition, signs with prohibitive language discouraging illegal dumping shall be posted at designated public access points to creeks, other relevant waterbodies, and channels. Signage and storm drain messages shall be legible and maintained.

(b) Public Reporting

Each Permittee shall identify staff who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/dumping, faded or missing catch basin labels, and general storm water management information. Permittees shall include this information, updated by July 1 of each year, in public information media such as the government pages of the telephone book, and internet web sites. The Principal Permittee shall compile a list of the general public reporting contacts submitted by all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request. Each Permittee is responsible for providing current, updated information to the Principal Permittee.

(c) Outreach and Education

(1) Collaboratively, the Permittees shall implement the following activities:

- (A) Conduct a Storm Water pollution prevention advertising campaign.
- (B) Conduct Storm Water pollution prevention public service announcements.
- (C) Distribute storm water pollution prevention public education materials within 365 days to:
  - (i) Automotive parts stores
  - (ii) Home improvement centers/ lumber yards/ hardware stores
  - (iii) Pet shops/ feed stores
- (D) Public education materials shall include, but are not limited to information on the proper disposal, storage, and use of:
  - (i) Vehicle waste fluids
  - (ii) Household waste materials
  - (iii) Construction waste materials
  - (iv) Pesticides and fertilizers (including integrated pest management practices-IPM)
  - (v) Green waste (including lawn clippings and leaves)
  - (vi) Animal wastes
- (E) Work with existing local watershed groups or organize watershed Citizen Advisory Groups/ Committees to develop effective methods to

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- educate the public about storm water pollution no later than (365 days after Order adoption date).
- (F) Organize events targeted to residents and population subgroups; and
- (G) Maintain the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), which shall include educational material listed in the preceding subpart C.1(c)(1)(C).
- (2) The Principal Permittee shall develop a strategy to educate ethnic communities through culturally effective methods. Details of this strategy should be incorporated into the PIPP, and implemented, no later than (365 days after Order adoption date).
- (3) Each Permittee shall continue the existing outreach program to residents on the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices.
- (4) Each Permittee shall conduct educational activities within its jurisdiction and participate in countywide events.
- (5) The Permittees shall make a minimum of 5 million impressions per year to the general public related to storm water quality, with a minimum of 2.5 million impressions via newspaper, local TV access, local radio and/ or internet access.
- (6) The Principal Permittee, in cooperation with the Permittees, shall provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution. Alternatively, a Permittee may submit a plan to the Regional Water Board Executive Officer for consideration no later than (90 days after adoption of the Order), to provide outreach in lieu of the school curriculum. Pursuant to Water Code section 13383.6, the Permittees, in lieu of providing educational materials/ funding to School Districts in the County, may opt to provide an equivalent amount of funds or fraction thereof to the Environmental Education Account established within the State Treasury.
- (7) Each Permittee shall provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee and contact information changes no later than 30 days after a change occurs.
- (8) The Permittees shall develop and implement a behavioral change assessment strategy no later than (365 days after Order adoption date), in order to determine whether the PIPP is demonstrably effective in changing the behavior of the public. The strategy shall be developed based on current sociological data and studies.
- (d) Pollutant-Specific Outreach  
The Principal Permittee, in cooperation with the Permittees, shall coordinate to develop outreach programs that focus on metals, urban pesticides, bacteria and

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nutrients as the pollutants of concern no later than (365 days after Order adoption date). Metals may be appropriately addressed through the Industrial/ Commercial Facilities Program (e.g. the distribution of educational materials on appropriate BMPs for metal fabrication and recycling facilities that have been identified as a potential source). Region-wide pollutants may be included in the Principal Permittee's mass media outreach program.

3. Businesses Program

(a) Corporate Outreach

(1) The Permittees shall work with other regional or statewide agencies and, associations such as the California Storm Water Quality Association (CASQA), to develop and implement a Corporate Outreach program to educate and inform corporate franchise operators and/or local facility managers about storm water regulations and BMPs. Once developed, the program shall target a minimum of four Retail Gasoline Outlets (RGO) franchisers and cover a minimum of 80% of RGO franchisees in the county, four retail automotive parts franchisers, two home improvement center franchisers and six restaurant franchisers. Corporate outreach for all target facilities shall be conducted not less than twice during the term of this Order, with the first outreach contact to begin no later than two years after Order adoption date. At a minimum, this program shall include:

- (A) Confer with franchise operators and/or local facility managers to explain storm water regulations.
- (B) Distribution and discussion of educational material regarding storm water pollution and BMPs, and provide managers with recommendations to facilitate employee and facility compliance with storm water regulations.

(b) Business Assistance Program

(1) The Permittees shall implement a Business Assistance Program to provide technical information to small businesses to facilitate their efforts to reduce the discharge of pollutants in storm water. The Program shall include:

- (A) On-site, telephone or e-mail consultation regarding the responsibilities of businesses to reduce the discharge of pollutants, procedural requirements, and available guidance documents.
- (B) Distribution of storm water pollution prevention education materials to operators of auto repair shops, car wash facilities (including mobile car detailing), mobile carpet cleaning services, commercial pesticide applicator services and restaurants.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures, unless precluded by local ordinances, at industrial and commercial facilities, with the objective of

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reducing pollutants in storm water. Except where specified otherwise in this Order, pollutant reduction and control measures may be used alone or in combination, and may include Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollutant generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program shall include requirements to:

- (a) Track
  - (b) Inspect
  - (c) Ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water
1. Inventory of Critical Sources
    - (a) Each Permittee shall maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of storm water pollution. Critical Sources to be tracked are summarized below, and specified in Attachment "D":
      - (1) Commercial Facilities
        - (A) Restaurants
        - (B) Automotive service facilities
        - (C) RGOs and automotive dealerships
        - (D) Nurseries and nursery centers
      - (2) U.S. EPA Phase I, II Facilities
      - (3) Other Federally-mandated Facilities [as specified in 40 CFR122.26(d)(2)(iv)(C)]
        - (A) Municipal landfills
        - (B) Hazardous waste treatment, disposal, and recovery facilities
        - (C) Facilities subject to SARA Title III (also known as the Emergency Planning and Community Right-to-Know Act (EPCRA))
    - (b) Each Permittee shall include the following minimum fields of information for each critical source industrial and commercial facility
      - (1) Name of facility and name of owner/ operator.
      - (2) Address of facility
      - (3) Coverage under the IASGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
      - (4) A narrative description including Standard Industrial Classification (SIC) System/ North American Industry Classification System (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
    - (c) The Regional Water Board recommends that Permittees include additional fields of information, such as material usage and/ or industrial output, and discrepancies between SIC System/ NAICS Code designations (as reported by facility operators) and identify the actual type of industrial activity that has the potential to pollute storm water. In addition, the Regional Water Board recommends the

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use of an automated database system, such as a Geographical Information System (GIS) or Internet-based system.

- (d) Each Permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available inter and intra-agency informational databases (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, and similar information).

2. Inspect Critical Sources

(a) Commercial Facilities

Permittee shall inspect all facilities identified in subpart 5.D.1. twice during the 5-year term of the Order, provided that the first inspection occurs no later than (2 years after Order adoption date). A minimum interval of 6 months between the first and the second mandatory compliance inspection is required. In addition, each Permittee shall implement the activities outlined in the following subparts. At each facility, inspectors shall verify that the operator is implementing the source control BMPs. The Permittees may require implementation of additional BMPs where storm water flows from the MS4 discharge to an environmentally sensitive area (ESA, see part 7 for definition) or a CWA § 303(d) listed waterbody (see subpart 3(b) below).

(1) Restaurants-

Level of inspections: Each Permittee shall inspect all restaurants within its jurisdiction to confirm that storm water BMPs are being effectively implemented in compliance with State law, County and municipal ordinances. BMPs in Table 2 (BMPs at Restaurants) shall be implemented, unless the pollutant generating activity does not occur.

Table 2 - BMPs at Restaurants

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Waste/ Hazardous Materials Storage, Handling and Disposal	Implementation of effective storage, handling and disposal procedures for hazardous materials.	By Municipality
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

(2) Automotive Service Facilities-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 3 (BMPs at Automotive Service Facilities) are being implemented, unless the pollutant generating activity does not occur.

Table 3 - BMPs at Automotive Service Facilities

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling.	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning.	Implementation of effective equipment/ vehicle cleaning practices and appropriate wash water management practices	SC-21
Vehicle/ Equipment Repair	Implementation of effective vehicle/ equipment repair practices and source control devices.	SC-22
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance Practices	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

(3) Retail Gasoline Outlets and Automotive Dealerships-

Level of Inspections: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 4 (BMPs at Retail Gasoline Outlets) are being implemented, unless the pollutant generating activity does not occur.

Table 4 - BMPs at Retail Gasoline Outlets

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning	Implementation of effective wash water control devices.	SC-21
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43

- (4) Commercial Nurseries and Nursery Centers (Merchant Wholesalers, Nondurable Goods, and Retail Trade)-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 5 (BMPs at Nurseries) are being implemented, unless the pollutant generating activity does not occur.

Table 5 - BMPs at Nurseries

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Outdoor Loading/ Unloading	Implementation of effective outdoor loading/ unloading practices.	SC-30
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices.	SC-32
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41

(b) Industrial Facilities

Each Permittee shall conduct compliance inspections as specified below.

- (1) **Frequency of Inspection**



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- (A) Each Permittee shall perform an initial inspection at all industrial facilities identified by the U.S. EPA in 40 CFR122.26(c) no later than 2 years after Order adoption date. After the initial inspection, all facilities determined as having exposure of industrial activities to storm water are subject to a second mandatory compliance inspection. A minimum interval of 6 months between the first and the second compliance inspection is required.
  - (B) Following the first mandatory compliance inspection, a Permittee shall perform a second mandatory compliance inspection yearly at a minimum of 20% of the facilities determined not to have exposure of industrial activities to storm water. The purpose of this inspection is to verify the continuity of the no exposure status. Facilities determined as having exposure will be notified that they must obtain coverage under the IASGP. A facility need not be inspected more than twice during the term of the Order unless subject to an enforcement action. A minimum interval of 6 months in between the first and the second compliance inspection is required.
  - (C) Applicable to all facilities: A Permittee need not inspect facilities that have been inspected by the Regional Water Board within the previous 24 month interval. However, if the Regional Water Board performed only one inspection, the Permittee shall conduct the second required mandatory compliance inspection.
- (2) **Level of Inspection:** Each Permittee shall confirm that each operator:
- (A) Has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity, and that a Storm Water Pollution Prevention Plan (SWPPP) is available on-site.
  - (B) Is effectively implementing BMPs in compliance with County and municipal ordinances. Facilities must implement the source control BMPs identified in subpart 5.D.3. and Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*; or *\*keep this?\**
  - (C) Has applied and has a current No Exposure Certification (and WDID number) for facilities subject to this requirement.
3. Ensure Compliance of Critical Sources
- (a) **BMP Implementation:** Facilities must implement the source control BMPs identified in Part 5. D. 2. and, as applicable, Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*. In the event that a Permittee determines that a BMP is infeasible at any site, the Permittee shall require implementation of similar BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not

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protective of water quality standards, Permittees may require additional site-specific controls.

(b) **Environmentally Sensitive Areas (ESAs) and Impaired Waters:** For critical sources that discharge to MS4s that directly discharge to ESAs or to CWA § 303(d) listed impaired waterbodies, the Permittees shall require operators to implement additional pollutant specific controls to reduce pollutants in storm water runoff that are causing or contributing to exceedances of water quality objectives. A Regional Board approved TMDL Implementation Plan for the receiving water will substitute for this requirement.

(c) **Progressive Enforcement:** Each Permittee shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable time period as specified below.

(1) In the event that a Permittee determines, based on an inspection conducted, that an operator has failed to adequately implement all necessary BMPs, that Permittee shall take progressive enforcement actions which, at a minimum, shall include a follow-up inspection within 4 weeks from the date of the initial inspection.

(2) In the event that a Permittee determines that an operator has failed to adequately implement BMPs after a follow-up inspection, that Permittee shall take enforcement action as established through authority in its municipal code and ordinances or through the judicial system.

(3) Each Permittee shall maintain records and make them available on request to the Regional Water Board, including inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

4. Interagency Coordination

(a) **Referral of Violations of the Municipal Storm Water Ordinances and California Water Code § 13260:** A Permittee may refer a violation(s) of § 13260 by Industrial and Commercial facilities to the Regional Water Board provided that under its municipal storm water ordinance the Permittee has made a good faith effort of progressive enforcement. At a minimum, a Permittee's good faith effort must be documented with:

- (1) Two follow-up inspections
- (2) Two warning letters or notices of violation

(b) **Referral of Violations of the Industrial Activities Storm Water General Permit (IASGP), including Requirements to File a Notice of Intent or No Exposure Certification:** For those facilities in violation of the municipal storm water ordinance and subject to the IASGP, Permittees may escalate referral of such violations to the Regional Water Board (electronically on a quarterly basis to the Regional Water Board's Storm Water Site at

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MS4stormwaterrb4@waterboards.ca.gov) after one inspection and one written notice (copied to the Regional Water Board) to the operator regarding the violation. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Name of the facility
- (2) Operator of the facility
- (3) Owner of the facility
- (4) WDID Number (if applicable)
- (5) Industrial activity being conducted at the facility that is subject to the IASGP
- (6) Records of communication with the facility operator regarding the violation, which shall include at least an inspection report
- (7) The written notice of the violation copied to the Regional Water Board
- (c) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:** Each Permittee shall initiate, within one business day,<sup>1</sup> investigation of complaints (other than non-storm water discharges) to the MS4 from facilities within its jurisdiction. The initial investigation shall include, at a minimum, a limited inspection of the facility to confirm the complaint to determine if the facility is effectively complying with the municipal storm water urban runoff ordinances, and, if necessary, to oversee corrective action.
- (d) **Assistance of Regional Water Board Enforcement Actions:** As directed by the Regional Water Board Executive Officer, Permittees shall assist Regional Water Board enforcement actions by: helping in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Water Board inspectors; appearing as witnesses in Regional Water Board enforcement hearings; and providing copies of inspection reports and other progressive enforcement documentation.
- (e) **Participation in a Task Force:** The Permittees shall participate with the Regional Water Board, and other public agencies on an enforcement task force such as the Storm Water Task Force, to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

**E. Planning and Land Development Program**

**I. Purpose**

- 1. The Permittees shall implement a Planning and Land Development Program pursuant to part 5.E. for all New Development and Redevelopment projects subject to this Order to:

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<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to “initiate” the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

- (a) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.
- (b) Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of waterbodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100).
- (c) Minimize the percentage of effective impervious surfaces on land developments to mimic predevelopment water balance through infiltration, evapotranspiration and reuse.
- (d) Minimize pollutant loadings from impervious surfaces such as roof-tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), Low Impact Development Strategies, and Treatment Control BMPs.
- (e) Properly select, design and maintain Treatment Control BMPs and Hydromodification Control BMPs to address pollutants that are likely to be generated, assure long-term function, and to avoid the breeding of vectors.<sup>1</sup>
- (f) Prioritize the selection of BMPs suites to remove storm water pollutants, reduce storm water runoff volume, and beneficially reuse storm water to support an integrated approach to protecting water quality and managing water resources in the following order of preference:
- (1) Infiltration BMPs
  - (2) BMPs that store and reuse storm water runoff.
  - (3) BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses
  - (4) BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly
  - (5) Approved modular/ proprietary treatment control BMPs that are based on LID concepts and that meet pollution removal goals

## II. Applicability

### 1. New Development Projects.

- (a) Development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:
- (1) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area
  - (2) Industrial park 10,000 square feet or more of surface area

<sup>1</sup> Treatment BMPs when designed to drain within 72 hours of the end of rainfall minimize the potential for the breeding of vectors.

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- (3) Commercial strip mall 10,000 square feet or more of impervious surface area
- (4) Retail gasoline outlet 5,000 square feet or more of surface area
- (5) Restaurant (SIC 5812) 5,000 square feet or more of surface area
- (6) Parking lot 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
- (7) Streets, roads, highways, and freeway construction of 10,000 square feet or more of impervious surface area shall incorporate USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets to the maximum extent practicable.
- (8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area]
- (9) Redevelopment projects in subject categories that meet Redevelopment thresholds (identified in subpart E.II.2 below)
- (10) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
  - (A) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
  - (B) Create 2,500 square feet or more of impervious surface area
- (11) Single-family hillside homes. To the extent that a Permittee may lawfully impose conditions, mitigation measures or other requirements on the development or construction of a single-family home in a hillside area as defined in the applicable Permittee's Code and Ordinances, each Permittee shall require that during the construction of a single-family hillside home, the following measures to be implemented:
  - (A) Conserve natural areas
  - (B) Protect slopes and channels
  - (C) Provide storm drain system stenciling and signage
  - (D) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability
  - (E) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability

2. Redevelopment Projects

- (a) Redevelopment projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:
  - (1) Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on development categories identified in subpart 5.E.II.1.
  - (2) Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing

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development was not subject to post development storm water quality control requirements, the entire project must be mitigated.

- (3) Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

- (b) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

- (c) Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

- 3. Effective Date –The New Development and Redevelopment requirements contained in Section E of the Order shall begin 90 calendar days after Regional Board Executive Officer approval of the changes to the Technical Guidance Manual needed to comply with this permit. After that date all discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals must comply with the requirements in Section E. Projects that have been deemed complete prior to the update of the technical design manual are not subject to this section. For Permittee’s projects the effective date shall be the date the governing body or their designee approves initiation of the project design.

**III. New Development/ Redevelopment Performance Criteria**

- 1. Integrated Water Quality/ Flow Reduction/ Resources Management Criterion
  - (a) Permittees shall establish standards for all New Development and Redevelopment projects identified in subpart 5.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through percolation, infiltration, storage, or evapo-transpiration, by reducing the percentage of Effective Impervious Area (EIA). The standards shall be based on the type of development, site conditions (including soils and groundwater), community constraints, and shall consider USEPA’s “Managing Wet Weather with Green Infrastructure, Action Strategy, 2008”.

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- (b) The goal of the New Development and Redevelopment standards shall be to minimize pollutant loads and runoff volume from impervious surfaces by reducing the effective impervious area of new and redevelopment projects. This goal may be implemented through use of site features, a Redevelopment Project Area Master Plan (RPAMP), or payment of an in-lieu fee as described in this section. For projects in undeveloped areas, the project shall comply with the goal of 5% or less of effective impervious area (EIA). For development and redevelopment projects which can be demonstrated that the 5% EIA goal is infeasible, the project shall comply with the surface discharge requirements of 5.E.III.3. Permittees shall submit the criteria for determining infeasibility to the Regional Board within 180 days of permit adoption. The infeasibility criteria shall become effective for determining feasibility upon Executive Officer approval.
- (c) Impervious surfaces may be rendered "ineffective" if the storm water runoff is:
  - (1) Collected and stored for beneficial use such as irrigation, or other reuse purpose; or
  - (2) Infiltrated; or,
  - (3) Evapotranspired; or
  - (4) Biofiltrate.
- (d) All features and structures implemented to render impervious surfaces "ineffective" to attain the EIA requirement as described in provision (b), above, shall be properly sized to infiltrate, store for beneficial reuse, evapotranspire, or biofiltrate at least the volume of water that meets the criteria in subpart 5.E.III.3.
- (e) Any surface discharge of the storm water runoff from projects that cannot attain the 5% EIA goal shall be mitigated in accordance with subpart 5.E.III.3

2. Hydromodification (Flow/ Volume/ Duration) Control Criteria

- (a) Each Permittee shall require all New Development and Redevelopment projects identified in subpart 5.E.II to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and duration. This shall be achieved by maintaining the project's pre-project storm water runoff flow rates and durations.
  - (1) Description
    - (A) Hydromodification control in natural drainage systems shall be achieved by maintaining the Erosion Potential ( $E_p$ ) in streams at a value of 1, unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat (see Attachment "E" - Determination of Erosion Potential)

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- (B) Hydromodification control may include one, or a combination of on-site, regional subregional hydromodification control BMPs, LID strategies, or stream restoration measures, with preference given to LID strategies and hydromodification control BMPs. Any in-stream restoration measure shall not adversely affect the beneficial uses of the natural drainage systems
  - (C) Natural drainage systems, which include unlined or unimproved (not engineered) creeks, streams, rivers and their tributaries, are located in the following watersheds:
    - (i) Ventura River
    - (ii) Santa Clara River
    - (iii) Calleguas Creek
    - (iv) Miscellaneous Ventura Coastal
  - (D) The Southern California Storm Water Monitoring Coalition (SMC) is developing a regional methodology to eliminate or mitigate the adverse impacts of hydromodification as a result of urbanization, including hydromodification assessment and management tools.
    - (i) The SMC has identified the following objectives for the Hydromodification Control Study (HCS):
      - (I) Establishment of a stream classification for Southern California streams
      - (II) Development of a deterministic or predictive relationship between changes in watershed impervious cover and stream-bed/ stream bank enlargement
      - (III) Development of a numeric model to predict stream-bed/ stream bank enlargement and evaluate the effectiveness of mitigation strategies
  - (E) The Permittees shall participate in the SMC HCS to develop:
    - (i) A regional stream classification system
    - (ii) A numerical model to predict the hydrological changes resulting from new development
    - (iii) A numerical model to identify effective mitigation strategies
  - (F) Until the completion of the SMC HCS, Permittees shall implement the Interim Hydromodification Control Criteria, described in subpart 5.E.III.3(a)(3)(A) below, to control the potential adverse impacts of changes in hydrology that may result from new development and redevelopment projects identified in subpart 5.E.II
  - (G) Existing single-family structures are exempt from the Hydromodification control requirements unless such projects disturb one acre or more of land or create, add, or replace 10,000 square feet or more of impervious surface area
- (2) Exemptions to Hydromodification Controls. Permittees may exempt the following New Development and Redevelopment projects from

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implementation of Hydromodification controls where assessments of downstream channel conditions and proposed discharge hydrology indicate that adverse Hydromodification effects to present and future beneficial uses of Natural Drainage Systems are unlikely:

- (A) All projects that disturb less than one acre.
- (B) Projects that are replacement, maintenance or repair of a Permittee's existing flood control facility, storm drain, or transportation network.
- (C) Redevelopment Projects in the Urban Core that do not increase the effective impervious area or decrease the infiltration capacity of pervious areas compared to the pre-project conditions.
- (D) Projects that have any increased discharge go directly or via a storm drain to a sump, lake, area under tidal influence, into a waterway that has a 100-year peak flow (Q100) of 25,000 cfs or more, or other receiving water that is not susceptible to Hydromodification impacts;
- (E) Projects that discharge directly or via a storm drain into concrete or improved (not natural) channels (e.g., rip rap, sackcrete, etc.), which, in turn, discharge into receiving water that is not susceptible to Hydromodification impacts (as in D above).

(3) Interim Hydromodification Control Criteria

(A) The Interim Hydromodification Control Criteria to protect natural drainage systems until Permittees complete Hydromodification Control Plans (HCPs), described in subpart 5.E.III.3(a)(4) below, are as follows:

- (i) **Projects disturbing land area of less than fifty acres** will be subject to LID and/or source or treatment BMPs as addressed in this permit. The combined effects of LID and the treatment BMPs are considered adequate for Hydromodification control for projects that disturb less than 50 acres.
- (ii) **Projects disturbing land areas of fifty acres or greater** Projects in this category shall develop and implement a Hydromodification Analysis Study (HAS) that demonstrates that post development conditions are expected to approximate the pre-project erosive effect of sediment transporting flows in receiving waters. The HAS must lead to the incorporation into the project design features intended to approximate, to the extent feasible, an Erosion Potential value of 1 or any alternative value

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that can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage systems, or

- (iii) Alternatively, project proponents in this category may elect to develop, in partnership with Permittees, an equivalent implementation method based on flow duration control in the form of nomographs relating planned impervious area and local soil type (infiltration rates) to determine hydromodification control BMP volume and land area requirements for the proposed project. The nomographs shall be derived from continuous simulation modeling using Ventura County specific rain gauge records and soil types, and calibrated using data from a local undeveloped watershed with similar conditions; or

(4) Final Criteria

- (A) The Permittees shall develop and implement watershed specific HCPs no later than 180 days after the completion of the SMC HCS.

- (i) The HCP shall identify:
  - (I) Stream classifications
  - (II) Flow rate and duration control methods
  - (III) Sub-watershed mitigation strategies
  - (IV) Stream restoration measures, which will maintain the stream and tributary Erosion Potential at 1 unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage system tributaries

- (B) The HCP shall contain the following elements:

- (i) Hydromodification Management Standards
- (ii) Natural Drainage Areas and Hydromodification Management Control Areas
- (iii) New Development and Redevelopment Projects subject to the HCP
- (iv) Description of authorized Hydromodification Management Control BMPs
- (v) Hydromodification Management Control BMP Design Criteria.
- (vi) For flow duration control methods, the range of flows to control for, and goodness of fit criteria
- (vii) Allowable low critical flow,  $Q_c$ , which initiates sediment transport
- (viii) Description of the approved Hydromodification Model.

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- (ix) Any alternate Hydromodification Management Model and Design
- (x) Stream Restoration Measures Design Criteria
- (xi) Monitoring and Effectiveness Assessment
- (xii) Record Keeping

The HCP shall be deemed in effect upon Executive Officer approval.

3. Water Quality Mitigation Criteria

- (a) Each Permittee shall require all New Development and Redevelopment projects identified in subpart 5.E.II to implement post-construction storm water treatment BMPs and control measures to mitigate storm water pollution as follows:
  - (1) Projects disturbing land areas less than 50 acres
    - (A) Volumetric Treatment Control BMP
      - (i) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998)*; or
      - (ii) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or
      - (iii) The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system;<sup>1</sup> and/ or
    - (B) Flow Based Treatment Control BMP
      - (i) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
      - (ii) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records; or
      - (iii) Eight percent of the 50-year storm design flow rate as determined from the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions)
  - (2) Projects disturbing land area of 50 acres or greater
    - (A) Eighty percent of the average runoff volume using an appropriate public domain continuous flow model (such as Storm Water Management Model (SWMM) or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF), using the local rainfall record and relevant BMP Performance data.

<sup>1</sup> This option is available only for construction projects that disturb land area less than 5 acres.

**IV. Implementation**

1. Maintenance Agreement and Transfer
  - (a) Prior to issuing approval for final occupancy each Permittee shall require that all new development and redevelopment projects subject to post-construction BMP requirements provide an operation and maintenance plan and verification of ongoing maintenance provisions for LID practices, Treatment Control BMPs, and Hydromodification Control BMPs including but not limited to: final map conditions, legal agreements, covenants, conditions or restrictions, CEQA mitigation requirements, conditional use permits, and/ or other legally binding maintenance agreements.
    - (1) Verification at a minimum shall include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either
      - (A) A signed statement from the public entity assuming responsibility for BMP maintenance; or
      - (B) Written conditions in the sales or lease agreement, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or
      - (C) Written text in project covenants, conditions, and restrictions (CCRs) for residential properties assigning BMP maintenance responsibilities to the Home Owners Association (HOA); or
      - (D) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of BMPs.
    - (b) Each Permittee shall require all development projects subject to post-construction BMP requirements to provide a plan for the operation and maintenance of all structural and treatment controls. The Operation and Maintenance plan shall follow the Technical Guidance Manual Appendix D "Maintenance Plan Guidance" (or subsequent guidance manual) for each BMP component. The plan shall be submitted for examination of relevance to keeping the BMPs in proper working order. Where BMPs are transferred to Permittee for ownership and maintenance, the plan shall also include all relevant costs for upkeep of BMPs in the transfer. Operation and Maintenance plans for private BMPs shall be kept on site for periodic review by Permittee inspectors.
  2. Tracking, Inspection, and Enforcement of Post-Construction BMPs
    - (a) Each Permittee shall implement a tracking system, and an inspection and enforcement program for new development and redevelopment post-construction storm water BMPs as set fort in part 5.E no later than (365 days after Order adoption date).

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- (1) Implement a GIS or other electronic system for tracking projects that have been conditioned for post-construction BMPs. The electronic system, at a minimum, should contain the following information:
    - (A) Municipal Project ID
    - (B) State WDID No
    - (C) Project Acreage
    - (D) BMP Type and Description
    - (E) BMP Location (coordinates)
    - (F) Date of Acceptance
    - (G) Date of Maintenance Agreement
    - (H) Maintenance Records
    - (I) Inspection Date and Summary
    - (J) Corrective Action
    - (K) Date Certificate of Occupancy Issued
    - (L) Replacement or Repair Date
  - (b) Inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and Hydromodification control BMPs. The inspection may be combined with other inspections provided it is conducted by trained personnel.
  - (c) Verify proper maintenance and operation of post-construction BMPs previously approved for new development and redevelopment and operated by the Permittees. The post construction BMP maintenance inspection program shall incorporate the following elements:
    - (1) Post-construction BMP Maintenance Inspection checklist.
    - (2) Inspection at least once every 2 years, beginning (365 days after Order adoption date), of post-construction BMPs to assess operation conditions with particular attention to:
    - (3) Criteria and procedures for post construction Treatment Control and Hydromodification Control BMP repair, replacement, or re-vegetation.
  - (d) For post construction BMPs operated and maintained by parties other than the Permittees the Permittees shall require annual reports by the other parties demonstrating proper maintenance and operations.
  - (e) Undertake enforcement as appropriate based on the results of the inspection.
3. Alternative Post Construction Storm Water Mitigation Programs
- (a) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within the Redevelopment Project Areas, in consideration of exceptional site constraints that inhibit site-by-site or project-by-project implementation of post-construction requirements.

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- (b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:
  - (1) Result in equivalent or superior reduction of storm water pollutant loads in comparison to individual projects regulated by this permit.
  - (2) Satisfy, on a Redevelopment Project Area-wide basis, the hydromodification criteria of this section.
  - (3) Reduce the percentage of Effective Impervious Area (EIA) to a target of 5 percent or less of the Redevelopment Project Area, using properly sized storm water treatment/collection features, as described in this Section.
  - (4) Be fiscally sustainable and have secure funding; and
  - (5) Be completed in four years of the adoption date of this permit.
- (c) The RPAMP should prioritize the implementation of LID storm water mitigation measures, as described in this section.
- (d) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) that takes into consideration the balancing of water quality protection with the needs for adequate housing, population growth, public transportation and management, land recycling, and urban revitalization.
- (e) For the RPAMP to be considered, a technical panel of the Local Government Commission or an equivalent state or regional planning agency must have reviewed and approved the proposed RPAMP, prior to its submittal to the Regional Water Board. The Regional Water Board Executive Officer may then consider the RPAMP for approval, or elect to submit it to the Regional Water Board for consideration.
- (f) The RPAMP, on approval, may substitute in part or wholly for post-construction requirements.
- (g) Redevelopment Project Areas include the following:
  - (1) City Center areas
  - (2) Historic District areas
  - (3) Brownfield areas
  - (4) Infill Development areas
  - (5) Urban Transit Villages
  - (6) Any other redevelopment area so designated by the Regional Water Board
- (h) Nothing in these provisions shall be construed as to delay the implementation of post-construction control requirements, as approved in this Order.

4. Mitigation Funding

- (a) The Principal Permittee or a coalition of Permittees shall create a Mitigation Funding Plan to fund regional or subregional solutions to storm water pollution, where any of the following situations occur:
  - (1) A waiver for impracticability is granted
  - (2) Funds become available

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- (3) Off-site mitigation is required because of loss of environmental habitat; or
- (4) An approved watershed management plan, or an integrated water resources management plan, or a regional storm water mitigation plan, or a wetlands recovery plan exists that incorporates an equivalent or improved strategy for storm water pollution mitigation
- (5) When a Permittee determines that a project is infeasible in accordance with 5.(E).III.(1)(c), the project application shall provide sufficient funds to the Permittee for a public project that will retain or mitigate a volume of stormwater equivalent to the onsite retention volume that was not retained on site.

The Permittees shall submit the Mitigation Funding Plan to the Executive Officer for approval 445 days after Permit adoption. The Mitigation Funding Plan shall be deemed in effect upon Executive Officer approval.

5. Developer Technical Guidance and Information

- (a) The Permittees shall update the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures to include, at a minimum, the following:
  - (1) Hydromodification Control criteria described in this Order, including numerical criteria.
  - (2) Expected BMP pollutant removal performance including effluent quality (ASCE/ U.S. EPA International BMP Database, CASQA New Development BMP Handbook, technical reports, local data on BMP performance, and the scientific literature appropriate for southern California geography and climate).
  - (3) Selection of appropriate BMPs for storm water pollutants of concern.
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs.
  - (5) BMP Maintenance and Cost Considerations.
  - (6) Guiding principles to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits.
  - (7) LID principles and specifications, including the objectives and specifications for integration of LID strategies in the areas of:
    - (A) Site Assessment.
    - (B) Site Planning and Layout.
    - (C) Vegetative Protection, Revegetation, and Maintenance.
    - (D) Techniques to Minimize Land Disturbance.
    - (E) Techniques to Implement LID Measures at Various Scales
    - (F) Integrated Water Resources Management Practices.
    - (G) LID Design and Flow Modeling Guidance.
    - (H) Hydrologic Analysis.
    - (I) LID Credits.

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- (b) Permittees shall update the Technical Guidance Manual within 365 days of the adoption of this Order.
- (c) The Permittees shall facilitate implementation of LID by providing key industry, regulatory, and other stakeholders with information regarding LID objectives and specifications contained in the LID Technical Guidance Section through a training program. The LID training program will include the following:
  - (1) LID targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders
  - (2) A combination of awareness on national efforts and local experience gained through LID pilot projects and demonstration projects
  - (3) Materials and data from LID pilot projects and demonstration projects including case studies
  - (4) Guidance on how to integrate LID requirements into the local regulatory program(s) and requirements
  - (5) Availability of the LID Technical Guidance regarding integration of LID measures at various project scales
  - (6) Guidance on the relationship among LID strategies, Source Control BMPs, Treatment Control BMPs, and Hydromodification Control requirements

The Permittees shall submit revisions to the Ventura County Technical Guidance Manual to the Regional Board for Executive Officer approval.

6. Project Coordination

- (a) Each Permittee shall facilitate a process for effective approval of post-construction storm water control measures. The process shall include:
  - (1) Detailed BMP review including BMP sizing calculations, BMP pollutant removal performance, and municipal approval; and
  - (2) An established structure for communication and delineated authority between and among municipal departments that have jurisdiction over project review, plan approval, and project construction through memoranda of understanding (MOU) or an equivalent agreement.

V. State Statute Conformity

1. California Environmental Quality Act (CEQA) Document Update

- (a) Each Permittee shall incorporate into its CEQA process no later than (6 months from Order adoption date), those additional procedures necessary for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents.
  - (1) The procedures shall require consideration of the following:
    - (A) Potential impact of project construction on storm water runoff.
    - (B) Potential impact of project post-construction activity on storm water runoff.

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- (C) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- (D) Potential for discharge of storm water to impair the beneficial uses of the receiving waters.
- (E) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and waterbodies.
- (F) Potential for significant changes in the flow velocity or volume of storm water runoff to cause harm to or impair the beneficial uses of natural drainage systems.
- (G) Potential for significant increases in erosion at the project site or surrounding areas.

2. General Plan Update

- (a) Each Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended:
  - (1) Land Use
  - (2) Housing
  - (3) Conservation
  - (4) Open Space
- (b) Each Permittee shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq.*

**F. Development Construction Program**

- I. Each Permittee shall implement a construction program that prevents illicit construction-related discharges of pollutants into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.
  - 1. BMP Implementation - Construction Sites Less Than One Acre

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- (a) Each Permittee shall require the implementation of an effective combination of erosion and sediment control BMPs from Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes.<sup>1</sup>

Table 6 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Sand Bag Barrier	SE-8	SC-8
Stabilized Construction Site Entrance/Exit	TC-1	TC-1
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>2</sup>	NS-2	NS-2
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

2. BMP Implementation - Construction Sites One Acre but Less than 5 acres.

- (a) Each Permittee shall require the implementation of an effective combination of appropriate erosion and sediment control BMPs from Table 7 in addition to the ones identified in Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 7 - BMPs at Construction sites 1 acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8

<sup>1</sup> The BMPs are taken from the *California BMP Handbook, Construction, January 2003* and the *Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March 2003*, and addenda.

<sup>2</sup> Pondered storm water may be discharged at a concentration of Total Suspended Solids (TSS) of 100mg/L or less.

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<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

3. BMP Implementation - Construction Sites 5 acres and Greater

- (a) Each Permittee shall require the implementation of an effective combination of the following BMPs in Table 8 (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) and Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes. Erosion control BMPs shall be preferred to sediment control BMPs.

Table 8 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
<b>Sediment Controls</b>		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
<b>Tracking Control BMPs</b>		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

4. Enhanced Construction BMP Implementation.

- (a) Each Permittee shall implement, or require implementation of, enhanced practices that preclude impacts to water quality posed by all construction sites on hillsides as defined in this Order and construction sites that directly discharge to a waterbody listed on the CWA § 303 (d) list for siltation or sediment, or that occur within or directly adjacent to an Environmentally Sensitive Area (ESAs).

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Construction sites located on hillsides, adjacent to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to ESAs are termed "High risk sites."

- (b) Each Permittee shall require implementation of enhanced practices for high risk sites which shall include increased BMP inspection and maintenance requirements.
  - (1) Each Permittee shall require that high risk sites shall be inspected by the project proponent's Qualified SWPPP Developer or Qualified SWPPP Practitioner or personnel or consultants who are Certified Professionals in Erosion and Sediment Control (CPESC) at the time of BMP installation, at least weekly during the wet season, and at least once each 24 hour period during a storm event that generates runoff from the site, to identify BMPs that need maintenance to operate effectively, that have failed or could fail to operate as intended.
  - (2) During the wet season, the area of disturbance shall be limited to the area that can be controlled with an effective combination of erosion and sediment control BMPs. Enhanced sediment controls should be used in combination with erosion controls and should target portions of the site that cannot be effectively controlled by standard erosion controls described above. Effective sediment and erosion control BMPs proposed by the proponent shall include the BMPs listed in Table 9 below. The project proponents are responsible to implement the BMPs below unless shown unnecessary. The Permittee shall require that the project proponent retain records of the inspection and a determination and rationale of the BMPs selected to control runoff.

**Table 9** Enhanced Construction BMP Implementation.

<b>CONSTRUCTION SITE BMPs</b>	<b>CASQA Handbook</b>	<b>Caltrans Handbook</b>
<b>Erosion Controls</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
Slope Drains	EC-11	SS-11
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Fiber Rolls	SE-5	SC-5
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Gravel Bag Berm	SE-6	SC-6

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<b>CONSTRUCTION SITE BMPs</b>	<b>CASQA Handbook</b>	<b>Caltrans Handbook</b>
Street Sweeping and/or Vacuum	SE-7	SC-7
Sand Bag Barrier	SE-8	SC-8
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/Exit Tire Wash	TC-3	TC-3
Advanced Treatment Systems <sup>1</sup>		
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>19</sup>	NS-2	NS-2
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/Septic Waste Management	WM-9	WM-9

5. Local Agency Requirements

(a) Each Permittee shall require for all construction sites 1 acre or greater, compliance with all conditions identified in the preceding subparts F.1 - F.4, and the following requirements:

(1) Local Storm Water Pollution Prevention Plan (Local SWPPP),

(A) Each Permittee shall require the preparation and submittal of a Local SWPPP, for the Permittee's review and written approval prior to issuance of a grading or construction permit for construction or demolition projects. The Permittees' approval signature shall be contained within the first pages of the Local SWPPP

(i) The Permittee shall not approve any Local SWPPP unless it contains appropriate site-specific construction site BMPs, specific locations, and maintenance schedules.

(ii) The Local SWPPP must include the rationale used for selecting or rejecting BMPs for various construction phases and weather conditions. The project architect, or engineer of record, or

<sup>1</sup> If appropriate given natural background stormwater runoff and receiving water quality conditions.

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authorized qualified designee, must sign a statement on the Local SWPPP to the effect:

(I) *“As the architect/ engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project’s construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity.”*

(2) Certification Statement

(A) Each Permittee shall require that each landowner or the landowner’s agent sign a statement on the Local SWPPP to the effect:

(i) *“I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/ or adequately implement the Local SWPPP may result in revocation of grading and/ or other permits or other sanctions provided by law.”*

(ii) The Local SWPPP certification shall be signed by the property owner or owner’s representative/designee. If the Local SWPPP or SWPPP is being prepared by the local agency then the appropriate authority of the local agency shall sign the document.

6. Roadway Paving or Repaving Operations (For Private or Public Projects)

(a) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project:

- (1) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
- (2) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat
- (3) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- (4) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt

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- (5) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
- (6) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly
- (7) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly
- (8) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm
- (9) Cover loads with tarp before haul-off to a storage site, and do not overload trucks
- (10) Minimize airborne dust by using water spray during grinding
- (11) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters
- (12) Protect stockpiles with a cover or sediment barriers during a rain

7. Electronic Site Tracking System

- (a) Each Permittee shall use an electronic system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.

8. Inspections

- (a) Each Permittee shall inspect all construction sites for the implementation of storm water quality controls a minimum of once during the wet season. Concurrently, each Permittee shall ensure that:
  - (1) The Local SWPPP is reviewed for compliance with local codes, ordinances, and permits.
  - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Local SWPPP.
- (b) Each Permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
- (c) Each Permittee can refer sites to the Regional Water Board for joint enforcement actions for violation of municipal storm water ordinances and the Construction Activities Storm Water General Permit (CASGP), or Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), after conducting a minimum of 2 site inspections and issuing a minimum of 2 written notices to the operator regarding the violation (copied to the Regional Water Board). In making

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such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Name of the site
  - (2) WDID number
  - (3) Site developer
  - (4) Site owner
  - (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report
  - (6) Written notice of the violation copied to the Regional Water
- (d) Prior to approving and/ or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each Permittee shall inspect the constructed site design, source control and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. The initial/ acceptance BMP verification inspection does not constitute a maintenance and operation inspection, as required in the preceding subpart E.IV.2(c).

## 9. State Conformity Requirements

- (a) Each Permittee shall ensure that no grading permit, encroachment permit, demolition permit, building permit, electrical permit, or construction permit (or any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) is issued for any project requiring coverage under the CASGP or Small LUP General Permit<sup>1</sup> unless:
- (1) Proof of filing a Notice of Intent for coverage under a State NPDES permit is demonstrated).
  - (2) Demonstration or Certification that a SWPPP has been prepared by the project developer.
  - (3) Proof of Change of Information form (COI) and a copy of the modified SWPPP(s) at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

## 10. Interagency Coordination

## (a) Referral of Violations:

A Permittee may refer a violator of the municipal storm water ordinance and CWC § 13260 to the Regional Water Board provided that the Permittee has made a good faith effort at progressive enforcement consistent with the preceding subpart F.8(c). At a minimum, the Permittee's good faith effort shall be documented with:

<sup>1</sup> NPDES Permit No. CAS000005, Waste Discharge Requirements For Discharges of Storm Water Runoff Associated with Small Linear Underground/ Overhead Construction Projects (Small LUP General Permit) for any linear land disturbing activity or activities (cumulatively) that will cause one acre or more of land disturbance but not more than 5 acres.

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- (1) A minimum of 2 follow-up inspection reports (inspections completed within 3 months).
  - (2) A minimum of two warning letters or NOV's.
- (b) **Referral of Non-filers under the CASGP or the Small LUP General Permit:**  
Each Permittee shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) under the CASGP or Small LUP General Permit, to the Regional Water Board, no later than 15 days after making a determination of failure to file. In making such referrals, Permittees shall include, at a minimum, the following documentation:
- (1) Project location address
  - (2) Project description
  - (3) Developer or owners name with complete mailing address
  - (4) Project size
  - (5) Records of communication with the developer or owner regarding filing requirements
- (c) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:**
- (1) Each Permittee shall initiate, within one business day,<sup>1</sup> an initial investigation of complaint(s) (other than non-storm water discharges) on the construction site(s) within its jurisdiction.
    - (A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water/ urban runoff ordinances, and to oversee corrective action.
- (d) **Support of Regional Water Board Enforcement Actions – As directed by the Regional Water Board Executive Officer:**
- (1) Each Permittee shall support Regional Water Board enforcement actions by:
    - (A) Assisting in identification of current owners, operators, and lessees of properties and sites.
    - (B) Providing staff, when available, for joint inspections with Regional Water Board inspectors.
    - (C) Appearing to testify as witnesses in Regional Water Board enforcement hearings.
    - (D) Providing copies of inspection reports and other progressive enforcement documentation.

**G. Public Agency Activities Program**

<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to "initiate" the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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- I. Each Permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:
  - i. Public Construction Activities Management.
  - ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
  - iii. Vehicle and Equipment Wash Areas
  - iv. Landscape and Recreational Facilities Management
  - v. Storm Drain Operation and Management
  - vi. Streets and Roads Maintenance
  - vii. Public Industrial Activities Management
  - viii. Emergency Procedures
  - ix. Employee Training
  - x. Infrastructure Maintenance
  
- 1. Public Construction Activities Management
  - (a) Each Permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. of this Order at Permittee owned or operated public construction projects for project types identified in part 5.E of this Order.
  - (b) Each Permittee shall implement and comply with the appropriate Development Construction Program requirements in part 5.F. of this Order at Permittee owned or operated construction projects as applicable.
  - (c) For public projects including those under a Capital Improvement Project Plan that disturb less than one acre of soil the Permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Tables 5, 9 and 10.
  
- 2. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Long Term Maintenance Programs
  - (a) Each Permittee shall implement the activity specific BMPs<sup>1</sup> listed in Table 10 when such activities occur at Permittee owned/leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Tables. Additionally, for any activity or area described in the footnote below,<sup>2</sup> each Permittee shall also implement the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 10 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards).

<sup>1</sup> These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda. Other BMPs may be substituted upon approval by the Executive Officer.

<sup>2</sup> Scheduling and Planning; Spill Prevention and Control; Sanitary/ Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/ Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill / Discharge Control and Maintenance Facility Housekeeping Practices.

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Table 10 - BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards

From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide	Appendix B
Activity Specific BMPs	Page
<b>General BMPs</b>	B-4
<b>Flexible Pavement</b>	B-9
Asphalt Cement Crack and Joint Grinding/ Sealing	B-9
Asphalt Paving	B-10
Structural Pavement Failure (Digouts) Pavement Grinding and Paving	B-11
Emergency Pothole Repairs	B-13
Sealing Operations	B-14
<b>Rigid Pavement</b>	B-15
Portland Cement Crack and Joint Sealing	B-15
Mudjacking and Drilling	B-16
Concrete Slab and Spall Repair	B-17
<b>Slope/ Drains/ Vegetation</b>	B-19
Shoulder Grading	B-19
Nonlandscaped Chemical Vegetation Control	B-21
Nonlandscaped Mechanical Vegetation Control/ Mowing	B-23
Nonlandscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-24
Fence Repair	B-25
Drainage Ditch and Channel Maintenance	B-26
Drain and Culvert Maintenance	B-28
Curb and Sidewalk Repair	B-30
<b>Litter/ Debris/ Graffiti</b>	B-32
Sweeping Operations	B-32
Litter and Debris Removal	B-33
Emergency Response and Cleanup Practices	B-34
Graffiti Removal	B-36
<b>Landscaping</b>	B-37
Chemical Vegetation Control	B-37
Manual Vegetation Control	B-39
Landscaped Mechanical Vegetation Control/ Mowing	B-40
Landscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-41
Irrigation Line Repairs	B-42
Irrigation (Watering), Potable and Nonpotable	B-43
<b>Environmental</b>	B-44
Storm Drain Stenciling	B-44
Roadside Slope Inspection	B-45
Roadside Stabilization	B-46
Storm Water Treatment Devices	B-48
Traction Sand Trap Devices	B-49
<b>Public Facilities</b>	B-50
Public Facilities	B-50
<b>Bridges</b>	B-52
Welding and Grinding	B-52

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Activity Specific BMPs	Page
Sandblasting, Wet Blast with Sand Injection and Hydroblasting	B-54
Painting	B-56
Bridge Repairs	B-57
<b>Other Structures</b>	B-59
Pump Station Cleaning	B-59
Tube and Tunnel Maintenance and Repair	B-61
Tow Truck Operations	B-63
Toll Booth Lane Scrubbing Operations	B-64
<b>Electrical</b>	B-65
Sawcutting for Loop Installation	B-65
<b>Traffic Guidance</b>	B-67
Thermoplastic Striping and Marking	B-67
Paint Striping and Marking	B-68
Raised/ Recessed Pavement Marker Application and Removal	B-70
Sign Repair and Maintenance	B-71
Median Barrier and Guard Rail Repair	B-73
Emergency Vehicle Energy Attenuation Repair	B-75
<b>Snow and Ice Control</b>	B-76
Snow Removal	B-76
Ice Control	B-77
<b>Storm Maintenance</b>	B-78
Minor Slides and Slipouts Cleanup/ Repair	B-78
<b>Management and Support</b>	B-80
Building and Grounds Maintenance	B-80
Storage of Hazardous Materials (Working Stock)	B-82
Material Storage Control (Hazardous Waste)	B-84
Outdoor Storage of Raw Materials	B-85
Vehicle and Equipment Fueling	B-86
Vehicle and Equipment Cleaning	B-87
Vehicle and Equipment Maintenance and Repair	B-88
Aboveground and Underground Tank Leak and Spill Control	B-90

3. Vehicle and Equipment Wash Areas
  - (a) Each Permittee shall eliminate discharges of wash waters from vehicle and equipment washing no later than (365 days after Order adoption date) by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:
    - (1) Self-contain, and haul off for disposal
    - (2) Equip with a clarifier
    - (3) Equip with an alternative pre-treatment device; or
    - (4) Plumb to the sanitary sewer
  - (b) Each Permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced has all vehicle and equipment wash areas plumbed to the sanitary

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sewer or be self contained and all wastewater/ washwater hauled for legal disposal.

4. Landscape, Park, and Recreational Facilities Management

(a) Integrated Pest Management (IPM)

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each Permittee shall implement an IPM program within 365 days that includes the following:

- (1) Pesticides are used only if monitoring indicates they are needed according to established guidelines.
- (2) Treatments are made with the goal of removing only the target organism.
- (3) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.
- (4) Its use of pesticides, including Organophosphates and Pyrethroids do not threaten water quality.
- (5) Partner with other agencies and organizations to encourage the use of IPM.
- (6) Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the Permittees' overall operations and on municipal property.
- (7) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
  - (A) Quantify pesticide use by its staff and hired contractors.
  - (B) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
  - (C) Demonstrate reductions in pesticide use.

(b) Each Permittee shall implement the following requirements no later than (180 days after Order adoption date):

- (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers.
- (2) Ensure no application of pesticides or fertilizers are applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area.
- (3) Ensure that no banned or unregistered pesticides are stored or applied.
- (4) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.
- (5) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs; and

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- (6) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment.
  - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills.
  - (B) Regularly inspect storage areas.
- (7) Comply with the provisions and the monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2004-0008-DWQ).

5. Storm Drain Operation and Management

(a) Catch Basin Cleaning

- (1) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:
  - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash.
  - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash.
  - Priority C: Catch basins that are designated as generating low volumes of trash.

Within one year of Order adoption, Permittees shall submit a map or list of Catch Basins with their GPS coordinates and their designations. The map or list shall contain the rationale or data to support designations.

- (2) Each Permittee shall inspect catch basins according to the following schedule:
  - Priority A: A minimum of 3 times during the wet season and once during the dry season every year.
  - Priority B: A minimum of once during the wet season and once during the dry season every year.
  - Priority C: A minimum of once per year.

Catch basins shall be cleaned as necessary on the basis of inspections. Permittees shall maintain inspection records for Regional Board review.

- (3) In addition to the preceding schedule, Permittees shall ensure that any catch basin that is determined to be at least 25% full of trash shall be cleaned out.

(b) Trash Management at Public Events

- (1) Each Permittee shall require for any event in the public right of way or wherever it is foreseeable that substantial quantities of trash and litter may be generated, the following measures:
  - (A) Proper management of trash and litter generated; and
  - (B) Arrangement for temporary screens to be placed on catch basins; or
  - (C) Provide clean out of catch basins, trash receptacles, and grounds in the event area within 24 hours subsequent to the event.

(c) Trash Receptacles

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- (1) Each Permittee shall install trash receptacles, or equivalent trash capturing devices in areas subject to high trash generation within its jurisdiction no later than (one year after Order adoption date).
- (2) Each Permittee shall ensure that all trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.
- (d) Catch Basin Labels
- (1) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest each catch basin and inlet before the wet season begins.
- (2) Each Permittee shall record and re-stencil or re-label within 15 days of inspection, catch basins with illegible stencils.
- (e) Additional Trash Management Practices
- (1) Each Permittee shall install trash excluders, or equivalent devices on or in catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water no later than two years after Order adoption date in areas defined as Priority A (Provision 1a(2)) except in sites where the application of such BMP(s) alone will cause flooding. Lack of maintenance that causes flooding is not an acceptable exception to the requirement to install BMPs. Alternatively the Permittee may implement alternative or enhanced BMPs beyond the provisions of this permit (such as but not limited to increased street sweeping, adding trash cans near trash generation sites, prompt enforcement of trash accumulation, increased trash collection on public property, increased litter prevention messages or trash nets within the MS4) that provide substantially equivalent removal of trash. Permittees shall demonstrate that BMPs, which substituted for trash excluders provide equivalent trash removal performance as excluders. When outfall trash capture is provided, revision of the schedule for inspection and cleanout of catch basins in task (a) may be proposed by the Permittee for approval by the Executive Officer.
- (f) Storm Drain Maintenance
- (1) Each Permittee shall implement a program for Storm Drain Maintenance no later than (180 days after Order adoption date) that includes the following:
- (A) Visual monitoring of Permittee-owned open channels and other drainage structures for debris at least annually.
- (B) Remove trash and debris from open channel storm drains a minimum of once per year before the wet season.
- (C) Eliminate the discharge of contaminants during MS4 maintenance and clean outs.
- (D) Quantify the amount of materials removed using techniques appropriate for quantifying solid waste and ensure the materials are properly disposed of.
- (g) Spill Response Plan
- (1) Each Permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response Plan shall clearly identify

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agencies responsible and telephone numbers and e-mail address for contact and shall contain at a minimum the following:

- (A) Investigation of all complaints received within 24 hours of the incident report.
  - (B) Response within 2 hours to spills for containment upon notification, except where such overflows occur on private property, in which case the response should be within 2 hours of gaining legal access to the property.
  - (C) Notification to appropriate public health agencies and the Office of Emergency Services (OES).
- (h) Permittee Owned Treatment Control BMPs
- (1) Each Permittee shall implement an inspection and maintenance program for all Permittee owned treatment control BMPs, including post-construction treatment control BMPs.
  - (2) Each Permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
  - (3) Any residual water produced by a treatment control BMP and not being internal to the BMP performance when being maintained shall be:
    - (A) Hauled away and legally disposed of; or
    - (B) Applied to the land without runoff; or
    - (C) Discharged to the sanitary sewer system (with permits or authorization); or
    - (D) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 11 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

Table 11 - Discharge Limitations for Dewatering Treatment BMPs<sup>1</sup>

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

6. Streets and Roads Maintenance

(a) Maintenance

- (1) Each Permittee shall perform street sweeping of curbed streets in commercial areas and areas subject to high trash generation to control trash and debris at least two times per month.

(b) Road Reconstruction

<sup>1</sup> Technology based effluent limits.

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- (1) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.
  - (A) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall<sup>1</sup> unless required by emergency conditions.
  - (B) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
  - (C) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
  - (D) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
  - (E) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
  - (F) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
  - (G) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
  - (H) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
  - (I) Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
  - (J) Minimize airborne dust by using water spray during grinding.
  - (K) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters.
  - (L) Protect stockpiles with a cover or sediment barriers during a rain.

7. Emergency Procedures

- (a) Each Permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.
  - (1) Where the self-waiver has been invoked, the Permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
  - (2) Minor repairs of essential public service systems and infrastructure in emergency situations (can be completed in less than one day) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

<sup>1</sup> A probability of precipitation (POP) of 50% is required.

8. **Municipal Employee and Municipal Contractor Training**
- (a) Each Permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors in targeted positions (whose interactions, jobs, and activities affect storm water quality) on the requirements of the overall storm water management program to:
- (1) Promote a clear understanding of the potential for activities to pollute storm water.
  - (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
- (b) Each Permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training programs shall address:
- (1) The potential for pesticide-related surface water toxicity.
  - (2) Proper use, handling, and disposal of pesticides.
  - (3) Least toxic methods of pest prevention and control, including IPM.
  - (4) Reduction of pesticide use.
- (c) Each Permittee shall, no later than (12 months after Order adoption date) and annually thereafter before June 30, train all of their employees and contractors who are responsible for illicit connections and illicit/ illegal discharges. Training programs shall address:
- (1) Identification
  - (2) Investigation
  - (3) Termination
  - (4) Cleanup
  - (5) Reporting of Incidents
  - (6) Documentation of Incidents

#### **H. Illicit Connections and Illicit Discharges Elimination Program**

- I. Each Permittee shall implement an Illicit Connections and Illicit Discharges (IC/ IDs) program to eliminate IC/IDs to the storm drain system, and shall document, track, and report all such cases in accordance with the elements and performance measures specified in the following subsections.
1. General
    - (a) Implementation - Each Permittee shall implement an IC/ ID Program. The IC/ ID procedures shall be documented and made available for public review.
    - (b) Tracking - All Permittees shall, no later than (3 years after Order adoption date), map at a scale and in a format specified by the Principal Permittee all known connections to their storm drain system. All Permittees shall map at a scale and in a format specified by the Principal Permittee incidents of illicit connections and discharges since January 2009 on their baseline maps, and shall transmit this

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information to the Principal Permittee no later than (3 years after Order adoption date). Permittees shall use this information to identify priority areas for further investigation and elimination of IC/ ID.

## 2. Public Reporting

- (a) Permittees shall establish and maintain a phone hotline and internet site to receive all reports of IC/ ID complaints.
- (b) Permittees shall document the location of the reported IC/ ID and the actions undertaken in response to all IC/ ID complaints.

## 3. Illicit Connections

(a) Screening for Illicit Connections

- (1) Each Permittee shall submit to the Principal Permittee:

- (A) A map at a scale and in a format specified by the Principal Permittee showing the location and length of underground pipes 18 inches and greater in diameter, and channels within their permitted area and operated by the Permittee in accordance with the following schedule:

- (i) All channeled portions of the storm drain system no later than (365 days after Order adoption date).
- (ii) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, (no later than 3 years after Order adoption date). This provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual.
- (iii) All portions of the storm drain system consisting of storm drain pipes 18 inches in diameter or greater, (no later than 5 years after Order adoption date).

- (B) The status of suspected, confirmed, and terminated illicit connections.

- (2) Permittees shall conduct field screening of their storm drain systems in accordance with screening procedures described in the *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments (2004)*<sup>1</sup>. Permittees shall conduct field screening of their storm drain system that has not been previously screened and reported to the Regional Board, for illicit connections in accordance with the following schedule:

- (A) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, no later than (3 years after Order adoption date).
- (B) High priority areas identified during the mapping of illicit connections and discharges, no later than (3 years after Order adoption date).

<sup>1</sup> *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*. The Center for Watershed Protection, Pitt R., October 2004. Chapter 13, 13.1, 13.2, 13.3, 13.4

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(C) All portions of storm drain systems 50 years or older in age, no later than (3 years after Order adoption date).

(3) Each Permittee shall maintain a list containing all connections under investigation for possible illicit connection and their status.

(b) Response to Illicit Connections

(1) Investigation -

Each Permittee, upon discovery or upon receiving a report of a suspected illicit connection, shall complete an investigation within 21 days, to determine the following:

(A) Source of the connection.

(B) Nature and volume of discharge through the connection.

(C) Responsible party for the connection.

(2) Termination -

Each Permittee, upon confirmation of an illicit storm drain connection, shall ensure the following:

(A) Termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection.

(3) Documentation -

Each Permittee shall keep records of all illicit connection investigations and the formal enforcement taken to eliminate all illicit connections.

4. Illicit Discharges

(a) Investigation -

Each Permittee shall investigate an illicit/ illegal discharge during or immediately following containment and cleanup activities, and shall take appropriate enforcement action to eliminate the illegal discharge.

(b) Abatement and Cleanup -

Each Permittee shall respond, within 1 business day of discovery or a report of a suspected illicit/ illegal discharge, with actions to abate, contain, and/or clean up all illegal discharges, including hazardous waste.

(c) Documentation -

Each Permittee shall maintain records of all illicit/ illegal discharge discoveries, reports of suspected illicit/ illegal discharges, their response to the illicit/ illegal discharges and suspected illicit/ illegal discharges, and the formal enforcement taken to eliminate all illicit/ illegal discharges.

I. REPORTING PROGRAM

1. The Principal Permittee in consultation with the Permittees and Regional Water Board staff shall convene an adhoc working group to develop an Electronic Reporting Program, the basis of which shall be the requirements in this Order. The Committee

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shall no later than (12 months after Order adoption date) submit the electronic reporting form in each subsequent year.

- 2. Each Permittee shall submit information required in the Reporting Program in a method as appropriate to the format approved by the Regional Water Board Executive Officer.
- 3. The Principal Permittee shall submit by December 15<sup>th</sup> of each year, an Annual Report to the Regional Water Board Executive Officer in the form one hard copy and three compact disk (CD) copies (or an electronic equivalent).
- 4. The Annual Report shall document the status of the Municipal Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1- Monitoring Report.
  - (b) The requirements described under Part 2- Program Report.
- 5. Plans shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
- 6. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
- 7. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).

**PART 6 - TOTAL MAXIMUM DAILY LOAD PROVISIONS**

- I. Part 6 of this Order incorporates provisions to assure that Ventura County MS4 Permittees comply with WLAs and other requirements of TMDLs covering impaired waters impacted by the Permittees' discharges.
- II. Each Permittee shall attain the storm water WLAs incorporated into this Order by implementing BMPs in accordance with the TMDL Technical Reports, Implementation Plans, or as identified as a result of TMDL special studies specified in the Basin Plan Amendment.
- III. The Permittees shall comply with the following Wasteload Allocations, consistent with the assumptions and requirements of the Wasteload Allocations documented in the Implementation Plans, including compliance schedules, associated with the State adoption

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and approval of the TMDL at compliance monitoring points established in each TMDL (40CFR122.44(d)(1)(vii)(B).

- IV. TMDLs in effect and covered in this Order are the following:
  - 1. TMDL for Nutrients for Malibu Creek Watershed (Effective date: March 21, 2003)
  - 2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek (Effective date: July 16, 2003)
  - 3. TMDL for Nitrogen Compounds for the Santa Clara River (Effective date: March 23, 2004).
  - 4. TMDL for Chloride in Santa Clara River, Reach 3 (Effective date: June 18, 2003)
  - 5. TMDL for Chloride in Upper Santa Clara River (Effective date: May 4, 2005)
  - 6. TMDL for Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon - (Effective date: March 24, 2006).
  - 7. TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 24, 2006).
  - 8. TMDL for Bacteria in Malibu Creek and Lagoon (Effective date: January 24, 2006).
  - 9. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 26, 2007)
  - 10. TMDL for Trash in Revolon Slough and Beardsley Wash (Effective date: March 6, 2008).
  - 11. TMDL for Boron, Chloride, Sulfate, and TDS in Calleguas Creek Watershed (Effective date: December 2, 2008)
  - 12. TMDL for Trash in the Ventura River Estuary (Effective date: March 6, 2008).
  - 13. TMDL for Bacteria in Harbor Beaches of Ventura County (Effective date: September 23, 2008).
  
- IV. TMDL Interim WLAs incorporated into this Order due to compliance dates which exceed the term of this Order are the following:
  - 1. Final Wet Weather Bacteria WLAs for Malibu Creek and Lagoon – (Compliance date: January 24, 2016).
  - 2. Final Chloride WLAs for Upper Santa Clara River – (Compliance date: May 4, 2016)
  - 3. Final Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon – (Compliance date: March 24, 2026).
  - 4. Final Metals and Selenium WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 26, 2022)
  - 5. Final Boron, Chloride, Sulfate, and TDS WLAs for Calleguas Creek watershed (Compliance date: December 2, 2023)
  
- V. TMDL WLAs and Other TMDL Provisions Incorporated into this Order are as follows:

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1. TMDL for Nutrients for Malibu Creek Watershed

(a) Summer Load Allocations

	Nitrogen (lbs/day)	Phosphorus (lbs/day)
- Runoff from developed areas	26	2.6
- Golf Course Fertilization	37	6.6
- Dry Weather Urban Runoff	52	4.6
- Other	56	4.1

(b) Winter concentration-based Load Allocations

	Nitrogen (Nitrate-N + Nitrite-N) (mg/L)
- Runoff from Developed Areas	8
- Golf Course Fertilization	8
- Dry Weather Urban Runoff	8
- Other	8

(c) Compliance Monitoring:

This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(d) Actions and Special Studies required for Malibu Creek MS4 permittees

(1) Extent of algal impairment. EPA recommends studies to investigate the current extent of impairment due to excessive algal growth in the creek by surveying algal biomass and species composition at multiple sites within the creek.

(2) Limiting factor analysis. EPA recommends further study to assess whether total nitrogen or total phosphorus or other parameters such as flow and light limit algal growth in the Malibu Creek watershed.

(3) Fate of nutrients in Malibu Lagoon. EPA recommends this special study to determine if the expected upstream reductions in nutrient loadings would result in desired improvements in water quality in the lagoon.

2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek Watershed

The stormwater permitted discharges were considered minor sources of nitrogen to the Calleguas Creek. Therefore, WLAs are not assigned to storm water permitted discharges. The monitoring program of this TMDL includes data collection to quantify loadings and associated WLAs from these sources.

3. TMDL for Nitrogen Compounds in the Santa Clara River

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(a) Waste Load Allocations:

(1) The Ventura County MS4 permittees discharging to the Santa Clara River (the cities of Fillmore and Santa Paula) ("Santa Clara MS4 permittees") shall implement BMPs to achieve the following MS4 wasteload allocations applicable to River Reach 3:

Ammonia nitrogen 30-day average	2.0 mg/L
Ammonia nitrogen 1-hour average	4.2 mg/L
Nitrate + Nitrite nitrogen 30-day average	8.1 mg/L

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

- (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

4. TMDL for Chloride in Santa Clara River, Reach 3

(a) Waste Load Allocation:

MS4 permittees discharging to Santa Clara River, Reach 3 shall implement BMPs to achieve the following MS4 WLAs:

Chloride (mg/L)	80
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(b) Compliance Monitoring: This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

- (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

5. TMDL for Chloride in Upper Santa Clara River

(a) Waste Load Allocation:

MS4 permittees discharging to Upper Santa Clara River shall implement BMPs to achieve the following WLAs

Chloride (mg/L)	100
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(b) Compliance monitoring:



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- (1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports and Implementation Plans. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Santa Clara MS4 permittees:
  - (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

6. TMDL for Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries and Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the following MS4 WLAs:

Toxicity WLA	1.0 TUc
Chlorpyrifos WLA	0.014 ug/L
Diazinon WLA	0.10 ug/L

- (2) Pursuant to the TMDL, the final storm water WLAs for Toxicity, Chlorpyrifos and Diazinon, listed above, are receiving water concentrations measured in-stream at the base of each subwatershed within the Calleguas Creek watershed.

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (3) If as a result of compliance monitoring and subsequent investigations it is determined that a Calleguas MS4 permittee is responsible for exceedance of the in-stream Toxicity WLA, that permittee shall initiate the TRE/TIE process as outlined in U.S. EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the

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National Pollutant Discharge Elimination System Program” (2000) or the approved Toxicity TMDL monitoring plan, and take appropriate action to eliminate the identified source of the toxicity.

(c) Actions and Special Studies required of Calleguas MS4 permittees:

- (1) Special Study #1. Together with Calleguas POTW permittees, investigate the pesticides that will replace diazinon and chlorpyrifos in the urban environment, their potential impact on receiving waters and potential control measures. Special Study #1 was completed by March 24, 2008.
- (2) Special Study #2. Together with Calleguas Agricultural Dischargers, consider results of monitoring of sediment concentrations by source/land use type through the special study required in the Calleguas OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.
- (3) Pesticide Collection Program. Together with Calleguas POTW permittees, develop and implement a collection program for diazinon and chlorpyrifos and an educational program. Collection and education could occur through existing programs such as household hazardous waste collection events. The Pesticide Collection Program is to be implemented by March 24, 2009.
- (4) Special Study #3. Together with Calleguas Agricultural Dischargers, consider the findings of transport rates developed through the OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.

7. TMDL for Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, and Simi Valley) (“Calleguas MS4 permittees”) shall implement BMPs to achieve the interim WLAs listed in Table 12.

Table 12. Interim Sediment Concentration WLAs (ng/g)

Constituent	Subwatershed					
	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Chlordane	25	17	48	3.3	3.3	3.4
4,4-DDD	69	66	400	290	140	5.3
4,4-DDE	300	470	1600	950	170	20
4,4-DDT	39	110	690	670	25	2
Dieldrin	19	3	5.7	1.1	1.1	3
PCBs	180	3800	7600	25700	25700	3800
Toxaphene	22900	260	790	230	230	260

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- (2) Pursuant to the TMDL, the interim storm water WLAs for OC Pesticides, PCBs and Siltation, listed above, are annual average, sediment-based concentrations measured in surface waters at the base of each subwatershed within the Calleguas Creek watershed.
- (b) Compliance Monitoring:
- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Calleguas MS4 permittees:
- (1) Pesticide Collection Program. Together with Calleguas POTW permittees, implement a collection program and source control measures pursuant to a work plan approved by the Executive Officer. The Pesticide Collection Program is to be implemented by March 24, 2011.
- (2) Special Study #1. Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, submit a work plan to quantify sedimentation in the Calleguas Creek Watershed, evaluate management methods to control siltation and contaminated sediment transport to Calleguas Creek, identify appropriate BMPs to reduce sediment loadings and evaluate the effect of sediment on habitat preservation in Mugu Lagoon for approval by the Executive Officer. This special study is also to evaluate the concentration of OC pesticides and PCBs in sediments from various sources/land use types. Special Study #1 is to be completed by March 24, 2014.
- (3) Special Study #2. Together with Calleguas Agricultural Dischargers, identify areas of high OC concentrations and evaluate the effects of watershed protection and land use practices on water quality. Such practices include but are not limited to management of sediment reduction practices and structures, streambank stabilization, and other projects related to stormwater conveyance and flood control improvements in the Calleguas Creek watershed. Special Study #2 is to be completed based on the schedule provided in the workplan, submitted in March, 2007
- (4) Special Study #3 – Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, evaluate natural attenuation rates and evaluate methods to accelerate organochlorine pesticide and polychlorinated biphenyl attenuation and examine the

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attainability of wasteload and load allocations in the Calleguas Creek Watershed. Special Study #3 is to be completed by March 24, 2016.

8. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the interim WLAs listed in Table 13 and Table 14.

Table 13. Interim WLAs for Copper, Nickel and Selenium (ug/L)

Constituent	Calleguas and Conejo Creek (a)			Revolon Slough		
	Dry Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)	Dry Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)
Copper	23	19	204	23	19	204
Nickel	15	13	(a)	15	13	(a)
Selenium	(b)	(b)	(b)	14(c)	13(c)	(a)

- (A) The current loads do not exceed the TMDL under wet conditions, interim limits are not required
  - (B) Selenium allocations have not been developed for this reach as it is not on the 303(d) list
  - (C) Attainment of interim limits will be evaluated in consideration of background loading data, if available
- (2) Pursuant to the TMDL, the interim storm water WLAs for copper, nickel, and selenium are receiving water concentrations measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.

Table 14. Mass-based WLAs for copper, nickel and selenium

Annual Cumulative Flow (million gallons per year)	Calleguas Creek (lbs/yr)	Revolon Slough (lbs/yr)
0-15,000	3.3	1.7
15,000-25,000	10.5	4
Above 25,000	64.6	10.2

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- (3) Pursuant to the TMDL, the interim storm water WLAs for mercury are suspended sediment loads measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.
- (4) Determination of the applicable interim WLA will be determined by calculating the total annual flow (October 1-September 30) in the Calleguas Creek watershed as measured by the flow gage at CSUCI.
- (b) Compliance Monitoring:
- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality and total suspended solids (TSS) at the base of Calleguas Creek, Revolon Slough and in Mugu Lagoon, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Calleguas MS4 permittees:
- (1) Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium. Complete by March 26, 2009.
- (2) Implement the UWQMP within one year of approval by Executive Officer.
- (3) In cooperation with agricultural dischargers, evaluate the results of the OCs TMDL special study on sediment transport rates for applicability to the metals and selenium TMDL. Complete within 6 months of completion of the OCs TMDL special study #1.
- (4) In cooperation with agricultural dischargers, include monitoring for copper, mercury, nickel and selenium in the OC pesticides TMDL special study – Monitoring of Sediment by Source and Land Use Type. The special study is to be completed by March 26, 2014.
- (5) Evaluate the results of the OC Pesticides TMDL Special Study – Effects of BMPs on Sediment and Siltation, to determine the impacts on metals and selenium. Complete within 6 months of completion of the OC Pesticides special study #1.
- (6) Evaluate the effectiveness of BMPs implemented under the UWQMP in controlling metals and selenium discharges. This is to be completed by March 26, 2013.
- (7) Re-evaluate agricultural and urban waste load allocations for copper, mercury, nickel and selenium based on the evaluation of BMP effectiveness. By March 26, 2012, urban dischargers will have a required 25% reduction in the difference between the loadings at the time of the TMDL preparation and the final WLAs effective in 2022.

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- (8) In cooperation with POTW permittees and agricultural dischargers, conduct a study to identify selenium contaminated groundwater sources. Special Study is to be completed within one year of the approval of the workplan.
- (9) In cooperation with agricultural dischargers, conduct a study to investigate metals "hot spots" and natural soils concentrations. This special study is to be completed within 2 years of the approval of the workplan.

9. TMDL for Bacteria in Malibu Creek and Lagoon

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Malibu Creek or its tributaries (Ventura County Watershed Protection District, County of Ventura and the cities of Thousand Oaks and Simi Valley) ("Malibu MS4 permittees") shall achieve the WLAs identified in Resolution 2004-19. . These WLAs are expressed as the number of daily or weekly sample days that may exceed the single sample limits or 30-day geometric mean bacteria targets in Resolution 2004-19.

Table 15 - Bacteria Targets

Parameters	Unit	Fresh Water Targets	
		Geometric Mean	Single Sample
E. coli	mg	126/ 100	235/ 100
Fecal coliform	mg	200/ 100	400/ 100

- (2) The wasteload allocations are to be achieved no later than January 26, 2012.

(b) Compliance Monitoring:

- (1) Achievement of the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Monica Bacteria TMDL Compliance Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Malibu MS4 permittees:

- (1) If TMDL compliance monitoring indicates that the Malibu MS4 permittees are causing or contributing to an exceedance of the WLAs in the receiving waters, the permittees shall conduct a source identification study and implement additional controls sufficient to achieve the WLAs in the receiving waters.

10. TMDL for Trash in Revolon Slough and Beardsley Wash

(a) Wasteload Allocations

- (1) MS4 permittees discharging to Revolon Slough and Beardsley Wash (Ventura County Watershed Protection District, County of Ventura and the

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cities of Camarillo and Oxnard) shall implement BMPs to achieve the WLAs of zero trash.

(b) Compliance Monitoring

- (1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Revolon Slough and Beardsley Wash and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees

- (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.

11. TMDL for Trash in the Ventura River Estuary

(a) Wasteload Allocations

- (1) MS4 permittees discharging to the Ventura River Estuary (Ventura County Watershed Protection District, County of Ventura and the City of Ventura) shall implement BMPs to achieve the WLAs of zero trash.

(b) Compliance Monitoring

- (1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in the Ventura River Estuary and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees

- (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.

## 12. TMDL for Boron, Chloride, Sulfate and TDS in Calleguas Creek Watershed

## (a) Waste Load Allocation

Table 16. Interim Dry Weather WLAs for Permitted Stormwater Dischargers

Constituent	Interim Limit 30-day average (mg/L)
Boron Total	1.3
Chloride Total	230
Sulfate Total	1289
TDS Total	1720

Table 17. Final Dry Weather WLAs for Permitted Stormwater Dischargers

Subwatershed	Critical Condition Flow Rate (mgd)	Chloride Allocation (lb/day)	TDS Allocation (lb/day)	Sulfate Allocation (lb/day)	Boron Allocation (lb/day)
Simi	1.39	1,738	9,849	2,897	12
Las Posas	0.13	157	887	261	N/A
Conejo	1.26	1,576	8,931	2,627	N/A
Camarillo	0.06	72	406	119	N/A
Pleasant Valley (Calleguas)	0.12	150	850	250	N/A
Pleasant Valley (Revolon)	0.25	314	1,778	523	2

## (b) Compliance Monitoring

- (1) A monitoring plan will be submitted to the RWQCB for Executive Officer approval on June 2, 2009. Monitoring will begin one year after Executive Officer approval of the monitoring plan to allow time for the installation of automated monitoring equipment.
- (2) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (3) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.



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(c) Actions and Special Studies required of Calleguas Creek Watershed MS4 permittees

Responsible jurisdictions including MS4 permittees shall submit compliance monitoring plan to the Los Angeles Regional Board for Executive Officer approval on June 2, 2009. Monitoring shall begin monitoring as outlined in the approved monitoring plan six months after approval of the work plan.

Responsible jurisdictions including MS4 permittees shall demonstrate that implementation actions have reduced the boron, sulfate, TDS, and chloride imbalance by 20%, 40%, 70% by December 2 of 2011, 2015, and 2018 respectively. Stormwater dischargers shall achieve WLAs, which shall be expressed as NPDES mass-based limits specified in accordance with federal regulations and state policy on water quality control by December 2, 2023.

13. TMDL for Bacteria in Harbor Beaches of Ventura County

(a) Waste Load Allocations

(1) MS4 permittees discharging to the Channel Islands Harbor Beaches (the County of Ventura, the Ventura County Watershed Protection District (VCWPD) and associated Municipal Separate Storm Sewer System (MS4) permittees in the Channel Islands Harbor subwatershed, and the City of Oxnard shall implement BMPs to achieve the interim WLAs listed in Table 15. All WLAs for summer dry-weather single sample bacteria densities at the Harbor Beaches of Ventura County are zero (0) days of allowable exceedances; winter dry weather and wet weather final WLAs are listed in Table 17 below.

The Basin Plan objectives that serve as the numeric targets for this TMDL are (single sample limits):

- a. Total coliform density shall not exceed 10,000/100 ml.
- b. Fecal coliform density shall not exceed 400/100 ml.
- c. Enterococcus density shall not exceed 104/100 ml.
- d. Total coliform density shall not exceed 1,000/100ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Table 18. Interim WLAs for Single Sample Exceedance Days

Location	Summer Dry Weather		Winter Dry Weather		Wet Weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Kiddie Beach	54	8	23	4	32	5
Hobie Beach	40	6	25	4	38	6

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Table 19 Final Allowable Exceedance Days by Location

Location	Summer Dry-weather		Winter Dry-weather		Wet-weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Hobie Beach	0	0	3	1	17	3
Kiddie Beach	0	0	3	1	17	3

(2) Pursuant to the TMDL, the interim storm water WLAs for bacteria are from samples taken at existing monitoring sites in ankle to knee- high depths.

(b) Compliance Monitoring

(1) Compliance and monitoring for Harbor Beaches of Ventura County is based on existing monitoring protocols and locations. Monitoring shall continue at sampling locations (VCEHD 36000 and VCEHD37000) and at the current weekly monitoring frequency, consistent with AB411 compliance monitoring. Monitoring shall be conducted on a year-round basis at the current monitoring locations including the summer months (i.e., April to October) and winter months (i.e., November to March). Bacteria sampling shall be conducted in ankle- to knee-high water, consistent with AB411. However, if additional monitoring stations are added or if changes are made to the sampling frequencies or existing monitoring locations, then submittal of a monitoring plan is required for Executive Officer approval.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Harbor Beaches of Ventura County MS4 permittees

(1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through structural and non-structural BMPs or implementation of other measures to attain the required source control.

(2) Special studies are not required for implementation of the TMDL though conducting special studies is within the discretion of the responsible parties.

**PART 7 - DEFINITIONS**

The following are definitions for terms in this Order:

**Adverse Impact** - means a detrimental effect upon water quality or beneficial uses caused by a discharge or loading of a pollutant or pollutants.

**Agriculture** - means the science, art, and business of cultivating the soil, producing crops, and raising livestock.

**Antidegradation Policies** - means policies which protect surface and ground waters from degradation, and federal policies, which protect high quality surface waters. In particular, this policy protects waterbodies where existing quality is higher than that necessary for the protection of beneficial uses including the protection of fish and wildlife propagation and recreation on and in the water (*Statement of Policy with Respect to Maintaining High Quality Water in California*, State Board Resolution No. 68-16; 40 CRF 131.12).

**Applicable Standards and Limitations** - means all State, interstate, and Federal standards and limitations to which a "discharge" or a related activity is subject under the CWA, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, and pretreatment standards under § 301, § 302, § 303, § 304, § 306, § 307, § 308, § 403, and § 404 of CWA.

**Areas of Special Biological Significance (ASBS)** - means all those areas of this state listed as ASBS, listed specifically within the California Ocean Plan or so designated by the State Board which, among other areas, includes the area from Mugu Lagoon to Latigo Point: Oceanwater within a line originating from Laguna Point at 34° 5' 40" north, 119° 6'30" west, thence southeasterly following the mean high tideline to a point at Latigo Point defined by the intersection of the mean high tide line and a line extending due south of Benchmark 24; thence due south to a distance of 1000 feet offshore or to the 100 foot isobath, whichever distance is greater; thence northwesterly following the 100 foot isobath or maintaining a 1,000-foot distance from shore, whichever maintains the greater distance from shore, to a point lying due south of Laguna Point, thence due north to Laguna Point.

**Authorized Discharge** - means any discharge that is authorized pursuant to an NPDES permit, waste discharge requirement, conditional waiver from waste discharge requirements, or meets the conditions set forth in this Order.

**Automotive Repair Shop** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

**Automotive Service Facilities** - means a facility that is categorized in any one of the following

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Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to storm water.

SIC Code	Corresponding NAICS Code
5013	425120, 441310, 425110, & 423120
5014	425120, 425110, 423130, & 441320
5511	441110
5541	447110, & 447190
7532	811121
7533	811112
7534	326212, & 811198
7536	811122
7537	811113
7538	811111
7539	811198, & 811118

**Bacteria Total Maximum Daily Load (TMDL) Dry Weather** - defined in the Bacteria TMDLs as those days with less than 0.1 inch of rainfall and those days occurring more than 3 days after a rain.

**Bacteria Total Maximum Daily Load (TMDL) Wet Weather** - defined in the Bacteria TMDLs as a day with 0.1 inch or more of rain and 3 days following the rain event.

**Basin Plan** - means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments.

**Beneficial Uses** - means the existing or potential uses of receiving waters in the permit area as designated by the Regional Water Board in the Basin Plan.

**Best Management Practices (BMPs)** - means methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

**California Environmental Quality Act (CEQA)** - means a California statute that requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible (Reference: California Public Resources Code § 21000 et seq.)

**Channel** - means an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two waterbodies.

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**Chronic Toxicity** - means a measurement of a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.

**Commercial Area(s)** - means any geographic area of the Permittees' jurisdiction that is not heavy industrial or residential. A commercial area includes, but is not limited to areas surrounding: commercial activity, hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Commercial Development** - means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Construction** - Construction activity includes any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain original line and grade, hydraulic capacity, or original purpose of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage is required if more than one acre is disturbed or the activities are part of a larger plan.

**Construction Activities Storm Water General Permit (CASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from construction activities under certain conditions.

**Control** - means to minimize, reduce, eliminate, or prohibit by technological, legal, contractual or other means, the discharge of pollutants from an activity or activities.

**Critical Sources** - means commercial facilities and businesses that have a potential to contribute pollutants to stormwater runoff if effective BMPs are not implemented. Attachment "D" specifies the commercial facilities and businesses that have been identified as Critical Sources.

**Dechlorinated/ Debrominated Swimming Pool Discharge** - means any swimming pool discharge with a residual chlorine or bromine level of 0.1mg/L or less; and does not contain any detergents, wastes, algacides, or cyanuric acid in excess of 50 ppm, or any other chemicals

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including salts from pools commonly referred to as "salt water pools". The term does not include swimming pool filter backwash or swimming pool water containing bacteria.

**Development** - means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and any other non-residential projects, including public agency projects; or mass grading for future construction.

**Directly Adjacent** - means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area.

**Directly Discharging** - means outflow from a drainage conveyance system that is composed entirely or predominately of flows from the subject, property, development, subdivision, or industrial facility and not commingled with the flows from adjacent lands.

**Discharge** - means when used without qualification the "discharge of a pollutant."

**Discharging Directly** - means outflow from a drainage conveyance system that is composed entirely or predominantly of flows from the subject, property, development, subdivision, or industrial facility, and not commingled with the flows from adjacent lands.

**Discharge of a Pollutant** - means any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or, any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft, which is being used as a means of transportation. The term discharge includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**Disturbed Area** - means any area that is altered as a result of land disturbance. Examples include but are not limited to: clearing, grading, grubbing, stockpiling and/ or excavation, etc...

**Dry Day** - means a non-wet day for Malibu Creek and Lagoon Bacteria TMDL WLA. A wet day is defined as a day with a 0.1 inch or more of rain and 3 days following the rain event is a non-wet day for Bacteria TMDL WLA.

**Effect Concentration (EC)** is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g., Probit Model). EC<sub>25</sub> is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

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**Effective Impervious Surface** - means that portion of the surface area that is hydrologically connected via sheet flow over a hardened conveyance or impervious surface without any intervening medium to mitigate flow volume.

**Effluent limitation** - means any restriction imposed by the Permitting Authority (PA) on quantities, discharge rates, concentrations, and/ or mass loadings of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

**Emergency** - means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. (Reference: California Public Resources Code § 21060.3. Emergency).

**End-of-Pipe** - means the end of the major outfall as defined in 40 CFR122.26 (b)(5) and 40 CFR122.26 (b)(6).

**Endpoint** - means a biological measurement used to quantify the results obtained from analytical methods such as whole effluent toxicity testing [e.g., lethal concentration (LC<sub>50</sub>); inhibition concentration (IC<sub>25</sub>); and no observed effect concentration (NOEC)]. Such endpoints are quantitative measurements of the responses of test organisms (e.g., survival, growth, mobility, reproduction, and weight gain or loss) in response to exposure to a serial dilution of effluent.

**Environment** - means the physical conditions, which exist within the area and which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

**Environmentally Sensitive Area (ESA)** - means an area "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments" (Reference: California Public Resources Code § 30107.5). ESAs will include Clean Water Act 303d Listed Water Bodies in all reaches that are unimproved, all California Coastal Commission's Environmentally Sensitive Habitat Areas as delineated on maps in Local Coastal Plans and Regional Water Quality Control Board's Basin Plan Rare, Threatened or Endangered Species (RARE) and Preservation of Biological Habitats (BIOL) designated waterbodies. The California Department of Fish and Game's Significant Natural Areas map will be considered for inclusion as the department field verifies the designated locations. Watershed restoration projects will be considered for inclusion as the department field verifies the designated locations.

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**Erosivity Factor** - The Erosivity Factor is a criterion that to assess the risk of erosion on disturbed land. It is described in "Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE), Agricultural Handbook 703, USDA-ARS, U.S. Government Printing Office, Washington, D.C., 1997 by Renard, K.C., G.R. Foster, G.A. Weesies, D.K. McCool, and D.C. Yoder.

**Federal Clean Water Act (CWA)** - means (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92—500, as amended by Public Law 95—217, Public Law 95—576, Public Law 96—483 and Public Law 77—117, codified at 33 U.S.C. 1251 et seq.

**First Storm Event** - means the first storm event of the wet season that produces at least 0.25 inches of rain.

**Forest Land** - means land at least 10 percent stocked with live trees, or land that had this minimum tree stocking in the past and is not currently developed for nonforest use. The minimum area recognized is 1 acre.

**Groundwater Dewatering** - means the active practice of removing standing water from soil excavations using a pump(s) or other means.

**Hillside** - means property located in an area with known erosive soil conditions, where the development will result in grading on any slope that is 20% or greater or an area designated by the Municipality under a General Plan or ordinance as a "hillside area".

**Horse Stables** - means a property where at least one horse is stabled at least part of the year.

**Hydromodification** - means the alteration away from a natural state of stream flows or the beds or banks of rivers, streams, or creeks, including ephemeral washes, which results in hydrogeomorphic changes.

**Illegal Discharge** - means any discharge to the municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illegal discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to an NPDES permit, discharges that are identified in part 1, "Discharge Prohibitions" of this order, or discharges authorized by the Regional Water Board Executive Officer.

**Illicit Connection** - means any engineered conveyance that is connected to the storm drain system without a permit or municipal authorization. It also means any engineered conveyance through which discharges of pollutants to the separate storm drainage systems, which are not composed entirely of storm water or are not authorized by an NPDES permit, may occur.



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**Illicit Discharge** - means any discharge to a municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges that are identified in part 1, "Discharge Prohibitions" of this order, or authorized by the Regional Water Board Executive Officer.

**Illicit Disposal** - means any disposal, either intentionally or unintentionally, of material(s) or waste(s) that can pollute storm water.

**Industrial/ Commercial Facility** - means any facility involved and/ or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/ or commodities, and any facility involved and/ or used in providing professional and non-professional services. This category of facilities includes, but is not limited to, any facility defined by either the Standard Industrial Classifications (SIC) or the North American Industry Classification System (NAICS). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition.

**Industrial Activities Storm Water General Permit (IASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from certain industrial activities under certain conditions.

**Industrial Park** - means a land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry.

**Inhibition Concentration (IC)** - means a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). IC25 is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

**Inspection** - means entry and the conduct of an on-site review of a facility and its operations, at reasonable times, to determine compliance with specific municipal or other legal requirements. The steps involved in performing an inspection, include, but are not limited to:

1. Pre-inspection documentation research
2. Request for entry
3. Interview of facility personnel
4. Facility walk-through
5. Visual observation of the condition of facility premises

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6. Examination and copying of records as required
7. Sample collection (if necessary or required)
8. Exit conference (to discuss preliminary evaluation)
9. Report preparation, and if appropriate, recommendations for coming into compliance

**Integrated Pest Management (IPM)** - means a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health, and environmental risks.

**Large Municipal Separate Storm Sewer System (MS4)** - means all MS4s that serve a population greater than 250,000 (1990 Census) as defined in 40 CFR122.26 (b)(4). The Regional Water Board designated Ventura County as a large MS4 in 1990, based on: (i) the U.S. Census Bureau 1990 population count of 669,016 thousand, and (ii) the interconnectivity of the MS4s in the incorporated and unincorporated areas within the County.

**Local SWPPP** - means the Local Storm Water Pollution Prevention Plan (LSWPPP) required by the local agency for a project that disturbs one or more acres of land. Shall mean a plan identifying potential pollutant sources from a construction site and describing proposed design, placement and implementation of BMPs, to effectively prevent non-storm water discharges and reduce pollutants in storm water discharges to the storm drain system, during construction activities. Also referred as a Storm Water Pollution Control Plan (SWPCP).

**Low Impact Development (LID)** – means a design strategy with the goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable (mature) trees, flood plains, woodlands, and highly permeable soils.

**Major Municipal Separate Storm Sewer Outfall (“or major outfall”)** - means a major municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more), as defined in 40 CFR122.26 (b)(5).

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**Major Outfall** - means a major municipal separate storm sewer outfall, as defined in 40 CFR122.26 (b)(6).

**Maximum Extent Practicable (MEP)** – The technology-based permit requirement established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based requirements, including MEP, establish a level of pollutant control that is derived from available technology or other controls. MEP requires municipal dischargers to perform at maximum level that is practicable. Compliance with MEP may be achieved by emphasizing pollution prevention and source control BMPs in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving and advancing concept, which considers technical and economic feasibility.

**Method Detection Limit (MDL)** - means the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR136, Appendix "G" of this Order.

**Minimum Level (ML)** - means the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed. The ML value represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique.

**Minimum Significant Difference (MSD)** - means a measure of test sensitivity that establishes the minimum difference required between a control and a test treatment in order for that difference to be considered statistically significant.

**Municipal Action Levels (MALs)** – means an action level that is derived from a statistical analysis of relevant data that is utilized to identify areas and subwatersheds that require additional or improved BMPs to reduce the discharge of pollutants to the maximum extent practicable. MALs may be revised as additional data are obtained so that MALs can continue to be used to effectively prioritize BMP implementation as the storm water program progresses. MALs are one measure of the effectiveness of the storm water program. MALs are not effluent limitations as defined by this Order, and/or as defined by Water code section 13385.1(c).

**Municipal Separate Storm Sewer System (MS4)** - means a conveyance or system of conveyances (including roads w/ drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR122.26(b)(8):

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1. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the Federal Clean Water Act (CWA) that discharges into waters of the United States
2. Designed or used for collecting or conveying storm water
3. Which is not a combined sewer
4. Which is not part of a Publicly Owned Treatment Works (POTW), as defined in 40 CFR122.2

**NAICS** - means North American Industry Classification System.

**National Pollutant Discharge Elimination System (NPDES)** - means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA § 307, 402, 318, and 405.

**Natural Drainage Systems** - means unlined or unimproved (not engineered) creeks, streams, rivers or similar waterways.

**New Development** - means land disturbing activities; structural development, including construction or installation of a building or structure, creation and replacement of impervious surfaces; and land subdivision.

**Non-Storm Water Discharge** - means any discharge to a storm drain that is not composed entirely of storm water.

**No Observed Effect Concentration (NOEC)** - means the highest tested concentration of an effluent or toxicant that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically different from the controls).

**Nuisance** - means anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.; (3) occurs during, or as a result of, the treatment or disposal of wastes.

**Nursery** - means NAICS classification to describe nursery operations and determine the type of operations covered under this Order and those covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Conditional Waiver).

1. There are 3 broad NAICS sectors available to classify nurseries:

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- (1) 111xxx - Crop Production - Agriculture
- (a) 424xxx - Merchant Wholesalers, Nondurable Goods
- (b) 44xxxx - Retail Trade
  - (1) **Nursery (Agricultural Facilities - Crop Production)** - means Nursery and Floriculture Production under NAICS Code 11142x. These operations are subject to the **Conditional Waiver**. This industry comprises establishments primarily engaged in (1) growing nursery and floriculture products (e.g., nursery stock, shrubbery, cut flowers, flower seeds, foliage plants, sod) under cover or in open fields and/ or (2) growing short rotation woody trees with a growing and harvesting cycle of 10 years or less for pulp or tree stock (e.g., cut Christmas trees, cottonwoods).
  - (2) **Nursery (Commercial Facilities - Merchant Wholesalers, Nondurable Goods, and Retail Trade)** - means industries Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers under NAICS Code 424930; and Nursery, Garden Center, and Farm Supply Stores under NAICS Code 444220. This Order covers these types of operations. The industry in NAICS Code 424930 comprises establishments primarily engaged in the merchant wholesale distribution of flowers, florists' supplies, and/ or nursery stock (except plant seeds and plant bulbs). The industry in NAICS Code 444220 comprises establishments primarily engaged in retailing nursery and garden products, such as trees, shrubs, plants, seeds, bulbs, floriculture products and sod, which are predominantly grown elsewhere. These establishments may sell a limited amount of a product they grow themselves.

**Open Channel** - means a storm drainage channel that is not a natural water course.

**Parking Lot** - means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use.

**Percent Minimum Significant Difference (PMSD)** - means the minimum significant difference divided by the control mean, expressed as a percent (see minimum significant difference).

**Permit** - means an authorization, license, or equivalent control document issued by U.S. EPA or an "approved State" to implement the requirements of 40 CFR Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (§ 122.28). Permit does not include any permit, which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

**Permittee(s)** - means co-permittee(s) and any agency named in this Order as being responsible for permit conditions within its jurisdiction, as defined by Federal Regulation. Permittees to this Order include the Ventura Water Protection District, Ventura County, and the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley and Thousand Oaks.

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**Point Source** - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

**Point Zero** - means in the context of the TMDLs, the point at which water from the storm drain or creek initially mixes with water. Point zero has been selected as the compliance point for the TMDL numeric target because access to these drains is, on the whole, not restricted.

**Pollutants** - means those "pollutants" defined in CWA § 502(6) (33.U.S.C. § 1362(6)), and incorporated by reference into California Water Code § 13373.

**Pollutants of Concern** - means constituents that have exceeded Basin Plan Objectives, and CTR- Chronic or Acute Objectives during monitoring at Mass Emission, Receiving Water, and Land Use stations.

**Potable Water Sources** - means the potable water system for the treatment, distribution, and provision of water for residential, commercial, industrial, or institutional use that meets all California safe drinking water regulatory standards for human consumption.

**Pre-Developed Condition** - means native vegetation and soils that existed at a site prior to first development. The pre-developed condition may be assumed to be an area with the typical vegetation, soil, and storm water runoff characteristics of open space areas in coastal Southern California unless reasonable historic information is provided that the area was atypical.

**Priority Pollutants** - means those constituents referred to in 40 CFR401.15 and listed in the U.S. EPA NPDES Application Form 2C, pp. V-3 through V-9.

**Project** - means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Reference: California Public Resources Code § 21065).

**Qualified SWPPP Developer or Qualified SWPPP Practitioner** – refer to State of California General Construction Stormwater Permit for definition.

**Rare, Threatened, or Endangered Species (RARE)** - means a beneficial use for waterbodies in the Los Angeles Region, as designated in the Basin Plan (Table 2-1), that supports habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

**Redevelopment** - means land-disturbing activity that results in the creation, addition, or

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replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

**Regional Administrator** - means the Regional Administrator of the Regional Office of the U.S. EPA or the authorized representative of the Regional Administrator.

**Report of Waste Discharge (ROWD)** - means an application for renewal of the NPDES Permit for Waste Discharge Requirements for Municipal Separate Storm Sewer Discharges Within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein.

**Restaurant** - means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812).

**Restoration** - means the reestablishment of predisturbance aquatic functions and related physical, chemical and biological characteristics (Reference: National Research Council. 1992. Restoration of Aquatic Ecosystems: Science, Technology and Public Policy. National Academy Press, Washington, D.C.).

**Retail Gasoline Outlet (RGO)** - means any facility engaged in selling gasoline and lubricating oils- SIC 5541 and NAICS 447110 & 447190.

1. RGOs: 447190 Other Gasoline Stations:

This industry comprises establishments known as gasoline stations (except those with convenience stores) primarily engaged in one of the following: (1) retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) or (2) retailing these fuels in combination with activities, such as providing repair services; selling automotive oils, replacement parts, and accessories; and/ or providing food services.

2. RGOs: 447110 Gasoline Stations with Convenience Stores:

Retailing automotive fuels in combination with a convenience store or food mart.

**Routine Maintenance** - Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.

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4. Update existing lines\* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.

5. Repair leaks

Routine maintenance does not include construction of new\*\* lines or facilities resulting from compliance with applicable codes, standards and regulations.

\* Update existing lines includes replacing existing lines with new materials or pipes.

\*\* New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

**Screening** - means using proactive methods to identify illicit connections through a continuously narrowing process. The methods may include: performing baseline monitoring of open channels, conducting special investigations using a prioritization approach, analyzing maintenance records for catch basin and storm drain cleaning and operation, and verifying all permitted connections into the storm drains. Special investigation techniques may include: dye testing, visual inspection, smoke testing, flow monitoring, infrared, aerial and thermal photography, and remote control camera operation.

**Sidewalk Rinsing** - means only sidewalk rinsing using high pressure and low volume of water with no additives and at an average usage of 0.006 gallons per square foot of surface area to be rinsed. Any waste generated from the activity must be collected and properly and legally disposed of. It does not mean hosing of any sidewalk or street with a garden hose with a pressure nozzle.

**Site** - means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

**Small Construction** - means any soil disturbing activities less than 5 acres.

**Smart Growth**- development in or near cities intended to lessen or reverse suburban sprawl, decrease the use of automobiles, and shorten daily travel. It uses compact building design to cluster together residential, shopping, and work areas and encourages walk and public transportation. Smart Growth is considered a stormwater BMP in the 2005 publication *Using Smart Growth Techniques as Stormwater Best Management Practices*, EPA 231-B-05-002.

**Source Control BMP** - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

**Southern California Stormwater Monitoring Coalition (SMC)** - means the Stormwater Monitoring Coalition, which is a collaborative research/ monitoring partnership of the Southern California Water Boards, Municipal Storm Water Agencies, and municipalities to develop the methodologies and assessment tools to more effectively understand urban storm water and non-storm water (anthropogenic) impacts to receiving waters and to conduct research/



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monitoring through Subsequent Research Implementation Agreements. The first original cooperative agreement was entered into on February 8, 2001.

**Stream** - means a body of flowing water; natural water course containing water at least part of the year. In hydrology, it is generally applied to the water flowing in a natural channel as distinct from a canal (Reference: US Geological Survey).

**Strip Mall** - means a commercial development that is a shopping center where the stores are arranged in a row, with a sidewalk in front. Strip malls are typically developed as a unit and have large parking lots in front. They face major traffic arterials and tend to be self-contained with few pedestrian connections to surrounding neighborhoods. It is also called a plaza.

**Storm Event Monitoring**- means a rainfall event that produces more than 0.25 inch of precipitation and is separated from the previous storm event by at least 1 week of dry weather, for the purpose of monitoring.

**Storm Water** - means storm water runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR122.26(b)(13).

**Storm Water Discharge Associated with Industrial Activity** - means industrial discharge, as defined in 40 CFR122.26(b)(14).

**Storm Water Quality Management Program** - means the Ventura Countywide Storm Water Quality Management Plan, which includes descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time.

**Structural BMP** - means any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

**Summer Dry Weather** - means dry weather days occurring from April 1 through October 31 of each year.

**t-Test** (formally Student's t-test) - means a statistical analysis comparing two sets of replicate observations, in the case of WET, only two test concentrations (e.g., a control and 100% effluent). The purpose of this test is to determine if the means of the two sets of observations are different [e.g., if the 100% effluent concentration differs from the control (i.e., the test pass or fails)].

**Targeted Employees** - means management and staff who perform or direct activities that directly or indirectly have an effect of storm water quality. The employees generally are employed in the following areas: department of public works, engineering, sanitation, storm

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water maintenance, drainage and flood control, transportation, streets and roads, parks and recreation, public landscaping and corporation yards, planning or community development, code enforcement, building and safety, harbor or port departments, airports, or general services and fleet services.

**Total Maximum Daily Load (TMDL)** - means the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background.

**Toxicity Identification Evaluation (TIE)** - means a set of procedures to identify the specific chemical(s) responsible for toxicity through a process of chemical/ physical manipulations of samples followed by toxicity tests. These procedures are performed in 3 phases (Phase I- Toxicity Characterization Procedure, Phase II- Toxicity Identification Procedure, and Phase III- Toxicity Confirmation Procedure) using aquatic organism toxicity tests.

**Toxicity Reduction Evaluation (TRE)** - means a study conducted in a step-wise process to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity.

**Toxicity Test** - means a procedure using living organisms to determine whether a chemical or an effluent is toxic. A toxicity test measures the degree of the effect of a specific chemical or effluent on exposed test organisms.

**Toxic Unit (TU)** - means a measure of toxicity in an effluent as determined by the acute toxicity units (TUa) or chronic toxicity units (TUc) measured. The larger the TU, the greater the toxicity.

**Toxic Unit - Chronic (TUc)** - means 100 times the reciprocal of the effluent concentration that causes no observable effect on the test organisms in a chronic toxicity test ( $TUc = 100/NOEC$  or  $100/EC25$ ) (see NOEC).

**Treatment** - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media absorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

**Treatment Control BMP** - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Urbanization** - means the process of changing of land use and land patterns from rural characteristics to urban (city-like) characteristics. These changes include (i) the replacement of pervious surfaces with impervious surfaces such as rooftops and buildings, and impervious materials such as asphalt and concrete; and (ii) the conversion of rural land to house new residents, support new businesses, and facilitate vehicular traffic flow.

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**U.S. EPA Phase I Facilities** - means facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR122.26(c).

These categories include:

1. Facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N)
2. Manufacturing facilities
3. Oil and gas/ mining facilities
4. Hazardous waste treatment, storage, or disposal facilities
5. Landfills, land application sites, and open dumps
6. Recycling facilities
7. Steam electric power generating facilities
8. Transportation facilities
9. Sewage of wastewater treatment works
10. Light manufacturing facilities

**Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards** - means any Permittee owned or operated facility or portion thereof that:

1. Conducts industrial activity, operates or stores equipment or materials, and provides services similar to Federal Phase I facilities;
2. Performs fleet vehicle service/ maintenance including repair, maintenance, washing, or fueling;
3. Performs maintenance and/ or repair of machinery/ equipment; or
4. Stores chemicals, raw materials, or waste materials.

**Waste Load Allocations (WLAs)** - means a portion of a receiving water's Total Maximum Daily Pollutant Load (TMDL) that is allocated to one of its existing or future point sources of pollution (Reference: 40 CFR130.2(h)).

**Water Quality Objectives** - means water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federally approved surface water quality plans. Such plans are used by the Regional Water Board to regulate all discharges, including storm water discharges.

**Water Quality Standards** - means the State Water Quality Standards, which are comprised of beneficial uses, water quality objectives and the State's Antidegradation Policy.

**Waters of the State** - means any surface water or groundwater, including saline waters, within boundaries of the state (Reference: California Water Code § 13050).

**Waters of the United States or Waters of the US** - means:

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the

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- ebb and flow of the tide;
- 2. All interstate waters, including interstate "wetlands";
- 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used for industrial purposes by industries in interstate commerce
- 4. All impoundment's of waters otherwise defined as waters of the United States under this definition;
- 5. Tributaries of waters identified in the preceding paragraph (1) through (4) of this definition;
- 6. The territorial sea; and
- 7. "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in the preceding paragraph (1) through (6) of this definition.  
(Reference: 33 CFR328)

**Watercourse** - means any natural or artificial channel for passage of water, including the VCFCD jurisdictional channels included in the List of Channels within the Comprehensive Plan of the VCFCD, as approved by the Board of Supervisors of the VCFCD on October 4, 1993, and any amendments thereto.

**Watershed Management** - means approach for water resources protection. It is a strategy for integrating and managing resources, both human and fiscal that focuses on regulation of point sources, to a more regional approach that acknowledges environmental impacts from other activities.

**Watershed Management Areas (WMA)** - means the geographically-defined watershed areas where the Regional Water Board will implement the watershed approach. These generally involve a single large watershed within which exists smaller subwatersheds but in some cases may be an area that does not meet the strict hydrologic definition of a watershed e.g., several small Ventura coastal waterbodies in the region are grouped together into one WMA.

**Wet Season** - means the calendar period beginning October 1 through April 15.

**Winter Dry Weather** - means dry weather days occurring from November 1 - March 31 of each year.

**Whole Effluent Toxicity** - means the aggregate toxic effect of an effluent measured directly by a toxicity test.

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**PART 8 - STANDARD PROVISIONS**

**A. General Requirements**

- 1. The Permittee shall comply with all provisions and requirements of this Order.
- 2. Should the Permittee discover that it failed to submit any relevant facts or that it submitted incorrect information in a report it shall promptly submit the missing or correct information.
- 3. The Permittee shall report all instances of non-compliance not otherwise reported at the time monitoring reports are submitted.
- 4. This Order includes Attachment "H", the Reporting Program, which is a part of this Order and must be complied with.

**B. Regional Water Board Review**

- 1. The Regional Water Board may review any formal determinate or approval made by the Regional Water Board Executive Officer pursuant to the provisions of this Order.
  - (a) Permittee(s) or a member of the public may request such review upon petition within 30 day of the effective date of the notification of such decision to the Permittee(s) and interested parties on file at the Regional Water Board.

**C. Public Review**

- 1. All documents submitted to the Regional Water Board in compliance with the terms and conditions of this Order shall be made available to members of the public pursuant to the Freedom of Information Act (5 U.S.C. § 552), as amended, and the Public Records Act (California Government Code § 6250 et seq.).
- 2. All documents submitted to the Regional Water Board Executive Officer for approval shall be made available to the public for a 30-day period to allow for public comment.

**D. Duty to Comply [40 CFR122.41(a)]**

- 1. Each Permittee must comply with all of the terms, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for

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- reissuance, or a combination thereof [40 CFR122.41(a), CAL. WATER CODE § 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].
2. A copy of these waste discharge specifications shall be maintained by each Permittee so as to be available during normal business hours to Permittee employees and members of the public.
  3. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

**E. Duty to Mitigate [40 CFR122.41 (d)]**

1. Each Permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

**F. Inspection and Entry; Investigations; Responsibilities [40 CFR122.41(i), Cal. Water Code § 13225 and § 13267]**

1. The Regional Water Board, U.S. EPA, and other authorized representatives shall be allowed:
  - (a) Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;
  - (b) Access to copy any records, at reasonable times that are kept under the conditions of this Order;
  - (c) To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order;
  - (d) To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA and the CAL. WATER CODE;
  - (e) To review any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement to investigate the quality of any waters of the state within its region; and,
  - (f) To require as necessary any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.

**G. Proper Operation and Maintenance [40 CFR122.41 (e), Cal. Water Code § 13263(f)]**

1. The Permittees shall at all times properly operate and maintain all facilities and systems of treatment (and related appurtenances) that are installed or used by the Permittees to achieve compliance with this Order. Proper operation and maintenance includes:

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- (a) adequate laboratory controls; and
  - (b) appropriate quality assurance procedures.
2. This provision requires the operation of backup or auxiliary facilities or similar system that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order.

**H. Signatory Requirements [40 CFR122.41(k) & 122.22]**

1. Except as otherwise provided in this Order, all applications, reports, or information submitted to the Regional Water Board shall be signed by the City Manager or Mayor, or authorized designee and certified as set forth in 40 CFR122.22.

**I. Reopener and Modification [40 CFR122.41(f) & 122.62]**

1. This Order may only be modified, revoked, or reissued, prior to the expiration date, by the Regional Water Board, in accordance with the procedural requirements of the CAL. WATER CODE and CCR Title 23 for the issuance of waste discharge requirements, 40 CFR122.62, and upon prior notice and hearing, to:
- (a) Address changed conditions identified in the required reports or other sources deemed significant by the Regional Water Board;
  - (b) Incorporate applicable requirements or statewide water quality control plans adopted by the State Board or amendments to the Basin Plan, including TMDLs;
  - (c) Comply with any applicable requirements, guidelines, and/ or regulations issued or approved pursuant to CWA § 402(p); and/ or,
  - (d) Consider any other federal, or state laws or regulations that became effective after adoption of this Order.
2. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
- (a) Violation of any term or condition contained in this Order;
  - (b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;  
or,
  - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
3. The filing of a request by the Principal Permittee or Permittees for a modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
4. This Order may be modified to make corrections or allowances for changes in the permitted activity listed in this section, following the procedures at 40 CFR122.63, if processed as a minor modification. Minor modifications may only:
- (a) Correct typographical errors; or

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(b) Require more frequent monitoring or reporting by the Permittee.

**J. Severability**

1. The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected.

**K. Duty to Provide Information [40 CFR122.41(h)]**

1. The Permittees shall furnish, within a reasonable time, any information the Regional Water Board or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order.
2. The Permittees shall also furnish to the Regional Water Board, upon request, copies of records required to be kept by this Order.

**L. Twenty-Four Hour Reporting [40 CFR122.41(l)(6)]<sup>1</sup>**

1. The Permittees shall report to the Regional Water Board any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time any Permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
2. The Regional Water Board may waive the required written report on a case-by-case basis.

**M. Bypass [40 CFR122.41(m)]<sup>2</sup>**

1. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Water Board may take enforcement action against Permittees for bypass unless:

<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

<sup>2</sup> This provision applies to the operation and maintenance of storm water controls and BMPs as provided in this Order or in the Ventura County SMP.



## Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

- (a) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);
- (b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance;
- (c) The Permittee submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or,
- (d) Permittees may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The Permittee shall submit notice of an unanticipated bypass as required.

**N. Upset [40 CFR122.41(n)]<sup>1</sup>**

1. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. A Permittee that wishes to establish the affirmative defense of an upset in an action brought for non compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (a) An upset occurred and that the Permittee can identify the cause(s) of the upset;
  - (b) The permitted facility was being properly operated by the time of the upset;
  - (c) The Permittee submitted notice of the upset as required; and,
  - (d) The Permittee complied with any remedial measures required.
3. No determination made before an action for noncompliance, such as during administrative review of claims that non-compliance was caused by an upset, is final administrative action subject to judicial review.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

**O. Property Rights [40 CFR122.41(g)]**

- 1. This Order does not convey any property rights of any sort, or any exclusive privilege.

**P. Enforcement**

- 1. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The CWA provides the following:

(a) Criminal Penalties for:

- (1) Negligent Violations [CWA 309 (c)(1)(B)]:

The CWA provides that any person who negligently violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$2,500 nor more than \$25,000 per day for each violation, or by imprisonment for not more than 1 year, or both.

- (2) Knowing Violations [CWA 309 (c)(2)(B)]:

The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

- (3) Knowing Endangerment [CWA 309 (c)(3)(A)]:

The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 307, 308, 318, or 405 and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

- (4) False Statement [CWA 309 (c)(4)]:

The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.

- (b) Civil Penalties [[CWA 309 (d)]

The CWA provides that any person who violates a permit condition implementing

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Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a civil penalty not to exceed \$27,500 per day for each violation.

2. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The Cal Water Code § 13885 provides the following:
  - (a) Any person who violates any of the following shall be liable civilly in accordance with this section:
    - (1) Section 13375 or 13376.
    - (2) Any waste discharge requirements or dredged or fillmaterial permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.
    - (3) Any requirements established pursuant to Section 13383.
    - (4) Any order or prohibition issued pursuant to Section 13243 or Article 1 (commencing with Section 13300) of Chapter 5, if the activity subject to the order or prohibition is subject to regulation under this chapter.
    - (5) Any requirements of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the Clean Water Act, as amended.
    - (6) Any requirement imposed in a pretreatment program approved pursuant to waste discharge requirements issued under Section 13377 or approved pursuant to a permit issued by the administrator.

**Q. Need to Halt or Reduce Activity not a Defense [40 CFR122.41(c)]**

1. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

**R. Termination of Board Order**

1. Regional Water Board Order No. 00-108 is hereby terminated.

**S. Board Order Expiration Date**

1. This Order expires on May 7, 2014. The Permittees must submit a Report of Waste Discharge (ROWD) and a proposed Storm Water Quality Management Program in accordance with CCR Title 23 as application for reissuance of waste discharge requirements no later than 180 days in advance of such date.

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**T. MS4 Annual Reporting Program [40 CFR122.42(c)]**

1. The Annual Program Reporting shall include the following information:

(a) *Municipal separate storm sewer systems.*

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
- (2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with 40 CFR122.26(d)(2)(iii) of this part;
- (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR122.26(d)(2)(iv) and (d)(2)(v) of this part;
- (4) A summary of data, including monitoring data that is accumulated throughout the reporting year;
- (5) Annual expenditures and budget for year following each annual report;
- (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
- (7) Identification of water quality improvements or degradation.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on mm dd, 2009.

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Tracy J. Egoscue  
Executive Officer

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Land Jurisdictions in Ventura County, California

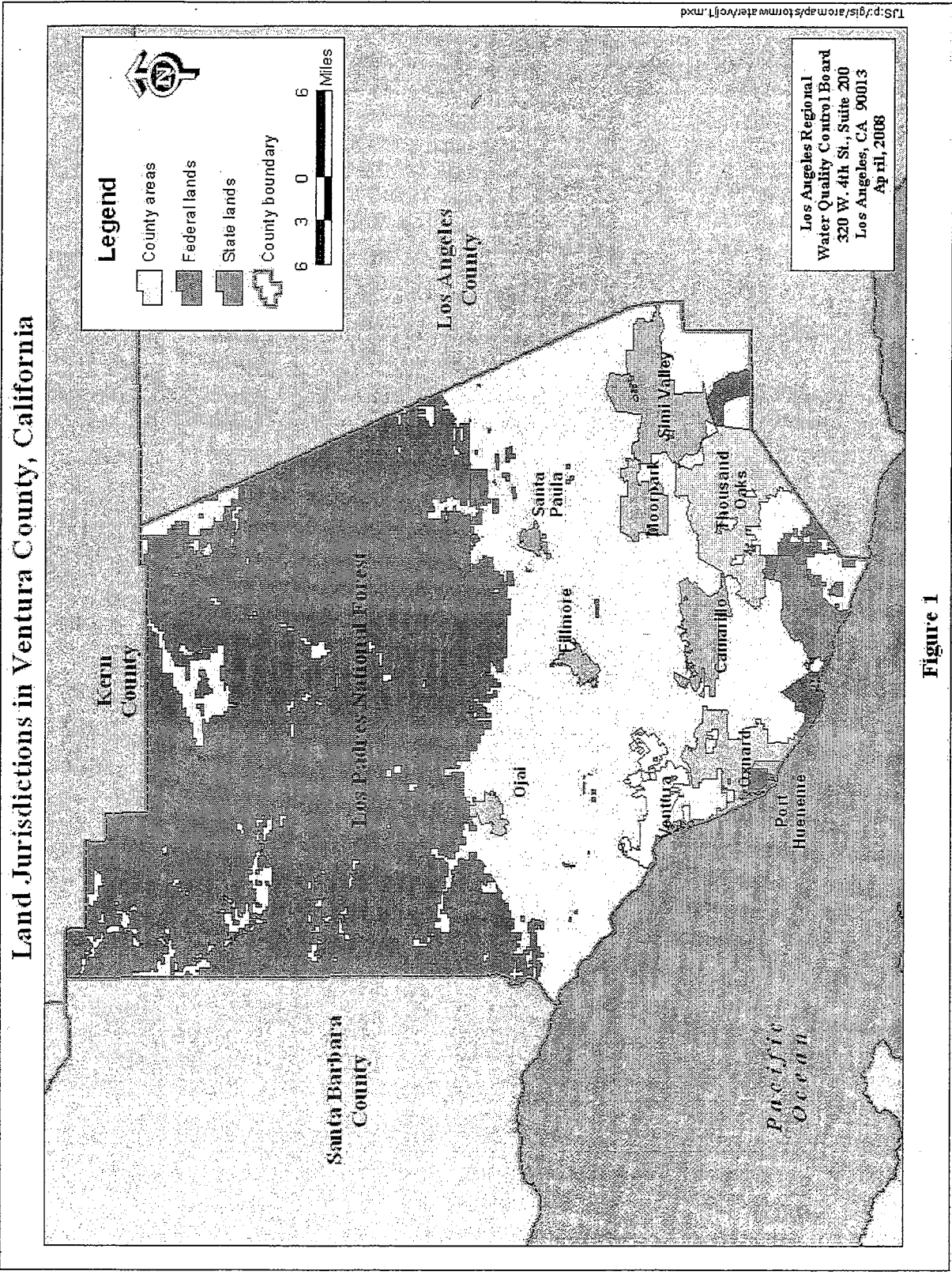


Figure 1

**ATTACHMENT A**  
Watershed Management Areas

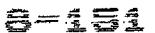
Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Ventura River	402.10 402.20 402.31 402.32	Ventura River Ventura River Estuary Canada Larga Matilija Creek Matilija Creek Reservoir San Antonio Creek	Algae Coliform (fecal, total) Eutrophic Low DO Nitrogen Trash	City of Ojai City of San Buenaventura Ventura County Watershed Protection District
Santa Clara River	403.11 403.21 403.22 403.31 403.32 403.41 403.42 403.43 403.44 403.51 403.52 403.53 403.54 403.55	Santa Clara River Santa Clara River Estuary Brown Barranca/Long Canyon Elizabeth Lake Hopper Creek Lake Hughes Mint Canyon Creek Munz Lake Piru Creek Pole Creek Sespe Creek Torrey Canyon Creek Wheeler Canyon/Todd Barranca	Algae Ammonia ChemA* (tissue) Chloride Coliform Enrichment Eutrophic Fish kills Low DO/Organic Enrichment Nitrate + Nitrite Odors pH Sulfate Trash Total Dissolved Solids Toxaphene	City of Fillmore City of Oxnard City of San Buenaventura City of Santa Paula Ventura County Watershed Protection District

Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

**ATTACHMENT A**

Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Calleguas Creek	403.11	Calleguas Creek	Algae	City of Camarillo
	403.12	Calleguas Creek Estuary	Ammonia	City of Moorpark
	403.61	Arroyo Conejo	Boron	City of Oxnard
	403.62	Arroyo Las Posas	ChemA* (tissue)	City of Simi Valley
	403.63	Arroyo Simi	Chlordane (tissue, sediment)	City of Thousand Oaks
	403.64	Beardsley Channel	Chloride	Ventura County
	403.67	Conejo Creek	Chlorpyrifos (tissue)	Watershed Protection District
	403.66	Fox Barranca	Coliform, fecal	
	403.68	Mugu Lagoon	Copper (total, dissolved)	
		Mugu Drain/Oxnard Drain	Dacthal (sediment)	
		Rio de Santa Clara/Oxnard Drain	DDT (tissue, sediment)	
		Revolon Slough	Dieldrin (tissue)	
		Tapo Canyon	Endosulfan (tissue, sediment)	
			Hexachlorocyclohexane (tissue)	
			Mercury	
			Nickel	
			Nitrate + Nitrite	
			Nitrate as Nitrogen (NO3)	
			Nitrogen	
			Organophosphorus Pesticides	
			PCBs (tissue)	
			Sediment Toxicity	
			Sedimentation/Siltation	
			Selenium	
			Sulfate	
			Total Dissolved Solids	
			Toxaphene (tissue, sediment)	
			Toxicity	
			Trash	
			Zinc	



Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

R E V I S E D T E N T A T I V E

ATTACHMENT A  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Malibu Creek	401.00 403.11 404.21 404.22 404.23 404.24 404.25 404.26 404.47 404.45	Malibu Creek Malibu Creek Lagoon Lake Lindero Lake Sherwood Las Virgenes Creek Liner Creek Malibu Lake Medea Creek Palo Comado Santa Monica Bay Westlake Lake Triunfo Creek	Algae Ammonia Coliform DDT (tissue, sediment) Enteric viruses Eutrophic Lead Low DO/Organic Enrichment Nutrients (algae) PAHs (sediment) PCBs (tissue, sediment) PH Mercury Scum/foam Sedimentation/Siltation Sediment Toxicity Selenium Specific Conductance Trash	City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

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**ATTACHMENT A**

Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Miscellaneous Ventura Coastal	401.00 403.11	Channel Islands Harbor Channel Islands Beach Hobie Beach Mandalay Beach McGrath Lake McGrath Beach Ormond Beach Port Hueneme Harbor Promenade Park Beach Rincon Beach San Buenaventura Beach Santa Clara River Estuary Beach/Surfers Knoll Ventura Harbor: Ventura Keys	Beach closures Coliform (fecal) Chlordane (sediment) DDT (tissue, sediment) Dieldrin (sediment) PCBs (tissue, sediment) Lead (sediment) Sediment Toxicity Zinc (sediment)	City of Oxnard City of Port Hueneme City of San Buenaventura Ventura County Watershed Protection District

**ATTACHMENT B**

Calleguas Creek Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-CC), Receiving Water (W-3 & W-4), and Land Use (A-1) Sites

<b>Wet Weather</b>	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Residual Chlorine	
TDS	
<b>Metal</b>	
Aluminum - Total	Chromium - Total
Barium - Total	Cooper - Dissolved
Beryllium - Total	Mercury - Total
Cadmium - Total	Nickel - Total
<b>Nutrient</b>	
Nitrate as Nitrogen	
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Hexachlorobenzene	
Indeno(1,2,3-cd)pyrene	
Pentachlorophenol	
<b>Pesticide</b>	
4,4'-DDD	
4,4'-DDE	

<sup>1</sup> Mass Emission, Receiving Water, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern

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**ATTACHMENT B**

Santa Clara River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-SCR) and Land Use (I-2 & R-1) Sites

<b>Wet Weather</b>	
<b>Anion</b>	
Chloride	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Ph	
TDS	
<b>Metal</b>	
Aluminum - Total	Cooper - Dissolved
Arsenic - Total	Mercury - Total
Barium - Total	Nickel - Total
Cadmium - Total	Selenium - Total
Chromium - Total	Zinc - Dissolved
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Indeno(1,2,3-cd)pyrene	
<b>Pesticide</b>	
4,4'-DDE	

<sup>1</sup> Mass Emission, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

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**ATTACHMENT B**

Ventura River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME- VR & ME- VR2) Sites

<b>Wet Weather</b>
<b>Anion</b>
Chloride
<b>Bacteriological</b>
E. Coli
Fecal Coliform
<b>Conventional</b>
TDS
<b>Metal</b>
Aluminum - Total
Cadmium - Total
Chromium - Total
Mercury - Total
Nickel - Total
Zinc - Dissolved
<b>Organic</b>
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Chrysene
Hexachlorobenzene
<b>Pesticide</b>
4,4'-DDD
4,4'-DDE

<sup>1</sup> Mass Emission wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07). Monitoring data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

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**ATTACHMENT C**  
Municipal Action Levels

**Table 1 - Conventional Pollutants**

Pollutants	TSS mg/L	Nitrate & Nitrite- total mg/L
Municipal Action Level	252	2

**Table 2 - Metals**

Pollutants	Cu- total µg/L	Pb- total µg/L	Zn- total µg/L
Municipal Action Level	87	122	660

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**ATTACHMENT C**  
Treatment BMP Performance Standards

**Table 3 - Effluent Concentrations as Median Values**

BMP Category	Total Suspended Solids mg/L	Total Nitrate-Nitrogen mg/L	Total Copper, ug/L	Total Lead, ug/L	Total Zinc, ug/L
Detention Pond	27	0.48	15.9	14.6	58.7
Wet Pond	10	0.2	5.8	3.4	21.6
Wetland Basin	13	0.13	3.3	2.5	29.2
Biofilter	18	0.36	9.6	5.4	27.9
Media Filter	11	0.66	7.6	2.6	32.2
Hydrodynamic Device	23	0.29	11.8	5	75.1

Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database, 2007.

See subpart 4.A.3 (Storm Water Quality Management Program Implementation- General Requirements).

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**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Municipal Landfills (SIC 4953)

Hazardous Waste Treatment, Disposal and Recovery Facilities<sup>1</sup>

Facilities Subject to SARA Title III (also known as EPCRA)<sup>2</sup>

Restaurants<sup>3</sup>

Wholesale trade (scrap, auto dismantling) (SIC 50)

Automotive service facilities<sup>2</sup>

Fabricated metal products (SIC 34)

Motor freight (SIC 42)

Chemical/allied products (SIC 28)

Automotive Dealers/Gas Stations (SIC 55)

Primary Metals Products (SIC 33)

Nursery<sup>3</sup> (NAICS 424930 and 444220)

Electric/Gas/Sanitary (SIC 49)

Air Transportation (SIC 45)

Water Transportation (SIC 44)

Rubbers/Miscellaneous Plastics (SIC 30)

Local/Suburban Transit (SIC 41)

Railroad Transportation (SIC 40)

Oil & Gas Extraction (SIC 13)

Lumber/Wood Products (SIC 24)

Machinery Manufacturing (SIC 35)

Transportation Equipment (SIC 37)

<sup>1</sup> Non-underlined categories belong to Industrial Facilities.

<sup>2</sup> Various categories subject to these requirements.

<sup>3</sup> See Definition in Part 7. of the Order.

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**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Stone, Clay, Glass, Concrete (SIC 32)

Leather/Leather Products (SIC 31)

Miscellaneous Manufacturing (SIC 39)

Food and kindred Products (SIC 20)

Mining of Nonmetallic Minerals (SIC 14)

Printing and Publishing (SIC 27)

Electric/Electronic (SIC 36)

Paper and Allied Products (SIC 26)

Furniture and Fixtures (SIC 25)

Laundries (SIC 72)

Instruments (SIC 38)

Textile Mills Products (SIC 22)

Apparel (SIC 23)

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<sup>1</sup> Non-underlined categories belong to Industrial Facilities.



**ATTACHMENT E**  
Determination of Erosion Potential

$E_p$  is determined as follows- The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The index under urbanized conditions is compared to the index under pre-urban conditions expressed as a ratio ( $E_p$ ). The effective work index ( $W$ ) is computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:

$$W = \sum_{i=1}^n (\tau_i - \tau_c)^{1.5} \cdot V \cdot \Delta t_i \quad (1)$$

Where  $\tau_c$  = critical shear stress that initiates bed mobility or erodes the weakest bank layer,  $\tau_i$  = applied hydraulic shear stress,  $\Delta t$  = duration of flows (in hours), and  $n$  = length of flow record. The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential ( $E_p$ )<sup>1</sup> (McRae (1992, 1996).

$$E_p = \frac{W_{post}}{W_{pre}} \quad (2)$$

where:

$W_{post}$  = work index estimated for the post-urban condition

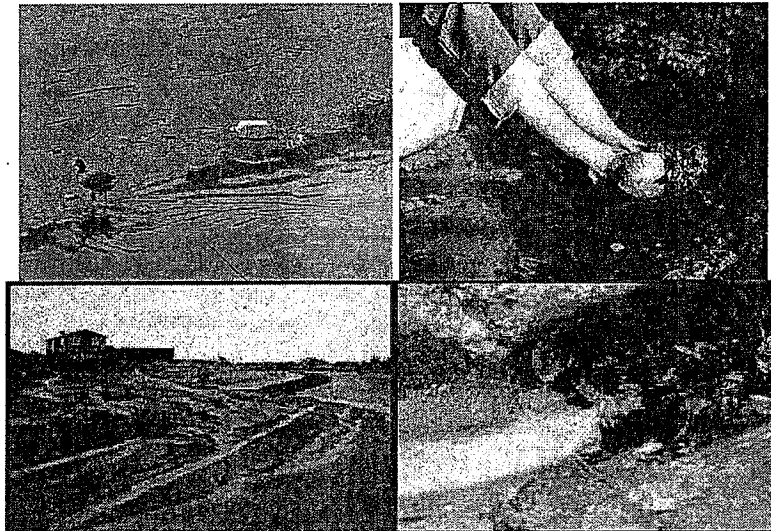
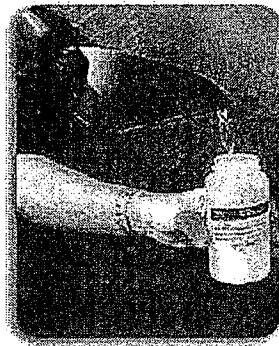
$W_{pre}$  = work index estimated for the pre-urban condition

<sup>1</sup> MacRae, C.R. 1992. The Role of Moderate Flow Events and Bank Structure in the Determination of Channel Response to Urbanization. Resolving conflicts and uncertainty in water management: Proceedings of the 45th Annual Conference of the Canadian Water Resources Association. Shrubsole, D, ed. 1992, pg. 12.1-12.21; MacRae, C.R. 1996. Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection. Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE Engineering Foundation Conference, Snowbird, Utah, pg. 144-162

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STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
MONITORING PROGRAM - No. CI 7388  
FOR  
ORDER 09-XXXX  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009



May 7, 2009

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**MONITORING PROGRAM**

1. The primary objectives of the Monitoring Program include, but are not limited to:
  - (a) Assessing the chemical, physical, and biological impacts of municipal storm water sewer system discharges on receiving waters.
  - (b) Assessing the overall health and evaluating long-term trends in receiving water quality.
  - (c) Assessing compliance with TMDL targets and water quality objectives.
  - (d) Characterization of the quality of storm water discharges.
  - (e) Identifying sources of pollutants.
  - (f) Measuring and improving the effectiveness of measures implemented under this Order.
  
2. The results of the monitoring requirements outlined below shall be used to refine BMPs for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in Ventura County.
  
3. The Permittees shall implement the Monitoring Program as follows:

**CORE MONITORING**

**A. Mass Emissions**

- I. The Principal Permittee shall monitor mass emissions to accomplish the following objectives:
  - i. Estimate the mass emissions from the MS4 to the watershed.
  - ii. Assess trends in the mass emissions over time.
  - iii. Determine if the MS4 is contributing to exceedances of water quality objectives by comparing results to applicable water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan) and the California Toxics Rule (CTR).
  
1. The Principal Permittee shall monitor mass emissions from the following 3 mass emission stations:
  - (a) ME-VR2 for Ventura River
  - (b) ME-SCR for Santa Clara River
  - (c) ME-CC for Calleguas Creek

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2. The Principal Permittee shall monitor the 3 mass emission stations on an annual basis as per A.3. below.
3. The Principal Permittee shall monitor each mass emission station each year as follows:
  - (a) The first storm event of the wet season that produces a 20% or greater increase in base stream flow, and 2 additional storm events; all storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rainfall) from the previously measurable storm event (0.25 inches of rain).
  - (b) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) per mass emission station.
4. Samples for mass emission monitoring may be taken with the same type of automatic sampler used under Order 00-108. . Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
5. Samplers shall be set to monitor storms that produce a 20% or greater increase in base stream flow.
6. Samples shall be flow-weighted composites, collected during the first 24 hours or for the duration of the storm if it is less than 24 hours.
7. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 and 0.24 inches of rain.
8. The flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours, with each aliquot being separated by a minimum of 15 minutes within each hour of discharge, unless the Regional Water Board Executive Officer approves an alternate protocol.
9. Flow may be estimated using U.S. EPA methods at sites where flow measurement devices are not in place.
10. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>), pH, temperature, and DO.
11. Each mass emission shall analyze for all of the Pollutants of Concern (POC) in its specific watershed listed in Attachment "B" (Calleguas Creek Watershed,

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Santa Clara River Watershed, and Ventura River Watershed Pollutants of Concern).

12. Each mass emission station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels), during the first storm event of the wet season for each year sampled. If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the California Toxics Rule (CTR) for chronic criteria. If a constituent is detected exceeding a Basin Plan objective, and/ or CTR criteria then the constituent shall be analyzed for the remainder of the Order, at the mass emission station where it was detected.
13. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests.
14. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within two working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation.
  - (b) Explanation of circumstance(s) with documentation.
  - (c) Statement of corrective action for the future.
15. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "K".
16. Results of monitoring from each mass emission station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water site at [MS4stormwaterRB4@waterboards.ca.gov](mailto:MS4stormwaterRB4@waterboards.ca.gov), no later than 90 days from sample collection date, highlighting exceedances (Pollutants of Concern, POC) to the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per mass emission station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).

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- 17. A summary of the annual mass emission monitoring results highlighting exceedances (POC) of the Basin Plan objectives and the CTR for acute criteria, with corresponding sampling dates per mass emission station, shall be included with the Annual Storm Water Report.

**B. Major Outfalls**

- I. The Principal Permittee shall monitor major storm drain outfalls to accomplish the following objectives:
  - i. Estimate the annual pollutant load of the cumulative discharges to waters of the State.
  - ii. Estimate the event mean concentration of the cumulative discharges to waters of the State.
  - iii. Assess trends in the major outfalls over time.
  - iv. Estimate the annual pollutant load of discharges to Waters of the U.S.
  - v. Estimate the event mean concentration of discharges to Waters of the U.S.
  - vi. Assess trends in the major outfalls over time.
  - vii. Determine if the MS4 is contributing to exceedances of MALs, and water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan), and the California Toxics Rule (CTR).
  
- 1. The Principal Permittee shall monitor:
  - (a) End-of-pipe of major outfalls, identified in Attachment I, transporting representative discharges from each Permittee's Municipal drainage area to:
    - (1) Major outfalls listed in Attachment "I" (Storm Water Monitoring Program's Major Outfall Stations).
  - (b) The first storm event of the wet season that produces at least 0.25 inches of rain, and 2 additional storm events per year, all storm events shall be separated by 7 days of dry weather (less than 0.1 inch) from the previously measurable storm event (0.25 inches).
  - (c) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) shall be sampled per identified major outfall.
  - (d) In the first year after permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment "I" are to be monitored annually according to the schedule above.
  
- 2. If an identified monitoring site is found to be unworkable due to immitigable factors the sampling location may be relocated upon Executive Officer's approval of another location. Best professional judgment shall be used to balance the site selection rationale and criteria to determine the most appropriate site. Due to limited potential locations of urban outfalls to be monitored, there may be no sites that satisfy all criteria and rationale. Sites will be selected to satisfy the following criteria:

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- (a) Maximize urban runoff contribution;
  - (b) Greater than 60% of catchment shall be Permittee's MS4;
  - (c) Attempt shall be made to avoid outfalls that contain discharge from extra-jurisdictional areas (e.g. agriculture land and other NPDES discharges).
  - (d) Drainage area should contain representative land uses in a ratio of use as similar as reasonably possible to that found in the Permittee's jurisdiction.
  - (e) Drainage areas with a higher percentage of the Permittee's MS4 are preferred;
  - (f) Ability to accurately measure flow
  - (g) Safety of monitoring personnel is the highest priority. Specific location of sampling collection may be upstream of the actual outfall if field safety or accurate flow measurement require it.
3. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 inches and 0.24 inches of rain.
  4. Samples shall be collected during the first 24 hours of storm water discharge or for the entire storm water discharge if it is less than 24 hours.
  5. Samples shall be flow-weighted composites and can be collected automatically or manually (see subparts A.7 and A.8) in accordance with U.S. EPA protocol or other procedure approved by the Executive Officer.
  6. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>) and pH, temperature, and DO.
  7. Major outfall samples taken within a subwatershed shall be analyzed for the biological and chemical parameters listed in the preceding subpart B.6, and for all of the constituents in Attachment "C" (Municipal Action Levels), Table 1 as listed below:
    - (a) TSS
    - (b) Nitrate & Nitrite- Total
    - (c) Cu- Total
    - (d) Pb- Total
    - (e) Zn- Total
  8. Each major outfall station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels) twice per wet season, per year, (1<sup>st</sup> storm event of the wet season and one other storm event of the wet season). If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the

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California Toxics Rule (CTR) acute criteria. If a constituent is detected exceeding a Basin Plan objective, and/or chronic CTR criteria then the constituent shall be sampled for the remainder of the Order at the major outfall station where it was detected.

9. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests. Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
10. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within 2 working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
11. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "K".
12. Results of monitoring from each major outfall station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water Site at [MS4stormwaterRB4@waterboards.ca.gov](mailto:MS4stormwaterRB4@waterboards.ca.gov), no later than 90 days from sample collection date, highlighting exceedances to the MALs, the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per major outfall station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
13. A summary of the annual major outfall monitoring results, highlighting exceedances (pollutants of concern POC) to the MALs, the Basin Plan objectives, and the CTR for acute criteria with corresponding sampling dates per major outfall station, shall be included with the Annual Storm Water Report.

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**C. Dry Weather Analytical Monitoring**

- 1. The Principal Permittee shall develop and implement a monitoring program to characterize pollutant discharges from representative MS4 outfalls in each municipality and in the unincorporated County area during dry weather. This monitoring program shall be implemented within each jurisdiction and shall begin within the 2010-2011 monitoring year.
- 1. Dry weather analytical monitoring shall include:
  - (a) Analytical monitoring, field measurements and observations at selected stations.
  - (b) Reports of analytical data in a SWAMP comparable format.
- 2. Selection of Dry Weather Analytical Monitoring stations: Based upon a review program data, the storm drain system and land uses, the Co-Permittees shall select dry weather analytical monitoring stations within their jurisdiction. At least 5 dry weather analytical monitoring stations need to be identified per Co-Permittee. The dry weather analytical monitoring stations shall be established using the following guidelines and criteria:
  - (a) Stations should be located downstream of municipal land uses where illegal or illicit activity may occur;
  - (b) Stations shall be located at accessible downstream locations within the storm drain system of each municipality or at major outfalls;
  - (c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
  - (d) Each Co-Permittee shall determine a primary station and at least 4 alternate stations to be sampled in case primary stations do not have flow in dry weather. The dry weather monitoring may utilize the same outfalls as those used for wet weather monitoring, if such outfalls are found to discharge during dry weather.
  - (e) Fact sheets of general information such as site descriptions (i.e., conveyance type, dominant watershed land uses) shall be created.
- 3. The Principal and Co-Permittees shall develop and/or update written procedures for dry weather analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:
  - (a) Dry weather analytical monitoring shall be conducted at each identified station at least once between May 1st and September 30th of each year.

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- (b) If flow or ponded runoff is observed at a dry weather analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample.
- (c) Record general information such as site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
4. At a minimum, collect samples for analytical laboratory analysis of the following constituents:
- Total Hardness
  - Total Organic Carbon or Oil and Grease
  - Lead (Dissolved)
  - Zinc (Dissolved)
  - Copper (Dissolved)
  - Total Coliform bacteria
  - E. Coli bacteria
5. Other required field observations include:
- Flow Estimation
  - Temperature
  - pH
  - Odor
  - Color
  - Turbidity
  - Floatables (foam, oil sheen)
  - Staining
  - Algal growth
6. If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
7. Visually assess the presence of trash in receiving waters and urban runoff. Assessments of trash shall provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.
8. Develop and/or update procedures for source identification follow up investigations in the event elevated levels are found. These procedures shall be consistent with procedures required in IC/ID section.

#### D. Aquatic Toxicity Monitoring

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- I. The objective of aquatic toxicity monitoring is to evaluate if storm water (wet weather) discharges are causing or contributing to chronic toxic impacts on aquatic life by the following:
  - i. Toxicity testing at mass emission and major outfall stations to assess impacts on the marine and freshwater environments.
  
1. The Principal Permittee shall collect and analyze mass emission and major outfall samples for toxicity to evaluate the extent and causes of toxicity in receiving waters. Permittees shall utilize documents such as: Ventura County's Technical Guidance Manual for Storm Water Quality Control Measures and U.S. EPA's National Management Measures to Control Nonpoint Source Pollution from Urban Areas to implement measures to eliminate or reduce sources of toxicity in storm water.
2. Toxicity samples may be flow-weighted composite samples or grab samples for both wet and dry event sampling (see subparts A.7 and A.8).
3. Volume of sample shall be determined by specific test methods to be used. At a minimum it is suggested to collect 5 gallons for baseline testing, and an additional 5 gallons for TIE studies. Sufficient sample volume shall be collected to perform the required toxicity tests.
4. All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before initial use of a sample.
5. When toxicity tests can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then the following shall be submitted to the Regional Water Board Executive Officer within 2 working days:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
6. The Principal Permittee shall conduct critical life stage chronic toxicity tests on undiluted samples in accordance with:
  - (a) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to *West Coast* Marine and Estuarine Organisms, (EPA/600/R-95/136, 1995) for all mass emission stations, and for major outfalls discharging to marine and estuarine environments, or
  - (b) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, October 2002 (EPA/821/R-02/013, 2002) or current version for major outfalls discharging to freshwater environments.

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7. The Principal Permittee shall analyze samples for chronic toxicity according to the schedule below:
- (a) During the first year of the Order, 2 storm events shall be monitored at each mass emission and major outfall station. The first storm event of the wet season that produces at least 0.25 inches of rain, and 1 additional storm event. All storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rain) from the previously measurable storm event.
    - (1) During the first year of the Order, all 3 test species shall be used for their respective chronic toxicity test method for the 2 storm events monitored, to determine the most sensitive test species for each monitoring station (see subparts D.8 and D.9 below).
  - (b) During the next 4 years of the Order, the first storm event of the wet season that produces at least 0.25 inches of rain shall be monitored for each mass emission and major outfall station.
    - (1) During the next 4 years of the Order, the most sensitive test species determined from the first year of testing at each mass emission and major outfall station shall be used for its respective chronic toxicity test method (see subpart D.6).
8. Marine and Estuarine Species and Test Methods.
- (a) Marine and estuarine species and short-term test methods for estimating the chronic toxicity of NPDES effluents shall be used and are found in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) and applicable water quality standards; also see 40 CFR Parts 122.41(j)(4) and 122.44(d)(1)(iv).
    - (1) The Permittee shall conduct:
      - (A) A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01)
      - (B) A static non-renewal toxicity test with the giant kelp *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and
      - (C) A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, (Fertilization Test Method 1008.0)
    - (b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.
9. Freshwater Species and Test Methods.
- (a) Species and short-term test methods for estimating the chronic toxicity of NPDES effluent shall be used and are found in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and*

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*Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136).

- (1) The Permittee shall conduct
    - (A) A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0<sup>1</sup>)
    - (B) A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0<sup>1</sup>); and
    - (C) A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0)
  - (b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.
10. The test endpoint data is analyzed using a standard t-test approach. Statistical analysis methods shall be consistent with U.S. EPA test method manuals.
  11. If significant toxicity is found then according to paragraph 10.2.6.2 of the U.S. EPA freshwater test methods manual, all chronic toxicity test results from the multi-concentration tests required by this Order must be reviewed and reported according to U.S. EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA/821/B-00-004, 2000).
  12. Toxic samples shall be immediately subjected to Toxicity Identification Evaluation (TIE) procedures to identify the toxic chemical(s) if toxicity is demonstrated by the standard t-test.
  13. A TIE is to be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA test method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

<sup>1</sup> Daily observations for mortality make it possible to calculate acute toxicity for desired exposure periods (i.e., 7-day LC50, 96-hour LC50, etc.).

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14. The Principal Permittee shall complete chronic Phase I (Toxicity Characterization Procedures) TIEs for all sites showing significant toxicity. For the purpose of triggering TIE (Toxicity Characterization Procedures), significant toxicity is defined as at least 50% mortality. The 50% mortality threshold is consistent with the approach recommended in guidance published by USEPA for conducting TIEs (USEPA, 1996), which recommends a minimum threshold of 50% mortality because the probability of completing a successful TIE decreases rapidly for samples with less than this level of toxicity.
- (a) The TIE shall be conducted on test species, demonstrating the most sensitive toxicity response at a sampling station. However, a TIE(s) may be conducted on an additional test species with the caveat that once the toxicant(s) has been identified then the most sensitive test species triggering the TIE event needs to be tested additionally to verify that the toxicant has been identified and addressed.
15. A TIE Prioritization Metric may be utilized to rank sites for TIEs.<sup>2</sup>
16. Toxicity Reduction Evaluation (TRE) when toxicity is identified
- (a) When the same pollutant or class of pollutants is identified through 2 consecutive TIE evaluations, a TRE shall be performed for that identified toxic pollutant.
- (b) The TRE development shall be performed by a neutral third party (retained by the Permittees), in consultation with the Regional Water Board staff.
- (c) The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs are identified, the Permittees shall submit the TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At a minimum, the Plan shall include a discussion of the following items:
- (1) The potential sources of pollutant(s) causing toxicity.
  - (2) A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
  - (3) Recommended BMPs to reduce the pollutant(s) causing toxicity.
  - (4) Proposed post construction control measures to reduce the pollutant(s) causing toxicity.
  - (5) Follow-up monitoring to demonstrate that toxicity has been removed.
- (d) The TRE process shall be coordinated with TMDL development and implementation (i.e., If a TMDL for 4,4'-DDD is being implemented when a TRE for 4,4'-DDD is required, the efforts shall be coordinated to avoid overlap).

<sup>2</sup> Appendix 5. SMC Model Monitoring Program.  
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- 17. Results of Toxicity monitoring conducted in accordance with the Standard Operating Procedure under Standard Provision 14 of this Attachment shall be sent to the Regional Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date for the initial toxicity test and no more than 30 days from completion of each aspect of the analysis for TIEs/TREs. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
- 18. The Annual Storm Water Report shall include:
  - (a) A full laboratory report for all toxicity testing.
  - (b) A summary of the years' mass emission and major outfall monitoring station's toxicity test results reported according to the test methods manual chapter on report preparation and test review.
  - (c) The dates of sample collection and initiation of each toxicity test.
  - (d) All results for effluent parameters monitored concurrently with the toxicity test(s).
  - (e) TIE Phase testing (Phase I, Phase II, and Phase III) that has been or is in the process of being conducted per monitoring station.
  - (f) The development, implementation, and results for each TRE Corrective Action Plan in the Annual Storm Water Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
- 19. When the SMC Standardized Toxicity Testing Guidance is completed, the Regional Water Board Executive Officer may direct Permittees to replace the current toxicity program with the standardized guidance procedure.

**SPECIAL STUDIES**

**E. Pyrethroid Insecticides Study**

- I. The Principal Permittee shall perform a Pyrethroid Insecticides study to accomplish the following objectives:
  - i. Establish baseline data for major watersheds
  - ii. Evaluate whether Pyrethroid Insecticide concentrations are at or approaching levels known to be toxic to sediment-dwelling aquatic organisms.
  - iii. Determine if Pyrethroids discovered are from urban sources.
  - iv. Assess any trends over the permit term.

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1. The Permittees shall incorporate monitoring for Pyrethroid Insecticides within the Calleguas Creek, Santa Clara River and Ventura River Watersheds according to the following:
  - (a) No later than the second year of this Order, monitoring shall begin.
  - (b) Quality Assurance Project Plan (QAPP) to be submitted to the Regional Board for approval 12 months prior to beginning monitoring.
  - (c) In selecting sites to conduct monitoring for Pyrethroid Insecticides, Permittees shall review existing monitoring programs in the watersheds by other public and private entities, watershed coalitions, and citizen volunteers, so as to complement and not duplicate efforts.
  - (d) Establish at least 2 stations along the mainstems of each major watershed river that are influenced by urban discharges.
  - (e) The study shall be repeated every third year following the year monitoring begins.
  
2. The Principal Permittee shall monitor Pyrethroid Insecticides stations according to the following:
  - (a) The Principal Permittee shall monitor 1 sampling event per station per monitoring year.
    - (1) Monitoring shall occur after sediment has settled within the waterbody, and safe access can be assured.
  - (b) Sufficient sediment is to be collected at each station in a pre-cleaned glass jar by skimming the upper 1 cm of the sediment column with a steel scoop, and held on ice until returned to the laboratory.
  - (c) Sediment shall be homogenized in the laboratory by hand mixing, then held at 4 °C (toxicity samples) or -20 °C (chemistry samples).
  - (d) All samples taken shall be analyzed for the following Pyrethroids:
    - (1) bifenthrin
    - (2) cyfluthrin
    - (3) cypermethrin
    - (4) deltamethrin
    - (5) esfenvalerate
    - (6) lambda-cyhalothrin
    - (7) permethrin
    - (8) tralomethrin (if laboratory is capable of analyzing for it)
  - (e) Detection limits for all Pyrethroids shall be as close to 1ng/g (dry weight) as reasonably achievable.
  - (f) Each sediment sample is to measure the following:
    - (1) total organic carbon (TOC).

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3. All samples shall be tested for toxicity to 7 to 10 day old *Hyaella azteca* according to standard U.S. EPA testing methods.<sup>3</sup>
  - (a) Use of the approach described in *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*<sup>4</sup> for toxicity testing shall be used.
4. Analysis by a laboratory that has performed sediment toxicity testing for Pyrethroid Insecticides is preferred.
5. Monitoring results from each station shall be sent electronically to the Regional Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
6. If toxicity is attributed to Pyrethroids then consultation with staff at U.S. EPA, the California Department of Pesticide Regulations and the California Stormwater Quality Association's (CASQA) pesticides committee (UP3 Project web site), shall be required to obtain relevant information to use in developing the recommendations to mitigate Pyrethroids in the Final Report.
7. Final Report for the Pyrethroid Insecticides study shall contain the following:
  - (a) Executive summary
  - (b) Methods
  - (c) Results (including map depicting monitoring stations)
  - (d) Discussion
  - (e) Recommendations to mitigate Pyrethroids
8. The Final Report shall be completed and submitted to the Executive Officer of the Regional Water Board no later than 8 months after completion of the study.

The Pyrethroid Insecticides Study requirement may be satisfied by another tributary monitoring program within the Watershed performing a sediment Pyrethroid Insecticides Study that is monitoring to assess pyrethroid concentrations and sediment toxicity, so as to complement other ongoing programs.

#### F. Hydromodification Control Study

<sup>3</sup> U.S. EPA. *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates*; EPA Publication 600/R-99/064; U.S. Environmental Protection Agency: Washington, DC, 2000; 192 pp.

<sup>4</sup> *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*; Weston, D.P.; Holmes, R.W.; You, J.; Lydy, M.J. *Environ. Sci. Technol.*; (Article); 2005; 39(24); 9780 pp.

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1. The Principal Permittee shall conduct or participate in special studies to develop tools to predict and mitigate the adverse impacts of Hydromodification, and to comply with hydromodification control criteria. This can be achieved by the following:
  - (a) Develop a mapping and classification system for streams based on their susceptibility to the effects of hydromodification.
  - (b) Establish protocols for ongoing monitoring to assess the effects of hydromodification.
  - (c) Develop dynamic models to assess the effects of hydromodification on stream condition.
  - (d) Develop a series of tools that managers can easily apply to make recommendations or set requirements relative to hydromodification for new development and redevelopment.
2. The Principal Permittee may satisfy this requirement by participating in the 'Development of Tools for Hydromodification Assessment and Management' Project undertaken by the SMC and coordinated by the SCCWRP.
3. The Principal Permittee shall continue to partner with the SMC and collect data or sponsor its collection for the Ventura County sites to reduce statistical uncertainty and/ or improve model predictability.
4. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they will satisfy this requirement, no later than (2 months after Order adoption date).

**G. Low Impact Development**

1. The Principal Permittee shall conduct or participate in a special study to assess the effectiveness of low impact development techniques in semi-arid climate regimes such as in Southern California.
2. The Principal Permittee may satisfy this requirement by participating in the SMC project titled "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practice in Southern California".
3. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they are satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special study.

**H. Southern California Bight Project**

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1. The Principal Permittee and Permittees shall participate with other government organizations regulating discharges in southern California in the collaboration to conduct a regional monitoring survey (Southern California Bight Project (SCBP)), which was started in 2008 and to be continued in successive years. The survey's primary objective is to assess the spatial extent and magnitude of ecological disturbances on the mainland continental shelf of the SCB and to describe relative conditions among different regions of the SCBP.
2. The Principal Permittee shall participate on the Steering Committee for the bight-wide monitoring project, and assist with the estuary and nearshore sampling effort requirement of the proposed monitoring project for Ventura County as defined in the SCBP plan.

#### I. Bioassessment

1. The Principal Permittee consents to participate in the following regional water quality program for watershed management and planning:
  - (a) SMC Regional Monitoring Program
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed per year
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six
        - (ii) Integrator sites per watershed
          - (A) Ventura River - One
          - (B) Santa Clara River - One
          - (C) Calleguas Creek - One
    - (b) Ventura County Bioassessment: Permittees shall conduct bioassessment at one fixed site in each of the watersheds above on an annual basis. Southern California Regional Bioassessment protocols shall be used to conduct the Ventura County Bioassessment program.

#### J. Volunteer Monitoring Programs

1. The Permittees shall provide limited assistance if requested in the development and implementation of volunteer monitoring programs in the Ventura watersheds. These include, but are not limited to the following:
  - (a) Ventura River - (Ventura Stream Team).
  - (b) Santa Clara River - (Santa Clara River Stream Team).
  - (c) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program).
  - (d) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program).

#### K. Standard Monitoring Provisions

May 7, 2009

- I. All monitoring activities shall meet the following requirements.
1. Monitoring and Records [40 CFR 122.41(j)(1)]
    - (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  2. Monitoring and Records [40 CFR 122.41(j)(2)] [CWC §13383(a)]
    - (a) The Principal Permittee and Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge (ROWD) and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.
  3. Monitoring and Records [40 CFR 122.21(j)(3)]
    - (a) Records of monitoring information shall include:
      - (1) The date, time of sampling or measurements; exact place, weather conditions, and rain fall amount.
      - (2) The individual(s) who performed the sampling or measurements.
      - (3) The date(s) analyses were performed.
      - (4) The individual(s) who performed the analyses.
      - (5) The analytical techniques or methods used.
      - (6) The results of such analyses.
      - (7) The data sheets showing toxicity test results.
  4. Monitoring and Records [40 CFR 122.21(j)(4)]
    - (a) All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order. If a particular Minimum Level (ML) is not attainable in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure may be used instead.
  5. Monitoring and Records [40 CFR 122.21(j)(5)]
    - (a) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

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6. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory:
    - (a) Certified for such analyses by an appropriate governmental regulatory agency.
    - (b) Participated in 'Intercalibration Studies' for storm water pollutant analysis conducted by the SMC.<sup>5</sup>
    - (c) Which performs laboratory analyses consistent with the storm water monitoring guidelines as specified in, the *Stormwater Monitoring Coalition Laboratory Guidance Document*, 2nd Edition R. Gossett and K. Schiff (2007), and its revisions.
  
  7. For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (SIP) shall be used for all analyses, unless otherwise specified. The MLs from the SIP are incorporated into Attachment "G".
  
  8. The Monitoring Report shall specify the analytical method used, the Method Detection Level (MDL) and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with 1 of the following methods, as appropriate:
    - (a) An actual numerical value for sample results greater than or equal to the ML.
    - (b) "Not-detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.
    - (c) "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
  
  9. For priority toxic pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must

<sup>5</sup> The 'Intercalibration Studies' are conducted periodically by the SMC to establish a consensus based approach for achieving minimal levels of comparability among different testing laboratories for storm water samples to minimize analytical procedure bias. Stormwater Monitoring Coalition Laboratory Document, Technical Report 420 (2004) and subsequent revisions and augmentations.

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submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to raising the ML for any constituent.

10. Monitoring Reports [40 CFR 122.41(I)(4)(ii)]
  - (a) If the Principal Permittee monitors any pollutant more frequently than required by the Order using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Monitoring Reports.
11. Monitoring Reports [40 CFR 122.41(I)(4)(iii)]
  - (a) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
12. If no flow occurred during the reporting period, then the Monitoring Report shall, so state.
13. The Regional Water Board Executive Officer or the Regional Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:
  - (a) By petition of the Principal Permittee or by petition of interested parties after submittal of the Monitoring Report. Such petition shall be filed not later than 60 days after the Monitoring Report submittal date, or
  - (b) As deemed necessary by the Regional Water Board Executive Officer following notice to the Principal Permittee.
14. The Principal Permittee must provide a copy of the Standard Operation Procedures (SOPs) for the Monitoring Program No. CI 7388 to the Regional Water Board upon request. The SOP will consist of five elements: Title page, Table of Contents, Procedures, Quality Assurance/ Quality Control (QA/ QC), and References. Briefly describe the purpose of the work or process, including any regulatory information or standards that are appropriate to the SOP process, and the scope to indicate what is covered. Denote what sequential procedures should be followed, divided into significant sections; e.g., possible interferences, equipment needed personnel qualifications, and safety considerations. Describe QA/ QC activities, and list any cited or significant references.

**L. Total Maximum Daily Load (TMDL) Monitoring**

1. TMDL monitoring is to determine compliance with the TMDL Waste Load Allocations (WLAs) and numeric targets for the MS4 Permittees that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA.

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- 2. TMDL monitoring is in accordance with approved TMDLs as discussed in part 6 of the permit. TMDL monitoring for specific watersheds is in accordance with the agreed upon monitoring plans submitted by stakeholders, including MS4 Permittees.

**M. Beach Water Quality Monitoring**

If funding from state and federal sources is not available for beach water quality monitoring during the winter season (October 15 – April 15) the Principal Permittee within thirty days of notice shall conduct beach water quality sampling and analysis at a maximum of ten sites in accordance with the procedures and locations used in AB 411 monitoring and listed below:

- 1. Rincon Beach – 25 yards south of the creek mouth\*
  - 2. Oil Piers Beach – south of the drain, bottom of the wood staircase
  - 3. Faria County Park – south of the drain at the north end of the park\*
  - 4. Solimar Beach – south (end of east gate access road)\*
  - 5. Emma Wood State Beach – 50 yards south of first drain
  - 6. Oxnard Beach – at J Street drain
  - 7. Surfer’s Point at Seaside – end of the access path via wooden gate
  - 8. Promenade Park – Figueroa Street
  - 9. Surfer’s Knoll – beach adjacent to the parking lot\*
  - 10. San Buenaventura Beach – south of drain at San Jon Road
- \* Not associated with MS4 discharges.

Ordered by:

Tracy J. Egoscue  
Executive Officer

Date: May 7, 2009

May 7, 2009



## ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

CONSTITUENTS	MLs
<b>CONVENTIONAL POLLUTANTS</b>	
	<b>mg/L</b>
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 - 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
<b>BACTERIA (single sample limits)</b>	
	<b>MPN/100ml</b>
Total coliform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
<b>GENERAL</b>	
	<b>mg/L</b>
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1 umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L

<sup>1</sup> For priority pollutants, MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified. Method Detection Levels (MDLs) must be lower than or equal to the ML value, unless otherwise approved by the Regional Board.

**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>METALS (Dissolved &amp; Total)</b>	
	<b>µg/L</b>
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Copper	0.5
Hex. Chromium	5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1
<b>SEMIVOLATILE ORGANIC COMPOUNDS</b>	
	<b>µg/L</b>
<b>ACIDS</b>	
	<b>µg/L</b>
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
<b>BASE/NEUTRAL</b>	
	<b>µg/L</b>
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10

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**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>BASE/NEUTRAL</b>	<b>µg/L</b>
Benzo(k)fluoranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexyl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	10
2,4-Dinitrotoluene	5
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1
Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1

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**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>CHLORINATED PESTICIDES</b>	
	<b>µg/L</b>
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
<b>POLYCHLORINATED BIPHENYLS</b>	
	<b>µg/L</b>
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1254	0.5
Aroclor-1260	0.5
<b>ORGANOPHOSPHATE PESTICIDES</b>	
	<b>µg/L</b>
Atrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
<b>HERBICIDES</b>	
	<b>µg/L</b>
2,4-D	0.02
Glyphosate	5
2,4,5-TP-SILVEX	0.2

**ATTACHMENT I**  
Storm Water Monitoring Program's Major Outfall Stations

PERMITTEE	STATION ID	LATITUDE	LONGITUDE
City of Camarillo	Camarillo-1	34°13'10.00"N	119° 3'58.06"W
City of Fillmore	Fillmore-1	34°24'16.51"N	118°55'50.47"W
Unincorporated Ventura County	VCMeiners Oaks-1	34°26'43.98"N	119°17'25.18"W
City of Moorpark	Moorpark-1	34°16'44.29"N	118°54'19.40"W
City of Ojai	Ojai-1	34°26'41.25"N	119°14'28.43"W
City of Oxnard	Oxnard-1	34°14'17.38"N	119°11'23.08"W
City of Port Hueneme	Hueneme-1	34° 8'29.30"N	119°11'21.09"W
City of Santa Paula	Santa Paula-1	34°20'54.99"N	119° 3'19.82"W
City of Simi Valley	Simi Valley-1	34°16'18.59"N	118°47'1.51"W
City of Thousand Oaks	Thousand Oaks-1	34°12'49.16"N	118°55'16.24"W
City of Ventura	Ventura-1	34°14'35.86"N	119°11'40.86"W

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STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
REPORTING PROGRAM - No. CI 7388  
FOR  
ORDER 09-xxxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009



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## Reporting Program Requirements

The Principal Permittee shall submit by December 15<sup>th</sup> of each year, beginning the year of 2007, an Annual Report to the Regional Water Board Executive Officer in the form of one hard copy and three compact disks (CD) (or equivalent electronic format).

1. The Annual Report shall document the status of the General Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1-Monitoring Report; and
  - (b) The requirements described under Part 2- Program Report.
2. Plans shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a compact disk (CD), submit 1 hard copy and 3 CD copies.
3. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.
4. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.

## PART 1 - MONITORING REPORT

### A. The following shall be included in the Annual Report:

1. Mass Emissions
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the mass emission station annual monitoring results highlighting exceedences (POC) with corresponding sampling.
2. Major Outfalls
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the major outfalls station annual monitoring results highlighting exceedences (POC) with corresponding sampling dates.
  - (d) Outfall(s) name and ID number (if applicable).

- 3. Aquatic Toxicity Monitoring
  - (a) An analysis of the mass emission station and major outfall station samples for aquatic toxicity.
  - (b) A report on the development, implementation, and results for each TRE Corrective Action Plan in the Annual Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  - (c) Report on the development, implementation, and results for each TRE Corrective Action Plan, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  - (d) All constituents (POCs) that caused toxicity or exceeded any applicable water quality objectives at the associated mass emission and/ or major outfall station the previous year shall be listed.
  - (e) A summary of the mass emission station and major outfall station annual monitoring results with corresponding sampling dates and Tox output.
- 4. TMDL Compliance Monitoring
  - (a) A summary of the annual monitoring results for each TMDL.
    - (1) Corresponding sampling dates and Tox output (if applicable).
- 5. Bioassessment
  - (a) Assess the effects of MS4 discharges on the biological integrity of the waterbody.
  - (b) Permittees shall conduct bioassessment, [using Southern California Regional Bioassessment protocol], at one fixed site in each of the watersheds below on an annual basis:
    - (1) Ventura River
    - (2) Santa Clara River
    - (3) Calleguas Creek

**B. The following shall be submitted to the Regional Water Board Executive Officer:**

- 1. Aquatic Toxicity Monitoring
  - (a) A TRE Corrective Action Plan within 30 days after the source of toxicity and appropriate BMPs are identified.
- 2. Pyrethroid Insecticides Study
  - (a) Pyrethroid insecticides study final report, no later than 8 months after completion of the study.
- 3. Hydromodification Control Study
  - (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
- 4. Non-Compliance

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- (a) When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted:
- (1) Statement of situation.
  - (2) Explanation of circumstance(s) with documentation.
  - (3) Statement of corrective action for the future.
5. Low Impact Development
- (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
6. Volunteer Monitoring Program
- (a) Results as obtained by volunteer monitoring programs in the Ventura watersheds including, but not limited to, the following:
- (1) Ventura River - (Ventura Stream Team)
  - (2) Santa Clara River - (Santa Clara River Stream Team)
  - (3) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program)
  - (4) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program)

**C. Submitted electronically to the Regional Water Board, the following shall be:**

1. Mass Emissions
  - (a) Monitoring results no later than 45 days from sample collection date.
2. Major Outfalls
  - (a) Monitoring results no later than 45 days from sample collection date.
3. Aquatic Toxicity Monitoring
  - (a) Monitoring results no later than 45 days from sample collection date.
3. TMDL Compliance Monitoring
  - (a) Monitoring results no later than 45 days from sample collection date.
4. Non-Compliance
  - (a) When the Order 's monitoring requirements can not be performed due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted to the Regional Water Board Executive Officer:
    - (1) Statement of situation.
    - (2) Explanation of circumstance(s) with documentation.
    - (3) Statement of corrective action for the future.

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5. Data transmitted shall be in the SMCs Standardized Data Transfer Formats (SDTFs) and all updates are to be adhered to.<sup>1</sup>
- (a) Regional Water Board's Storm Water E-mail Address:  
MS4stormwaterrb4@waterboards.ca.gov
6. Beach Water Monitoring
- (a) Assess bacteriological levels at various beaches in Ventura County, ensuring compliance with beach water quality standards.
- (b) Reports of beach monitoring shall be submitted to the Regional Board electronically within one business day of completion of analysis..

## PART 2 - PROGRAM REPORT

On an annual basis the Permittees shall complete an Annual Monitoring Program Report that responds adequately to the evaluative questions below which correspond to the Order.

### DISCHARGE PROHIBITIONS

- (a) Have you effectively prohibited all non-storm discharges into the MS4 and watercourses?
- (b) If there are any exceptions in the municipal code, list the exceptions to the municipal code. In other words, which non-storm water discharges does your municipality allow? Under what conditions are they allowed (with BMPs)? List which BMPs are required prior to discharge.
- (c) Do you have a procedure to assure that any project within your jurisdiction which may undertake ground water dewatering obtain a permit from the Regional Water Board?
- (d) How many projects are permitted to dewater in your jurisdiction?
- (e) How many are permanent dewatering to continue after construction is completed?
- (f) Do you have a permitting/ permission system for the discharge of dechlorinated/ debrominated swimming pool discharges? Explain it.
- (g) If yes, how many swimming pools are drained with the agency's permit/ permission?
- (h) How do you ensure that discharge limits for chlorine, bromine, etc are not exceeded?
- (i) Do you allow the discharge of "salt water" swimming pool discharges? If yes
- (j) Do you have a permitting/ permission system for the discharge of "salt water" swimming pool discharges? Explain it.

<sup>1</sup> The SMC developed a SDTFs for use by member agencies for electronic recording and transfer of storm water monitoring data. Southern California Coastal Water Research Project, Technical Report 421 (August, 2004).

**RECEIVING WATER LIMITATIONS**

1. At any time, has the discharge from the MS4 caused or contributed to the violation of water quality objectives or water quality standards?
2. At any time, has the discharge from the MS4 for which a Permittee is at least partially responsible, caused or contributed to a condition of nuisance?
3. At any time, has the discharge of pollutant(s) from the MS4 exceeded the MS4 Waste Load Allocation(s) for Wet Weather Discharges?
4. For pollutant(s) which continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, what has the Permittee implemented to eliminate future water quality impairments?

**PART 3 - STORM WATER QUALITY MANAGEMENT PROGRAM  
IMPLEMENTATION****A. General Requirements****B. Legal Authority**

1. Does your municipal agency possess all the necessary legal authority to implement and enforce each requirement of this Order?
2. If the answer is no, explain why not.
3. By what date certain will the municipal agency have all the necessary legal authority?
4. Attach a copy of the new or updated statement by its legal counsel that the Permittee has obtained all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.
5. After submitting the Statement from your legal counsel, was your city's municipal code (or other legal authority) changed (Any section that applies to or affects storm water permitting or requirements)? On what date(s) was it changed? Provide the changes.

**C. Fiscal Resources**

1. Provide a detailed Annual Budget Summary of the Permittee's allocation of funds expended to implement the activities required to comply with the conditions of this Order.
2. Indicate the source(s) of funding (whether general funds; and/ or Benefit Assessment Program funds; plan review fees; permit fees; industrial/ commercial user fee; revenue bonds; grants; or other funding mechanism. Each Permittee's Annual Budget Summary shall separately include:
3. Annual Budget Summary of expenditures applied to the storm water management program and also identify the storm water budget for the following year, using

estimated percentages and written explanations where necessary, for the specific categories noted below:

(a) Program Overall Management Activities;

(1) Administrative costs

(b) Program Required Activities Implementation;

Provide an estimated percent breakdown of expenditures for the categories below:

(1) Illicit connection/ illicit discharge

(2) Development planning

(3) Development construction

(4) Construction inspection activities

(5) Industrial/ Commercial inspection activities

(6) Public Agency Activities

(7) Maintenance of Structural BMPs and Treatment Control BMPs

(A) Municipal Street Sweeping for Commercial/ Industrial landuse only;

(B) Catch basin clean-outs (including dumping fees);

(C) Storm drain clean-outs (including dumping fees); and

(D) Other costs (describe).

(8) Public Information and Participation;

(9) Monitoring Program; and

(10) Miscellaneous Expenditures (describe).

**D. Designation and Responsibilities of the Principal Permittee**

The Principal Permittee shall submit within the Annual Program Report information on the implementation of the following:

1. Coordination and facilitation of activities to comply with the requirements of this Order;
2. Evaluation, assessment, and summary of the results of the monitoring program and the effectiveness of the implementation of BMPs and any recommended change.

**E. Responsibilities of the Permittees**

Each Permittee shall include within the Annual Program Report information on the implementation of the following:

1. A statement under penalty of perjury that the Permittee is or is not in compliance with the requirements of this Order and any subsequent modifications thereto.
2. A summary of how coordination occurs among its internal departments and agencies to ensure the implementation of the requirements of this Order.
3. Description of the intra-agency coordination by Agency departments (e.g. Community Development (Planning), Public Works, Sanitation, Engineering, Fire Department, Building and Safety, Code Enforcement, Public Health, Water and/ or Power Department, etc.) to ensure the successful implementation of the provisions of this Order.

- 4. In addition to the Budget Summary, identify any supplemental dedicated budgets for the storm water categories listed.
- 5. Identify the staff which participated at all committee or subcommittee meetings and when.

**PART 4 - SPECIAL PROVISIONS**

**A. General Requirements**

- 1. Best Management Practice Substitution
  - (a) Did the Regional Water Board Executive Officer approve any site-specific BMP substitution for your agency?
  - (b) If so, describe implementation of that/ those BMP(s).

**B. Watershed Initiative Participation**

- 1. Describe your participation (Principal Permittee) and present data results in the following:
  - (a) Southern California Stormwater Monitoring Coalitions' (SMC) Regional Monitoring program for the Southern California Regional Bioassessment.

**C. Public Information and Participation Program (PIPP)**

- 1. Describe the Permittee successes in:
  - Measurably increasing the knowledge of the target audiences regarding the MS4, the impacts of storm water pollution on receiving waters and potential solutions to mitigate the problems caused;
  - Measurably changing the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions;
  - Involving and engaging communities in Ventura County to participate in mitigating the impacts of storm water pollution.
- 2. Residential Program
  - (a) Did the Permittee label each storm drain inlet that they own with a legible "no dumping" message.
  - (b) How many inlets were labeled this year?
  - (c) How many inlets were labeled cumulatively?
  - (d) Did the Permittee install signs with prohibitive language discouraging illegal dumping at designated public access points to creeks, other relevant water bodies, and channels?
  - (e) How many?

Public Reporting

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- (a) Identify the staff person(s) who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/ dumping, faded or lack of catch basin stencils, and general storm water management information.
- (b) Did the Permittee update this information by July 1 of this year?
- (c) The Principal Permittee shall compile a list of the general public reporting contacts from all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request.

#### Outreach and Education

- (1) Provide documentation to show that the Permittees implemented the following activities:
- Storm Water pollution prevention advertising campaign.
  - Storm Water pollution prevention public service announcements.
  - Distribution of storm water pollution prevention public education materials to auto parts stores, home improvement centers and pet shops/ feed stores in regards to information on the proper storage and disposal of household waste materials, construction waste materials and vehicle waste fluids, the proper use of fertilizers and pesticides and the proper disposal of animal wastes.
  - Organization of watershed Citizen Advisory Groups/ Committees to develop/ implement effective methods to educate the public about storm water pollution.
  - Organization of events for residents and population subgroups.
  - Maintenance of the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), including educational materials.
- (2) Provide documentation to show that the Principal Permittee implemented the strategy to educate ethnic communities through culturally acceptable and effective methods.
- (3) Did each Permittee implement outreach efforts to residents and school children related to the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices?
- (4) Did the Permittees make demonstrable positive effects on the general public related to storm water quality?
- (5) On 4 above, explain how so.
- (6) Did the Principal Permittee, in cooperation with the Permittees, provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution?
- (8) Provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee and changes to contact information no later than 30 days after a change occurs.



- (9) Provide the assessment of the strategy to measure the effectiveness of in-school educational programs.

Businesses Program

- (a) Corporate Outreach
- (b) Provide a progress update on the Corporate Outreach program.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in storm water runoff. Except as specified in other sections of this Order, pollutant reduction and control measures may be used alone or in combination, and may include Structural Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollution generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program Report shall include requirements to: (1) track, (2) inspect, and (3) ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water runoff.

- 1. Inventory of Critical Sources
  - (a) Describe how the critical sources are inventoried. (whether via a watershed-based inventory or database or GIS. Provide a sample.
  - (b) Each Permittee shall include the following minimum fields of information for each critical sources industrial and commercial facility.
    - (1) Name of facility and owner/ operator.
    - (2) Address of facility.
    - (3) Coverage under the ISWGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
    - (4) A narrative description including SIC (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
  - (c) Did each Permittee update its inventory of critical sources annually?
  - (d) Critical Source Inventory Database

Did you (individually or jointly) update the Database for Critical Sources Inventory?	Yes <input type="checkbox"/>
	No <input type="checkbox"/>

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Comments/ Explanation/ Conclusion:

2. Inspection Program

(a) The Permittee shall verify the following for each inspection:

- (1) The facility has a current Waste Discharge Identification (WDID) number or a current No Exposure Certification for discharging storm water associated with industrial activity?
- (2) A Storm Water Pollution Prevention Plan available on-site?
- (3) The facility is effectively implementing BMPs in compliance with County and municipal ordinances including the source control BMPs outlined in Part 4.D. of this Order
- (4) The facility needs to implement additional treatment control BMPs where the storm water from the MS4 discharges to a CWA §303(d) listed water body?

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Order No. 08-xxx

APDES No. CAS004002  
 Tentative Ventura County Municipal Separate Storm Water Permit  
 Attachment H - Reporting Program No. CI 7388

Provide the reporting data as suggested in the following table.

Category	Initial Number of Facilities at the start of cycle proposed for inspection by categories (after the initial year, the updated number based on the new data)	Number of facilities inspected in the current reporting year	% Completed at the time of this report for present cycle (from the initial value, and from the updated value after first cycle)	Total number since permit adoption
Landfills				
TSDF				
Comments/ Explanation/ Conclusion:				

- Did each Permittee perform an initial inspection at all facilities in the categories listed no later than (two years after the adoption of the Order)?
- All facilities determined as having exposure of industrial activities to storm water are subject to a second compliance inspection. Were all inspections completed?
- Was there a minimum interval of six months between the first and the second compliance inspection per site as required?

R E V I S E D T E N T A T I V E

BMPs Implementation

Provide the reporting data as suggested in the following table.

Category	Number of facilities inspected by category this reporting year	Number of facilities identified as adequately implementing BMPs as specified in this reporting year	Percent adequately implementing out of total in this reporting year	Number of facilities required to implement or upgrade in this reporting year	Number of facilities inspected by category in this reporting cycle	Number of facilities identified as adequately implementing BMPs as specified in this reporting cycle	Percent adequately implementing in this reporting cycle	Number of facilities required to implement or upgrade in this reporting cycle	Total Number during this permit adequately implementing	Total Number during this permit required to implement or upgrade
Landfills										
etc...										

Comments/ Explanation/ Conclusion:

Tentative Ventura County Municipal Separate Storm Sewer System Permit  
Attachment H - Reporting Program No. CI 7388

R E V I S E D T E N T A T I V E

Enforcement Activities

Provide the reporting data as suggested in the following tables.

Enforcement Actions by categories (e.g. Warning letter, NOV, referral to D.A., etc.)	Number of facilities issued enforcement actions in the current reporting year	Number of facilities (re)inspected due to enforcement actions in current reporting year	Number of facilities (re)inspected to enforcement actions in current reporting cycle	Number of facilities brought into compliance in the current reporting year	Number of facilities brought into compliance in current reporting cycle	Total number of enforcement actions since permit adoption (by category)
NOVs						
Etc...						

Facilities by category	Number of Warning letters	Number of NOV's	Number of Referrals	Number of Other(Explain)
Landfill				
Etc...				
Comments/ Explanation/ Conclusion:				

Nurseries and nursery centers

- (a) At nurseries subject to the agricultural waiver issued by the Regional Water Board, provide a spreadsheet with the following information:
  - How many operators have enrolled under the waiver?
  - What is their identification number?
  - How many nonfilers did you notify to apply under the agricultural waiver?
- (b) Did you submit electronically semiannually to the Regional Water Board a list with the names of facilities notified to apply for the waiver?

Ensuring Compliance of Critical Sources

- (a) On how many sites did you determine that a BMP is infeasible, and require implementation of other BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges?
- (b) For critical sources that discharge to ESAs or that are tributary to CWA § 303(d) impaired water bodies, does the Permittee require operators to implement additional controls to reduce pollutants in storm water runoff that are causing or contributing to exceedences of Water Quality Standards?

Investigation of Complaints Regarding Facilities – Transmitted by the RB Staff

- (a) How many investigations were conducted as a result of USEPA or Regional Water Board staff referrals of violators to the Permittee?
- (b) Was the investigation initiated within one business day of being contacted?
- (c) What were the results of each investigation?

**E. Planning and Land Development Program**

1. Low Impact Development

- (a) Did all new development and redevelopment projects integrate Low Impact Development (LID) principles into project design?
- (b) How many did?
- (c) How many did not?
- (d) If not, Why not?

Numeric Hydromodification Mitigation Criteria

1. Hydrologic (Flow/ Volume/ Duration) Control

- (a) Did the Permittees require all new developments and redevelopment projects to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems?
- (b) How many did?
- (c) How many did not?
- (d) Why not?

2. Post Construction Storm Water BMP Program

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- (a) For each project, did each Permittee require that during the construction of a single-family hillside home, actions be taken to:
    - (1) Conserve natural areas?
    - (2) Protect slopes and channels?
    - (3) Provide storm drain system stenciling and signage?
    - (4) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability? and
    - (5) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability?
  - (b) Did each Permittee require that all development projects equal to 1 acre or greater be subject to conditioning and approval of post-construction BMPs as approved by the Regional Water Board in Board Resolution No. R 00-02?
  - (c) Did each Permittee require that the following development projects be subject to conditioning and approval of post-construction BMPs?
    - (1) Retail gasoline outlets 5,000 square feet or more of surface area; How many sites?
    - (2) Restaurants (SIC 5812) 5,000 square feet or more of surface area; How many sites?
    - (3) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces; How many sites?
    - (4) Automotive service facilities (SIC 5013,5014,5541,7532-7534 and 7536-7539) [5,000 square feet or more of surface area]; How many sites? and
    - (5) Redevelopment projects in subject categories that meet Redevelopment thresholds. How many sites?
  - (d) Did each Permittee require that post construction BMPs be subject to conditioning and approval for development projects located in or directly adjacent to or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - (1) Discharge storm water and urban runoff that is likely to impact a sensitive biological species or habitat.
    - (2) Create 2,500 square feet or more of impervious surface area.
3. Numeric Water Quality Design Criteria

**Projects disturbing land areas less than 50 acres**

- (a) How many did the Permittee require that post-construction Treatment Control BMPs incorporate, at a minimum, a volumetric and/ or hydrologic (flow based) treatment control design standard, as identified below to mitigate (infiltrate, filter or treat) storm water runoff as specified below?
- (b) How many sites were exempted from the requirement?
- (c) Why were they exempted?

**Projects disturbing land area of 50 acres or greater**

For sites 50 acres or greater how many did the Permittee require that post-construction Treatment Control BMPs be,

- (a) Designed using an appropriate public domain hydrodynamic model (such as Storm Water Management Model (SWMM) 5 or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF); and incorporate
- (b) Rainfall intensity based on hourly rainfall records;
- (c) An adjustment factor for within hour rainfall variability; and
- (d) Hydraulics of BMP Performance.
- (e) How many projects did this apply to?
- (f) Were there any sites that were exempted from the requirement?
- (g) How many sites were exempted?
- (h) Why were they exempted?

4. Applicability of Numerical Criteria

Did the Permittee require all projects equal to 1 acre or greater and the following additional projects to design and implement post-construction treatment controls to mitigate storm water pollution for the following?:

- (a) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area].
- (b) Retail gasoline outlets [5,000 square feet or more of impervious surface area and with projected Average Daily Traffic (ADT) of 100 or more vehicles]. Subsurface Treatment Control BMPs which may endanger public safety (i.e., create an explosive environment) are considered not appropriate.
- (c) Restaurants (SIC 5812) [5,000 square feet or more of surface area].
- (d) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces.
- (e) Projects located in, adjacent to or discharging directly to an ESA that meet threshold conditions identified above in 2(d).
- (f) Redevelopment projects in subject categories that meet Redevelopment thresholds.
- (g) How many projects did this apply to?
- (h) Were there any sites that were exempted from the requirement?
- (i) How many sites were exempted?
- (j) Why were they exempted?

5. Site Specific Mitigation

- (a) List how many sites did each Permittee require the implementation of a site-specific plan to mitigate post-development storm water for new development and redevelopment not identified in Section XX but which may potentially have

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adverse impacts on post-development storm water quality, with one or more of the following project characteristics:

- (1) Vehicle or equipment fueling areas. How many?
- (2) Vehicle or equipment maintenance areas, including washing
- (3) and repair. How many?
- (4) Commercial or industrial waste handling or storage. How many?
- (5) Outdoor handling or storage of hazardous materials. How many?
- (6) Outdoor manufacturing areas. How many?
- (7) Outdoor food handling or processing. How many?
- (8) Outdoor animal care, confinement, or slaughter. How many?
- (9) Outdoor horticulture activities. How many?

- (b) Were there any sites that were exempted from the requirement?
- (c) How many sites were exempted?
- (d) Why were they exempted?

6. Redevelopment Projects

- (a) Did the Permittees apply the post construction BMP requirements, or site specific requirements including post-construction storm water mitigation to all projects that undergo significant Redevelopment in their respective categories?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?

7. Maintenance Agreement and Transfer

- (a) How many developments subject to post construction BMP requirements and site specific plan requirements actually provided verification of maintenance provisions for Structural and Treatment Control BMPs, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits?
- (b) How many of each verification were received?
- (c) The developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred?
- (d) A signed statement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance and that it meets all local agency design standards?
- (e) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (f) Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning maintenance responsibilities to the Home Owners Association for maintenance of the Structural and Treatment Control BMPs?

- (g) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (h) Another type of legally enforceable agreement that assigns responsibility for the maintenance of post-construction Structural or Treatment Control BMPs?
8. Development Planning Coordination and Enforcement
- (a) Did you inspect each new development and redevelopment project for post construction controls prior to approving and signing off for occupancy?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
9. Regional Storm Water Mitigation Program
- (a) Have you applied to the Regional Water Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements?
10. Inspection and Tracking System for Post Construction Treatment BMPs
- (a) Did you implement the required Geographic Information System (GIS) or other electronic system for tracking projects conditioned for post construction treatment control BMPs?
- (b) Does include the following information? (Answer each separately)
- (1) Municipal Project ID?
  - (2) State WDID No.?
  - (3) Project Acreage?
  - (4) BMP Type and Description?
  - (5) BMP Location (GPS coordinates)?
  - (6) Date of Acceptance?
  - (7) Date of O&M Certification?
  - (8) Maintenance Records
  - (9) Inspection Date and Summary?
  - (10) Corrective Action?
  - (11) Replacement or Repair Dates?
- (c) Did you inspect all facilities to verify proper maintenance and operation of Treatment BMPs previously approved?
- (d) Did you accomplish the following?
- (e) BMP acceptance inspection to ensure proper installation?
- (1) Inspection once every two years of high priority post-construction BMPs to ensure treatment effectiveness, hydraulic function, and vector risk minimization?

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## 11. Developer Technical Guidance and Information

- (a) List dates as to when the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures was last updated to include the following:
- (1) Hydrologic (Peak Flow) Control criteria for volume control described herein and the interim criteria based on hydrograph matching?
  - (2) Expected BMP pollutant removal performance including consistent effluent quality and removal efficiency ranges (International BMP Database, technical reports and the scientific literature?
  - (3) Improved Correlation of BMPs with storm water POC?
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs?
  - (5) BMP Maintenance and Cost considerations?
  - (6) Criteria to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits?

## 12. Project Review and Inter Department Coordination

- (a) Did you ensure that a detailed BMP review was performed including BMP sizing calculations, BMP pollutant removal appropriateness, for each plan submitted with a signed certification?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
- (f) Did you ensure that a clear structure for communication and delineated authority are established between and among municipal departments which have jurisdiction over project review, plan approval, project construction, and site maintenance?
- (g) Explain how?

## 13. California Environmental Quality Act (CEQA) Document Update

Did you incorporate into the CEQA process procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents? (Answer each below separately.)

- (a) Potential impact of project construction on storm water runoff?
- (b) Potential impact of project post-construction activity on Storm Water runoff?
- (c) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?
- (d) Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit?

- (e) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies?
- (f) Potential for significant changes in the flow velocity or volume of Storm Water runoff that can cause environmental harm?
- (g) Potential for significant increases in erosion of the project site or surrounding areas?

15. General Plan Update

- (a) Was your General Plan amended, revised or updated to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended?

(Answer each separately)

- (1) Land Use?
- (2) Housing?
- (3) Conservation?
- (4) Open Space?

- (b) Did you provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or the General Plan was noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq*?

- (c) When?

**F. Development Construction Program**

- 1. Did you implement a program to control runoff from construction activity at all construction sites within your jurisdiction to ensure that the following requirements are effectively implemented? (Answer each separately)

- (a) For construction projects within or adjacent to an environmentally sensitive area (ESAs), did you prohibit grading between October 1 and April 15?
- (b) For construction projects, which include grading on slopes greater than 5:1, that no grading shall occur between October 1 and April 15?
- (c) All construction projects, which directly discharge into a sedimentation/ siltation impaired water body and is listed on the CWA §303 (d) list. No grading shall be occurring between October 1 and April 15?
- (d) If grading operations were not completed before the rainy season began, was grading halted and erosion control measures put in place to minimize erosion until grading resumes after April 15?

- 2. Did you require construction site operators to seek separate coverage from the Regional Water Board wherever ground water dewatering may be necessary, is anticipated, or likely?

- (a) Small Construction Sites

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- (1) For each construction site did you require and inspect to ensure that at each construction site, the minimum set of BMPs were implemented to minimize erosion and sediment loss, and prevent pollution from construction waste?
3. For each construction site 1 acre and greater:
- (a) Did you review and approve a Local Storm Water Pollution Prevention Plan (Local SWPPP), for approval prior to issuance of a grading permit for construction projects?
  - (b) Did you inspect all construction sites for storm water quality requirements during routine inspections a minimum of once during the wet season?
  - (c) Was the Local SWPPP reviewed for compliance with local codes, ordinances, and permits?
  - (d) For inspected sites that have not adequately implemented their Local SWPPP, a follow-up inspection to ensure compliance shall take place within 2 weeks?
  - (e) If compliance had not been attained, did the Permittee take additional actions to achieve compliance (as specified in municipal codes)?
  - (f) How many?
  - (g) For small construction sites one acre and greater (or part of a larger plan of development or sale), did you require, prior to issuing any grading permit, demolition permit, building permit, or construction permit [or any other municipal authorization to move soil and/ or construct or destruct that involves soil disturbance], for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for coverage under the CASGP and a certification that a SWPPP has been prepared by the project developer?
  - (h) Does your agency accept a Local SWPPP as a substitute for the State SWPPP?
  - (i) Is the Local SWPPP at least as inclusive in controls and BMPs as the State SWPPP?
  - (j) Do you require proof of an NOI and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going?
  - (k) What system do you use to track grading permits issued by your agency?
4. Linear Construction
- (a) Do require for any linear construction project or projects (cumulatively) that will cause one acre or more of soil disturbance but not more than 5 acres that coverage be obtained under the Small Linear Underground/ Overhead Construction Projects General Permit?
  - (b) Do you require proof of a Waste Discharger Identification Number (WDID) for filing a Notice of Intent (NOI) for coverage under the and a certification that a SWPPP has been prepared by the project developer, prior to issuing a grading permit, demolition permit building permit, or construction permit (or other authorization to move soil and/ or construct or destruct that involves soil disturbance)?

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5. CASGP Violation Referrals

- (a) Did you make any referral of violations of the new development and redevelopment post construction requirements and municipal storm water ordinances to the Regional Water Board?
- (b) Did you make any referral for suspected violations of the CASGP or Linear Permit coverage requirements

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G. Public Agency Activities Program

1. Sewage System Maintenance, Overflow, and Spill Prevention

- (a) Did you implement a response plan for overflows of the sanitary sewer system within their respective jurisdiction that clearly identifies agencies responsible and telephone numbers and email for any contact?
- (b) How many overflows did you have? \*
- (c) How many did you respond to?
- (d) Do you own and/ or operate a sanitary sewer system?
- (e) If so, did you also Identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4?
- (f) Did you implement procedures and maintenance schedules to prevent sewage spills or leaks from sewage facilities from entering the MS4?
- (g) If you are a Permittee with septic systems in your jurisdiction, how many do you have?
- (h) Did you implement the following for flows of septic leachate to surface waters within their respective jurisdiction, which shall consist at a minimum of the following:
  - (1) Investigation of any complaints received?
  - (2) Immediately respond to overflows for containment, upon notification?
  - (3) Notification to appropriate agencies and public health agencies when a septic system fails and flows to the MS4?

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2. Public Construction Activities Management

- (a) Did you comply with all the Development Planning Program requirements in at public construction projects?
- (b) Did you comply with all the Development Construction Program requirements at Permittee owned or operated construction sites?
- (c) Did you obtain coverage under the CSWGP for all construction activities for (non linear) capital improvement project(s), or contracts, that individually or cumulatively equals or surpass the 1 acre land disturbance threshold?
- (d) Did you obtain coverage under the Statewide General Permit for Storm water Discharges Associated with Construction Activity from Small Linear Underground/ Overhead Projects (Small LUP General Permit) for Small Linear

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Underground/ Overhead Projects disturbing at least 1 acre, but less than 5 acres  
(including trenching and staging areas)?

3. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management.

- (a) Did you implement the required BMPs for each maintenance yard and activity specified in the tables Permittee shall implement the following BMPs at all Permittee owned, leased facilities including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the tables below. Answer each separately.

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Tentative Ventura County Municipal Separate Storm Sewer System Permit  
Attachment H - Reporting Program No. CI 7388

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- (b) Are all of your existing facilities that are not plumbed to the sanitary sewer with vehicle and equipment washing areas:
- (1) Self-contained? How many?
  - (2) Equipped with a clarifier? How many?
  - (3) Equipped with an alternative pre-treatment device? How many?
  - (4) To be plumbed to the sanitary sewer? How many? When?
    - (A) Are all new facilities, or during redevelopment of existing facilities (including fire stations), all vehicle and equipment wash areas to be plumbed to the sanitary sewer and be equipped with a pre-treatment device in accordance with requirements of the sewer agency? If not state why.

4. Landscape and Recreational Facilities Management

Control Program for Registered Pesticides

- (a) Did you adopt and implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and the use of integrated pest management (IPM) techniques in your operations and on municipal property?
- (b) What was your previous year's pesticide use? Answer in gallons or pounds for each type used.
- (c) Using estimated projections, what is your expected use this coming fiscal year? Answer in gallons or pounds for each type used.
- (d) Do you have commitments to reduce or phase-out, and ultimately eliminate use of pesticides that cause impairment of surface waters? State for each, by when.
- (e) Describe your Integrated Pesticide Management (IPM) program.
- (f) Attach the program elements.
- (g) Did you comply with the following requirements?:
  - (1) Use a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers?
  - (2) Ensure no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?
  - (3) Ensure that no banned or unregistered pesticides are stored or applied?
  - (4) Ensure that all staff applying pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator?
  - (5) Implement procedures to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs?
  - (6) Store fertilizers and pesticides indoors or under cover on paved surfaces or use secondary containment?
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills?
    - (B) Regularly inspect storage areas to ensure no environmental harm?

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5. Storm Drain Operation and Management

Catch Basin Cleaning

- (a) How many catch basins did you designate as one of the following:
- Priority A: Catch basins that are designated as consistently generating the highest volumes of trash and/ or debris?
  - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash and/ or debris?
  - Priority C: Catch basins that are designated as generating low volumes of trash and/ or debris?
- (b) Did you clean all catch basins according to the following schedule?:
- Priority A: A minimum of three times during the wet season and once during the dry season every year? How many?
  - Priority B: A minimum of once during the wet season and once during the dry season every year? How many?
  - Priority C: A minimum of once per year? How many?
- (c) Did you ensure that any catch basin that is at least 25% full of trash and/ or debris was cleaned out? How many?

For each type of catch basin (A, B, or C) state how much trash and debris was collected and state the units (wet tons, dry pounds, etc...)

- (1) Did you require for any special event that they arrange for temporary screens to be placed on catch basins or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain event? How many events did this apply to?
- (2) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Trash Controls

- (a) Did you install trash receptacles at transit stops as required?
- (b) How many?
- (c) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (d) Did you install trash excluders, or similar devices upon catch basins to prevent the discharge of trash to the storm drain system?
- (e) How many?
- (f) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Catch Basin Labels

- (a) Did you inspect the legibility of the catch basin label by all inlets?
- (b) How many?
- (c) Were catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within 180 days of inspection?
- (d) How many were recorded?
- (e) How many were relabeled?

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Storm Drain Maintenance

- (a) Did you inspect all Permittee-owned open channels and other drainage structures for debris and identify and prioritize problem areas of illicit discharge for regular inspection?
- (b) Do your maintenance activities assure that appropriate storm water BMPs are being utilized to protect water quality?
- (c) Did you remove trash and debris from open channel storm drains before the storm season?
- (d) Did you minimize the discharge of contaminants during MS4 maintenance and clean outs?
- (e) How?
- (f) Did you properly dispose of material removed?
- (g) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (h) Have you obtained coverage under the CASGP for Long-term maintenance programs for flood control channels (such as vegetation removal) if one or more acres of soil are disturbed by grading, clearing or excavation activities for an individual project or as part of several projects part of the Permittee's long-term maintenance plan?
- (i) How many projects?
- (j) Which projects?
- (k) Were all municipally owned treatment control BMPs as maintained as necessary to ensure optimal pollutant reduction?
- (l) Was any pooled water shall be discharged to the sanitary sewer system?
- (m) Was any of the pooled water treated to remove pollutants and discharged to the storm drain?
- (n) Was every discharge monitored to ensure compliance?

6. Streets and Roads Maintenance

- (a) Did you conduct street sweeping of curbed streets in commercial areas to control trash and debris at least 2 times per month?
- (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (c) Did you obtain coverage under the CASGP for long-term maintenance programs for roadside maintenance (such as: vegetation removal ) if 1 or more acres of soil are disturbed including: grading, clearing or excavation activities that disturb 1 or more acres of land either for an individual project or as part of a long-term maintenance plan?

7. Parking Facilities Management

- (a) Were all Permittee-owned parking lots exposed to storm water cleaned to be kept clear of debris and excessive oil buildup and cleaned no less that 2 times per month?
- (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)

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8. Public Industrial Activities Management
- (a) Did you obtain separate coverage under the IASGP for any municipal activity subject to it for the discharge of storm water associated with industrial activity?
  - (b) For how many facilities?
  - (c) Which facilities?
9. Municipal Drinking Water System Discharges
- (a) From your municipal drinking system did you maintain the system by flushing hydrants or other fixtures?
  - (b) How many gallons total were discharged in the year?
  - (c) If the discharges in an annual period were less than 100,000 gallons for the entire city did you implement a BMP or suite of BMPs to ensure that the chlorine level of the discharge is 0.1mg/L or less?
  - (d) Did you sample or take a test every time to ensure dechlorination of the water to 0.1mg/L or less?
  - (e) Did you ensure that the BMP or suite of BMPs were implemented so that no erosion is caused by the discharge of the potable water?
  - (f) What BMPs were implemented?
10. Emergency Procedures
- (a) Were there any emergencies that caused the Permittee to invoke this section? Explain the situation.
11. Municipal Employee (and municipal contractor) Training
- (a) Did you train all of your employees in targeted positions regarding the requirements of the overall storm water management program?
  - (b) Did you promote a clear understanding of the potential for activities to pollute storm water?
  - (c) Did they learn to identify opportunities to require, implement, and maintain appropriate BMPs in their work?
  - (d) Did they learn the appropriate ways of identification, investigation, termination, cleanup, and reporting of illicit connections and discharges?
  - (e) Will they ensure that the requirements of this Order are met?
  - (f) For those employees or contractors who use or have the potential to use pesticides (whether or not they normally apply pesticides as part of their work), which includes pesticides available over the counter, did you address the potential for pesticide-related surface water toxicity?
  - (g) Proper use, handling, and disposal of pesticides?
  - (h) Least toxic methods of pest prevention and control?
  - (i) Encourage the use of IPM?
  - (j) Require the quantifiable reduction of pesticide use?
  - (k) Training - All Permittees shall train all targeted employees who are responsible for on an annual basis. In public agency?

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**H. Illicit Connections/ Illegal Discharge Program**

1. IC/ ID Program
  - (a) Did you implement an IC/ ID Program?
  - (b) The IC/ ID Program must be documented and available for review.
  - (c) Did you map all permitted connections to the storm drain system?
  - (d) Did you map all illicit connections and discharges on baseline maps?
  - (e) Did you transmit this information to the Principal Permittee?
  - (f) Did you use this mapping information to identify priority areas for further investigation?
  - (g) Did you eliminate all known illicit connections and illicit discharges?
  
2. Public Reporting
  - (a) Did you establish and maintain a phone hotline to receive illicit discharge/ connection complaints?
  - (b) Did you establish and maintain an internet homepage to receive illicit discharge/connection complaints?
  - (c) For all complaints received, did you document the location of the illicit discharge/ connection?
  - (d) Have you documented the actions undertaken in response to all illicit discharge/ connection complaints?
  
3. Illicit Connections

Screening for Illicit Connections

  - (a) Did you conduct field screening of your storm drain system for illicit connections?
  - (b) For those portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, how many miles did you field screen this year?
  - (c) Out of how many miles total?
  - (d) Did you conduct field screening for high priority areas identified during the mapping of illicit connections and discharges?
  - (e) How many miles were completed this year?
  - (f) Out of how many miles total?
  - (g) How much of the storm drain system that is 50 years or older in age did you field screen?
  - (h) Out of how many miles total?
  - (i) Did you submit to the Principal Permittee a GIS layer showing the location and length of underground pipes greater than 18" in diameter and channels within their jurisdiction?
  - (j) Did you also include the status of suspected, confirmed, and terminated illicit connections?
  - (k) Did you maintain a list containing all connections under investigation for possible illicit connection and their status?

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- (l) Did you attach that list to this Annual Report?

Response to Illicit Connections

- (a) Did you complete an investigation within 21 days of notice of a suspected illicit connection?
- (b) Did you determine the Source of each connection?
- (c) Did you determine the nature and volume of discharge through the connection?
- (d) Did you identify the responsible party of the connection?
- (e) How many suspected illicit connections were there this year?
- (f) Upon confirmation of the illicit nature of a storm drain connection did you terminate the connection within 180 days of completion of the investigation?
- (g) Did you document all illicit connection discoveries and your response to each?

4. Illicit Discharges

(a) Abatement and Cleanup

- (1) Did you respond and cleanup within 1 business day of discovery or of receiving a report of a suspected illicit discharge?
- (2) Did you keep records of all illicit discharge discoveries, reports of suspected illicit discharges and their response to the illicit discharges and suspected illicit discharges?
- (3) How many did you receive?
- (4) How many did you respond to?

(b) Investigation

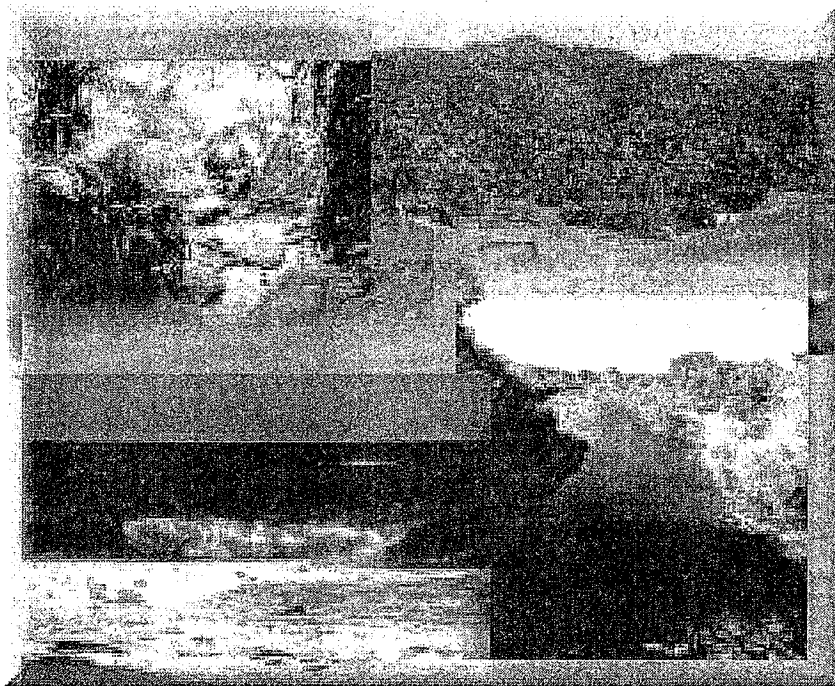
- (1) Did you investigate illicit discharges during or immediately following containment and cleanup activities, and take enforcement action as appropriate?

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STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 09-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR  
STORM WATER (WET WEATHER) AND NON-STORM WATER (DRY WEATHER)  
DISCHARGES FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS WITHIN THE VENTURA  
COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND  
THE INCORPORATED CITIES THEREIN.

May 7, 2009



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May 7, 2009

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 08-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR

STORM WATER DISCHARGES FROM THE MUNICIPAL SEPARATE STORM  
SEWER SYSTEM WITHIN THE VENTURA COUNTY WATERSHED PROTECTION  
DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN

FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter called Regional Water Board), finds that:

A. **Permit Parties and History**

1. Ventura County Watershed Protection District (Principal Permittee), County of Ventura, cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura (Ventura), Santa Paula, Simi Valley and Thousand Oaks (hereinafter referred to separately as Permittees) have joined together to form the Ventura Countywide Storm Water Quality Management Program to discharge wastes. The Permittees discharge or contribute to discharges of storm water and non-storm water from municipal separate storm sewer systems (MS4s), also called storm drain systems, into the Watershed Management Areas of Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek and Miscellaneous Ventura Coastal all within Ventura County and Los Angeles County (see Attachment "A").
2. Prior to the issuance of this permit, storm water discharges from the Ventura County MS4 were covered under the countywide waste discharge requirements contained in Order No. 00-108, adopted by the Regional Water Board on July 27, 2000, which replaced Order No. 94-082, adopted by the Regional Water Board on August 22, 1994. Order No. 00-108 also served as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of municipal storm water.
3. The Ventura County Board of Supervisors approved the concept of a countywide NPDES permit program and the use of the Flood Management District (presently the Watershed Protection District) benefit assessment authority to finance it on April 14, 1992. On June 30, 1992, the Ventura County Board of Supervisors adopted a benefit assessment levy for storm water and flood management in the unincorporated areas of Ventura County and the cities within the County, to be used in part to finance the implementation of a countywide NPDES municipal storm water

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permit program. The Ventura County MS4 Permittees have entered into an agreement with the Watershed Protection District to finance the activities related to the Ventura County MS4 Permit for shared and district wide expenses. The Permittees are also given the option to use the Benefit Assessment Program to finance their respective activities related to reducing the discharge of storm water pollutants under the MS4 Permit.

- 4. The Regional Water Board may require a separate NPDES permit for any entity that discharges storm water into the watersheds of Ventura County. Such an entity can be any State or Federal facility, special district or other public or private party.

**B. Nature of Discharge**

- 1. Storm water discharges consist of surface water runoff generated from various land uses in all the hydrologic drainage basins, which discharge into Waters of the State. The quality of these discharges varies and is affected by geology, land use, season, hydrology, and sequence and duration of hydrologic events. Based on the Ventura Countywide Storm Water Monitoring Program's Water Quality Monitoring Reports which were required under Order No. 00-108, the dry weather and wet weather Pollutants of Concern (POC) in urban stormwater include an anion, bacteria, conventional pollutants, metals, a nutrient, organic compounds, and pesticides. The POC are identified in Attachment "B" of this Order. Many of the POC listed are causing impairments identified on the federal Clean Water Act (CWA) § 303(d) list of impaired waterbodies.

The State Water Board submits a report (a list of water quality limited segments (§ 303[d] list)) on the State's water quality to the U.S. EPA pursuant to § 305(b) of the 1972 CWA, and Title 40, CFR 130.7, every 2 years. The Report provides water quality information to the general public and serves as the basis for the U.S. EPA's National Water Quality Inventory Report to Congress. Section 303(d) requires that all waters that are not attaining standards after the implementation of those controls required by 1977, shall be included on the list. Title 40 CFR 130.7(b)(3) defines "water quality standard applicable to such waters" as "those water quality standards established under § 303 of the Clean Water Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements."

- 2. Common pollutants in urban storm water and their respective sources are: bacteria from animal droppings and illegal discharges; Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications and from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints and automotive parts; copper



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from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; trash and dioxins as products of combustion.

3. In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems. In addition, the high volumes and high velocities of storm water discharged from MS4s into ~~natural watercourses~~ receiving waters can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed hydromodification. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California.
4. Ammonia as Nitrogen, and Nitrate plus Nitrite as Nitrogen are biostimulatory substances that can cause or contribute to eutrophic effects such as low dissolved oxygen and algae growth impairing warm freshwater and wildlife habitats. Ammonia is highly toxic to fish and other aquatic life. Excessive ammonia can cause aquatic life toxicity.
5. Elevated bacterial indicator densities impair the water contact recreation (REC-1) beneficial use at beaches, creeks, estuaries, lagoons, and marinas. Swimming in waters with elevated bacterial indicator densities has been associated with adverse health effects. Specifically, local and national epidemiological studies indicate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities (REFERENCE?). Sources of elevated bacteria to marine and fresh waters may also include illegal discharges from improperly maintained standard septic systems, onsite wastewater treatment systems (OWTS) and illicit discharges from private drains.
6. Pesticides are substances used to prevent, destroy, repel or mitigate pests such as insects, weeds, and microorganisms. Their effects can be direct (e.g. fish die from exposure to a pesticide entering waterways, or birds do not reproduce after ingesting contaminated fish), or indirect (a hawk becomes sick from eating a mouse dying from pesticide poisoning). Pesticide categories include: Organochlorine, Organophosphorus, Organophosphate, and Pyrethroid.
7. Polychlorinated Biphenyls (PCBs) are a subset of the synthetic organic chemicals known as chlorinated hydrocarbons. Concern over PCBs toxicity, persistence (chemical stability) in the environment and bioconcentration in aquatic organisms has led to prohibitions on PCBs.
8. Rising groundwater and swimming pool water have been found to be sources of pollutants such as salts (chloride). Salts increase the salinity of otherwise freshwater systems and disrupt physiological processes. The Regional Water Board has

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waterbodies listed on the CWA § 303(d) list for impairment due to salts and has adopted Basin Plan amendments to include Total Maximum Daily Loads (TMDLs) for salts. This Order includes provisions to control the discharges from these activities in order to directly or indirectly reduce or eliminate the discharge of salts to fresh water systems where salts may impair water quality and beneficial uses.

- 9. Trash and debris are pervasive pollutants which accumulate in streams, rivers, bays, and ocean beaches throughout Southern California. They pose a serious threat to our oceans and coasts, navigation, biological resources, recreation, human health and safety, aesthetics, and economies.
- 10. Municipal storm water (wet weather) and non-storm water (dry weather) discharges may contain pollutants that cause or threaten to cause an exceedance of the water quality standards, as outlined in the Los Angeles Region's Basin Plan. Wet weather and dry weather discharges from the MS4 are subject to conditions and requirements established in the Basin Plan for point source discharges. Discharges from the MS4 may not cause or contribute to exceedances of water quality standards.
- 11. Biological communities act to integrate the effects of water quality conditions in a stream by responding with changes in their population abundances and species composition over time. These populations are sensitive to multiple aspects of water and habitat quality, and provide expressions of ecological health easier to understand than the results of chemical and toxicity tests. Biological assessments and criteria address the cumulative impacts of all stressors, especially habitat degradation, and chemical contamination, which result in a loss of biological diversity. Biological information can help provide an ecologically based assessment of the status of a waterbody. Bioassessment is a cost-effective tool and protocol for assessing the biological and physical habitat conditions of streams and rivers for evaluation of the overall health of a watershed. The Principal Permittee consents to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program.
- 12. The increased volume, increased velocity, and discharge duration of storm water runoff from developed areas has the potential to greatly accelerate downstream erosion and impair stream habitat in natural drainages. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters (Managing Runoff to Protect Natural Streams *L. The Lates Development on Investigation and Management of Hydromorfication in California: Stein, E. et al. December 2005; Effect of Increase in Peak Flows and Imperviousness on the Morphology of Southern California Streams; Coleman, D., April 2005*). Significant declines in the biological integrity and physical habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces in a subwatershed.

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Percentage impervious cover is a one ~~reliable~~ indicator and predictor of potential water quality degradation expected from new development.

13. Studies indicate that facilities with paved surfaces subject to frequent motor vehicular traffic (such as: strip malls, parking lots, commercial business parks, and fast food restaurants), or facilities that perform vehicle repair, maintenance, or fueling (automotive service facilities) are potential sources of POC in storm water (California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Municipal, January 2003).

14. Retail Gasoline Outlets (RGOs) are points of convergence for vehicular traffic and are similar to parking lots and urban roads. Studies indicate that storm water discharges from RGOs have high concentrations of hydrocarbons and heavy metals (California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Municipal, January 2003).

15. The industries and businesses listed in this Order that are to be inspected by Permittees have the potential to discharge contaminated storm water into the MS4. This storm water is an environmental threat because it can adversely impact public health and safety, and the quality of receiving waters. For example, pretreatment program compliance inspections and audits performed in the Los Angeles and Ventura Counties indicate that automotive service and food service facilities sometimes discharge polluted storm water to the MS4s. The POC in such wash waters include oil and grease, toxic chemicals, and food waste. Spills from clogged sanitary sewer lines have a high likelihood to reach the receiving waters via MS4s. Overall, the most common POC identified in storm water discharge to the MS4s are: (i) heavy metals, (ii) oil and grease/ PAHs, (iii) sediments, (iv) oxygen demanding substances, (v) litter/ trash/ debris, (vi) nutrients, (vii) other toxic materials, such as pesticides. Municipal storm water monitoring data and industrial storm water monitoring data indicate that industrial and commercial sites continue to contribute significant quantities of pollutants in storm water runoff.

15.

- ~~16. Development and urbanization increase pollutant loads, volume, and discharge velocity. First, natural vegetated pervious ground cover is converted to impervious surfaces (paved) such as highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, impervious surfaces (such as pavement and concrete) can neither absorb water nor remove pollutants, and thus the natural purification characteristics are lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants. Development and urbanization especially threaten environmentally~~

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~~sensitive areas. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. These environmentally sensitive areas (ESAs) designated by the State in the Ventura County watershed include:~~

- ~~(a) Drainages to waters identified in the Basin Plan as supporting the "Rare, Threatened, or Endangered Species (RARE)" Beneficial Use; and~~
- ~~(b) California Coastal Commission's Environmentally Sensitive Habitat Areas as delineated on maps in Local Coastal Plans (LCPs).~~
- ~~(c) Additional ESAs that may be identified by California Department of Fish and Game.~~

16. Development and urbanization increase pollutant loads, volume, and discharge velocity. First, natural vegetated pervious ground cover is converted to impervious surfaces (paved) such as highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, impervious surfaces (such as pavement and concrete) can neither absorb water nor remove pollutants, and thus the natural purification characteristics are lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants. Development and urbanization especially threaten environmentally sensitive areas. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. These environmentally sensitive areas (ESAs) designated by the State in the Ventura County watershed are defined in Part 7 (Definitions).

17. ~~The implementation of Low Impact Development (LID) techniques across the United States and Canada has demonstrated that the proper implementation of LID techniques not only results in water quality protection benefits and in a reduction of the cost of land development and construction but also bears other positive attributes that go beyond economic benefits such as enhanced property values, improved habitat, aesthetic amenities, and improved quality of life. *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, USEPA Doc No. EPA 841-F-07-006, December 2007.* Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse affects of hydromodification on stream habitat. *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption, Low Impact Development Center and State of California, State Water Resources Control Board, December 2007.* The requirements of this Order facilitate the implementation of LID strategies to protect~~

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~~water quality, reduce runoff volume, and to benefit from these additional enhancements.~~

17. The implementation of Low Impact Development (LID) techniques across the United States and Canada has demonstrated that the proper implementation of LID techniques not only results in water quality protection benefits and in a reduction of the cost of land development and construction but also bears other positive attributes that go beyond economic benefits such as enhanced property values, improved habitat, aesthetic amenities, and improved quality of life. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, USEPA Doc No. EPA 841-F-07-006, December 2007. Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse affects of hydromodification on stream habitat. A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption, Low Impact Development Center and State of California, State Water Resources Control Board, December 2007. The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to benefit from these additional enhancements.
18. The Regional Water Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R4-2005-0080) on November 3, 2005. The objective of the program is to monitor runoff from irrigated agriculture facilities in the coastal watersheds of Ventura and Los Angeles Counties. The Basin Plan, which designates beneficial uses and establishes water quality objectives for the Region, recognizes that agricultural activities can generate pollutants such as sediment, pesticides, and nutrients that upon discharge to receiving water, can degrade water quality and impair beneficial uses. A category identified by the Conditional Waiver as a source of pollutants is nursery operations. This Order includes requirements for the municipal operator to confirm that nursery operators implement pollutant reduction and control measures with the objective of reducing pollutants in storm water runoff discharges.
19. Staff finds there is a growing acceptance by stormwater professionals to integrate LID principles into stormwater management programs and MS4 permits. However, there remains significant controversy regarding the appropriate requirements and metrics for LID. At the heart of this controversy is a dispute regarding the feasibility and effectiveness of requiring a fixed volume of stormwater to be captured and retained onsite for infiltration, reuse, and evapotranspiration, as opposed to permitting a portion of the stormwater to be released off site after it is treated, when it is infeasible to retain the required stormwater on site due to site specific conditions.

Staff has reviewed extensive technical literature regarding this issue (e.g. R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices*

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("LID") for Ventura County (February 2007): E. Strecker, A. Poresky, D. Christsen, Memorandum: Rainwater Harvesting and Reuse Scenarios and Cost Consideration, (April, 2009). Staff finds that there is consensus in the technical community that site conditions and the type of development can limit the feasibility of retaining, infiltrating, and reusing stormwater at sites due to a variety of site specific conditions. Factors that affect the feasibility of a fixed volume capture standard include, but are not limited to: soils infiltration capacity, subsurface pollution, and locations in urban core centers.

Regarding the effects of capturing a fixed stormwater volume on site, Staff finds the fixed volume approach may be ignoring basic hydrological principles that relate the feasible infiltration volume to the infiltration capacity of local soils. Requirements to capture a fixed volume on site could disturb the natural water balance and lead to unintended engineering and hydrologic consequences. For example, a typical hydrological condition in Ventura County is one of successive storms during the winter which may exceed the stormwater capacity that can be retained on site. This may result in ponded water on site with attendant health and safety risks, saturation of the near surface soils, and reduction of water resources in Regional waterbodies. These effects could damage site structures, increase groundwater pollution by forcing enhanced pollution spreading, or destroy aquatic habitat. Staff finds these reasonably potential effects are not well evaluated scientifically. Finally, staff cannot find that a fixed retention volume versus a standard that attempts to release surface flows at a predevelopment level would result in a greater reduction of stormwater pollution.

19-20. Research conducted on the contribution of aerial deposition of trace heavy metals in Los Angeles County watersheds indicates that dry indirect deposition may account for a significant load of pollutants into surface waters. Similar patterns of aerial deposition likely occur in Ventura County. Of the atmospherically deposited pollutants on the watersheds, ten to twenty percent may account for the total load for copper, zinc, nickel, lead, and chromium to the waterbodies. Land reservoirs and sequestration may account for the remaining eighty to ninety percent of the atmospherically deposited pollutants on the watersheds. Emissions of semi-volatile organics such as polycyclic aromatic hydrocarbons (PAHs) and pesticides and their subsequent deposition may contribute to the contamination of receiving waters but appear to be less significant. The remaining percentage is stored in land reservoirs and eventually shows up in receiving waters.

### C. Permit Background

1. The essential components of the Storm Water Management Program, as required by the Code of Federal Regulations (CFR) [40 CFR122.26(d)] are:
  - (a) Adequate Legal Authority.
  - (b) Fiscal Resources.

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- (c) Storm Water Quality Management Program (SMP)
    - (1) Public Information and Participation Program
    - (2) Industrial/ Commercial Facilities Program
    - (3) Planning and Land Development Program
    - (4) Development Construction Program
    - (5) Public Agency Activities Program
    - (6) Illicit Connection and Illicit Discharges Elimination Program
  - (d) Reporting Program (Monitoring Report and Program Report)
2. The Ventura County SMP, dated November 2001 (revision 2) identifies seven program areas, which are listed below and were previously approved under Board Order No. 00-108. For purposes of consistency, they are titled as follows:
    - (a) Ventura County SMP.
      - (1) Program Management
      - (2) Programs for Residents
      - (3) Programs for Industrial/ Commercial Businesses
      - (4) Programs for Planning and Land Development
      - (5) Programs for Construction Sites
      - (6) Programs for Public Agency Activities
      - (7) Programs for Illicit Connections/ Illegal Discharges
    - (b) For purposes of region-wide consistency, the program titles are revised and consolidated into the six areas listed in the preceding C.1(c). All Permittee storm water documents submitted to the Regional Water Board are to follow the organization enumerated in C.1(c).
  3. The Permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The Permittees applied for renewal of their waste discharge requirements for a 5-year period, which serves as an NPDES permit to discharge wastes to surface waters.
  4. The Regional Water Board reviewed the ROWD and determined it to be partially complete under the reapplication policy for MS4s issued by the United States Environmental Protection Agency (U.S. EPA) (61 Fed. Reg. 41697). The Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by Permittees will meet the requirements of the federal NPDES regulations at 40 CFR122.26.
  5. The Permittees ROWD contained a proposed Storm Water Management Program and a Monitoring Program to be considered by the Regional Water Board for incorporation into an MS4 NPDES Permit as permit conditions and to demonstrate compliance with federal law.
  6. To-date, the monitoring program has consisted of mass emission, receiving water (tributaries), and land-use monitoring stations, toxicity testing, special studies for

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bioassessment of the Ventura River and hydrology, identification of ESAs, implementation of the Storm Water Quality Urban Impact Mitigation Plan (SQUIMP), and has provided support for volunteer monitoring programs. This Order requires a monitoring program consisting of mass emission, toxicity, TMDL storm water (wet weather) MS4 water quality-based effluent limits, TMDL non-storm water (dry weather) MS4 water quality-based effluent limits, ~~trash and debris study~~, Pyrethroid assessment study, continuation of the hydromodification study, low impact development study, and participation in the Southern California Regional Bioassessment Program and Southern California Bight Project (SCBP).

- 7. The Principal Permittee is a member of the Southern California Coastal Water Research Project (SCCWRP) Commission. The Principal Permittee also participates in the Regional Monitoring Programs and research partnerships, such as the Southern California Storm Water Monitoring Coalition (SMC) and the Bioassessment Working Group.

**D. Permit Coverage**

- 1. The area covered by this Order includes all areas within Ventura County boundaries and all areas within each co-permittee's boundaries (see Figure 1) that drain into the MS4.
- 2. The Permittees covered under this Order were designated on a system-wide basis under Phase I of the CWA § 402(p)(3)(B)(i). The action of covering all Ventura County municipalities under a single MS4 permit on a system-wide basis was consistent with the provisions of 40 CFR122.26(a)(3)(iv), which states that one permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems; and the Regional Water Board may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.
- 3. Federal, State, Regional, or local entities within the Permittees' boundaries or in jurisdictions outside the Ventura County Watershed Protection District, and not currently named in this Order, may operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters ~~watereourses~~ covered by this Order. The Permittees may lack legal jurisdiction over these entities under State and Federal constitutions. The Regional Water Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. The Regional Board may consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations. Permittees have expressed their intention to work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the

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system. Permittees shall make good faith efforts to control the contribution of pollutants to the MS4 from non-permittee dischargers such as Caltrans, the U.S. Department of Defense, and other state and federal facilities.

4. TMDLs are numerical calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (Waste Load Allocation (WLA) and non-point sources (Load Allocation (LA))). Discharges from the MS4s are considered point sources discharges, because the MS4 is a point source.
5. This Order incorporates applicable WLAs that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA. The TMDL WLAs in the Order are expressed as water quality-based effluent limits in a manner consistent with the assumptions and requirements of the TMDL from which they are derived.
6. ~~The CWA and the California Water Code contain specific provisions on how wastewater discharges from point sources are to be permitted. Stormwater discharges (both Urban non-storm water (dry weather and wet weather) are considered point source discharges.) discharge is not considered a storm water (wet weather) discharge.~~
7. Permittees should work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system through inter-agency agreements or other formal arrangements.

#### E. Federal, State and Regional Regulations

1. The Water Quality Act of 1987 added § 402(p) to the CWA (33U.S.C. § 1251-1387). This section requires the U.S. EPA to establish regulations setting forth NPDES requirements for storm water discharges in 2 phases.
  - (a) U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase 1 Final Rule was published on November 16, 1990 (55 Fed. Reg. 47990).
  - (b) U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (population of less than 100,000), small construction projects (less than 5 acres), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water

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quality standard, or is a significant contributor of pollutants to waters of the U.S. The Phase II Final Rule was published on December 8, 1999 (64 Fed. Reg. 68722).

- 2. The U.S. EPA published an 'Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits on August 9, 1996 (61 Fed. Reg. 41697). This policy requires that MS4 reapplication for reissuance for a subsequent five-year permit term contain certain basic information and information for proposed changes and improvements to the storm water management program and monitoring program.
- 3. The U.S. EPA has entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service for enhancing coordination regarding the protection of endangered and threatened species under section 7 of the Endangered Species Act, and the CWA's water quality standards and NPDES programs. Among other actions, the MOA establishes a framework for coordination of actions by the U.S. EPA, the Services, and CWA delegated States on CWA permit issuance under § 402 of the CWA [66 Fed. Reg. 11202-11217].
- 4. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is a delegated State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of ~~wastese that could affect the quality of pollutants into all~~ waters of the State, including waters of the United States, and tributaries thereto.
- 5. Under CWA § 303(d) of the CWA, States are required to identify a list of impaired water-bodies and develop and implement TMDLs for these waterbodies (33 USC § 1313(d)(1)). The most recent 303(d) list's U.S. EPA approval date was June 28, 2007. The U.S. EPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monica BayKeeper on March 22, 1999, under which the Regional Water Board must adopt all TMDLs for the Los Angeles Region within 13 years from that date. This Order incorporates provisions incorporating approved WLAs for municipal storm water discharges and requires amending the SMP after subsequent pollutant loads have been allocated and approved.
- 6. Collectively, the restrictions contained in the TMDL Provisions for Storm Water (Wet Weather) Discharges and Non-Storm Water (Dry Weather) Discharges of this Order on individual pollutants are no more stringent than required to implement the provisions of the TMDL, which have been adopted and approved in a manner that is consistent with the CWA. Where a TMDL has been approved, NPDES permits must

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contain effluent limits and conditions consistent with the assumptions and requirements of the available WLAs in TMDLs (40 CFR122.44(d)(1)(vii)(B)).

7. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIIB, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. This Order implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B). (33 U.S.C. § 1342(p)(3)(B)) This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf. Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not "less stringent" than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass'n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 CFR122.44(d)(1)(vii)(B)).

Second, the local agency Permittees' obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the "costs incurred by local agencies" to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

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The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C. § 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4<sup>th</sup> 1351, 1358-1359.) The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. (See finding 5., supra.) To the extent, the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, where MS4 Permittees are regulated under a Best Management Practices (BMP) based storm water management program rather than end-of-pipe numeric limits, there exists no compulsion of a specific regulatory scheme that would violate the 10<sup>th</sup> Amendment to the United States Constitution. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies' voluntary decision to file a report of waste discharge proposing a program-

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based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

8. Under § 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Coastal States with approved coastal zone management programs are required to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: 1) agriculture; 2) silviculture; 3) urban; 4) marinas; and 5) hydromodification. This Waste Discharge Requirement addresses the management measures required for the urban category and the hydromodification category, with the exception of septic systems.
9. The Regional Water Board addresses septic systems through the administration of non-Chapter 15 regulatory programs and the implementation of Regional Water Board Order No.R4-2004-0146. Septic systems are also addressed under State Assembly Bill (AB) 885 (2000). The Regional Water Board will implement and enforce regulations issued by the State Board pursuant to AB 885. Taken together, these State and Local agency requirements when imposed on septic system operators are expected to reduce the bacterial contamination of storm water from improperly maintained septic systems.
10. The State Water Board has issued waste discharge requirements for discharges from utility vaults (CAG990002). The Regional Water Board has issued waste discharge requirements for discharges from well heads and hydrostatic pipe testing (CAG674001). These discharges to the MS4 shall be conducted under coverage of a separate NPDES permit specific to that activity.
11. On May 18, 2000, the U.S. EPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR) 65 Fed. Reg. 31682 (40 CFR131.38) for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays and estuaries.
12. The State Water Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) in 2005. The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's coastal waters. It applies to point and nonpoint source discharges. The Ocean Plan identifies the applicable beneficial uses of marine waters that include preservation and enhancement of designated Areas of

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Special Biological Significance (ASBS) (now called "State Water Quality Protection Areas") and establishes a set of narrative and numerical water quality objectives designed to protect beneficial uses. The SWRCB adopted the California Ocean Plan, and both the SWRCB and the six coastal Regional Water Quality Control Boards (RWQCBs) implement and interpret the California Ocean Plan.

13. This Regional Water Board adopted a revised Water Quality Control Plan (Basin Plan) for the Los Angeles Region on June 13, 1994. The Basin Plan specifies the beneficial uses of Ventura County waterbodies and their tributary streams, and contains both narrative and numerical water quality objectives for these receiving waters. The following beneficial uses identified in the Basin Plan apply to all or portions of each watershed covered by this Order:
- (a) Municipal and domestic supply
  - (b) Agricultural supply
  - (c) Industrial service supply
  - (d) Industrial process supply
  - (e) Ground water recharge
  - (f) Freshwater replenishment
  - (g) Navigation
  - (h) Hydropower generation
  - (i) Water contact recreation
  - (j) Non-contact water recreation
  - (k) Ocean commercial and sport fishing
  - (l) Warm freshwater habitat
  - (m) Cold freshwater habitat
  - (n) Preservation of Areas of Special Biological Significance
  - (o) Saline water habitat
  - (p) Wildlife habitat
  - (q) Preservation of rare and endangered species
  - (r) Marine habitat
  - (s) Fish migration
  - (t) Fish spawning
  - (u) Shellfish harvesting
14. On March 22, 1999 the Consent Decree in Heal the Bay, Inc.; Santa Monica BayKeeper, Inc. v. Browner, Case No. 98-4825 SBA was approved. Under Establishment of TMDLs- The parties understand that California has the initial opportunity pursuant to § 303(d) of the CWA to adopt and submit to U.S. EPA for approval TMDLs to be established under this Consent Decree. TMDLs developed by Regional Water Boards are generally adopted through Basin Plan amendments. Basin plan amendments adopted by the State Board pursuant to Water Code section 13246, and the regulatory portions must be approved by the Office of Administrative Law pursuant to Government Code section 11353(b). TMDLs established pursuant to

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CWA section 303(d)(1) must be submitted to U.S. EPA for approval pursuant to section 303(d)(2), and incorporated into the state's water quality management plan.

15. The Regional Water Board has adopted amendments to the Basin Plan, to incorporate TMDLs for the following:
- (a) The following TMDLs have been or will be incorporated into the Basin Plan within the term of the Order.
- (1) Santa Clara River - Nitrogen Compounds
    - (A) Regional Water Board Resolution No. 2003-011
    - (B) State Water Board Resolution No. 2003-0073
    - (C) OAL file No. 04-0123-35
    - (D) U.S. EPA approval date March 18, 2004
    - (E) Final fee exemption date March 23, 2004 (effective date).
    - (F) Compliance is 1 year after effective date (March 23, 2005)
  - (2) Malibu Creek and Lagoon - Bacteria.
    - (A) Regional Water Board Resolution No. 2004-019
    - (B) State Water Board Resolution No. 2005-0072
    - (C) OAL file No. 05-1018-03 S
    - (D) U.S. EPA approval date January 10, 2006
    - (E) Final fee exemption date January 24, 2006 (effective date)
    - (F) Compliance for Summer Dry is 3 years after effective date (January 24, 2009)
    - (G) Compliance for Winter Dry is 6 years after effective date (January 24, 2012)
    - (H) Compliance for Wet Weather is 10 years after effective date (January 24, 2016), which is beyond the term of this Order
  - (3) Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, Its Tributaries and Mugu Lagoon.
    - (A) Regional Water Board Resolution No. 2005-009
    - (B) State Water Board Resolution No. 2005-0067
    - (C) OAL file No. 05-1110-02 S
    - (D) U.S. EPA approval date March 14, 2006
    - (E) Final fee exemption date March 24, 2006 (effective date)
    - (F) Compliance for Toxicity and Interim WLA is effective date (March 24, 2006)
    - (G) Compliance for Final WLA is 2 years after effective date (March 24, 2008)
  - (4) Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation in Calleguas Creek, Its Tributaries and Mugu Lagoon.
    - (A) Regional Water Board Resolution No. 2005-010

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- (B) State Water Board Resolution No. 2005-0068
- (C) OAL file No. 05-1206-03 S
- (D) U.S. EPA approval date March 14, 2006
- (E) Final fee exemption date March 24, 2006 (effective date)
- (F) Compliance for Interim WLA is effective date (March 24, 2006)
- (G) Compliance for Final WLA is 20 years after effective date (March 24, 2026), which is beyond the term of this Order
- (5) Calleguas Creek Watershed Metals
- (A) Regional Water Board Resolution No. 2006-012
- (B) State Water Board Resolution No. 2006-0078
- (C) OAL file No. 06-1222-015 S
- (D) U.S. EPA approval date March 26, 2007
- (E) Final fee exemption date March 27, 2007 (effective date)
- (F) Compliance for Interim WLA is effective date (March 27, 2007)
- (G) Compliance for Final WLA is Within 15 years after the effective date (March 27, 2022), which is beyond the term of this Order
- (6) Revolon Slough & Beardsley Wash Trash TMDL
- (A) Regional Water Board Resolution No. 2007-007
- (B) State Water Board Resolution No 2007-0076
- (C) OAL file No 2007-1227-05 S
- (D) U.S. EPA approval date February 27, 2008
- (E) Final fee exemption date March 6, 2008 (effective date)
- (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
- (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)
- (7) Ventura River Estuary Trash TMDL
- (A) Regional Water Board Resolution No. 2007-008
- (B) State Water Board Resolution No 2007-0072
- (C) OAL file No 2007-1227-01 S
- (D) U.S. EPA approval date February 27, 2008
- (E) Final fee exemption date March 6, 2008 (effective date)
- (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
- (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)
- (8) Harbor Beaches of Ventura County Bacteria TMDL
- (A) Regional Water Board Resolution No. 2007-017
- (B) State Water Board Resolution No 2008-0072
- (C) OAL file No 2007-1023-01 S

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- (D) U.S. EPA approval date December 18, 2008  
 (E) Final fee exemption date January 17, 2009 (effective date)

16. The Regional Water Board adopted and approved requirements for new development and significant redevelopment projects in Ventura County to control the discharge of storm water pollutants in post-construction storm water, on January 26, 2000, in Board Resolution No. R-00-02. The Regional Water Board Executive Officer issued the approved Standard Urban Storm Water Mitigation Plans (SUSMPs) on March 8, 2000 for Los Angeles County and the Cities in Los Angeles County. Since 2000, new development and redevelopment water quality criteria have been implemented by the Permittees to be consistent with SUSMP. The State Board affirmed the Regional Water Board action and SUSMPs in State Board Order No. WQ 2000-11, issued on October 5, 2000.

- (a) A statewide policy memorandum (dated December 26, 2000), which interprets the Order to provide broad discretion to Regional Water Boards and identifies the potential future areas for inclusion in SUSMPs and the types of evidence and findings necessary. Such areas include ministerial projects, projects in environmentally sensitive areas, and water quality design criteria for Retail Gasoline Outlets (RGOs, see part 7 for definition). The Regional Water Board properly justified the extensions of SUSMPs and water quality criteria to ministerial projects, projects in environmentally sensitive areas, and RGOs, during the adoption of Regional Water Board Order 01-182. The Regional Water Board's action was upheld by the County of Los Angeles Superior Court (In Re: *County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4<sup>th</sup> 985).
- (b) The State Water Board's Chief Counsel interpreted the Order to encourage regional solutions and endorsed a mitigation fund or "bank" as alternatives for new development and significant redevelopment. The Regional Water Board has included provisions for regional solutions and the establishment of a mitigation bank in this Order.

17. The Regional Water Board supports Watershed Management planning to address water quality protection in the region. The objective of the Watershed Management planning is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with available resources.

18. To facilitate compliance with federal regulations, the State Water Board has issued the following 4 Statewide General NPDES Permits associated with storm water:

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- (a) Industrial General Permit (IASGP- Industrial Activities Storm Water General Permit), NPDES No. CAS000001, issued on November 19, 1991, reissued on September 17, 1992 and April 17, 1997, currently under review for reissuance.
- (b) Construction General Permit (CASGP- Construction Activities Storm Water General Permit), NPDES No. CAS000002, issued on August 20, 1992, reissued August 19, 1999, currently under review for reissuance.
- (c) Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), NPDES No. CAS000005, issued on June 18, 2003.
- (d) Small MS4 Permit WQ Order No. 2003-0005-DWQ, NPDES No. CAS000004, adopted on April 30, 2003.
19. Facilities discharging storm water associated with industrial activities, construction projects that disturb one or more acres of soil, or construction projects that disturb less than one acre but are part of a larger common plan of development or sale that in total disturbs 1 or more acres, and construction activities associated with small linear underground/ overhead projects that result in land disturbances greater than one acre, but less than five acres (small LUPs), are all required to obtain individual NPDES permits for storm water discharges, or be covered by the statewide General Permits by completing and filing a Notice of Intent (NOI) with the State Board. The U.S. EPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in storm water discharges to the MS4.
20. State Water Board Resolution No. 68-16 contains the state Antidegradation Policy, titled "Statement of Policy with Respect to Maintaining High Quality Waters in California" (Resolution 68-16), which applies to all waters of the state, including ground waters of the state, whose quality meets or exceeds (is better than) water quality objectives. Resolution No. 68-16 is considered to incorporate the federal Antidegradation Policy (40 CFR131.12) where the federal policy applies, (State Water Board Order WQO 86-17). Administrative policies that implement both, federal and state antidegradation policies acknowledge that an activity that results in a minor water quality lowering, even if incrementally small, can result in violation of Antidegradation Policies through cumulative effects, for example, when the waste is a cumulative, persistent, or bioaccumulative pollutant.
- (a) Federal Antidegradation Policy (40 CFR131.12) states that the State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:
- (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
- (2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that

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quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

(3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

(4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.

(b) State Water Board Resolution No. 68-16 establishes essentially a 2-step process for compliance with the policy.

(1) Step 1- if a discharge will degrade high quality water, the discharge may be allowed if any change in water quality:

(A) Will be consistent with maximum benefit to the people of the State.

(B) Will not unreasonably affect present and anticipated beneficial use of such water.

(C) Will not result in water quality less than that prescribed in state policies (e.g., water quality objectives in Water Quality Control Plans).

(2) Step 2- any activities that result in discharges to high quality waters are required to:

(A) Meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to avoid a pollution or nuisance.

(B) Maintain the highest water quality consistent with the maximum benefit to the people of the State.

21. The State Water Board on June 17, 1999, adopted Order No. WQ 99-05, which specifies standard receiving water limitation language to be included in all municipal storm water permits issued by the State and Regional Water Boards.

22. Cal. Water Code § 13263(a) requires that waste discharge requirements issued by Water Boards shall implement any relevant water quality control plans that have been adopted; shall take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose; other waste discharges; and the need to prevent nuisance.

23. Clean Water Act section 402(p)(3)(B)(iii) requires municipal separate storm sewer system (MS4) operators to control pollution in storm water to the “maximum extent practicable” (MEP). The MEP requirement is analogous to a technology-based requirement in that it focuses upon the feasibility of pollutant reduction measures rather than achievement of water quality standards in the receiving waters to achieve improvements in the quality of the storm water that is discharged. Compliance with the MEP requirement can range from implementation of structural and nonstructural best management practices to installation of end-of-pipe treatment systems. MEP generally provides the MS4 operators the flexibility to determine what controls should be implemented through the development of a storm water management plan, subject to the Regional Board’s approval. Nevertheless, MEP does not define the limits of pollution control measures that may be required of MS4 operators, and the requirement to implement controls that reduce pollutants to the MEP is not limited by the goal of attaining water quality standards. In some circumstances, compliance with MEP may result in controls more stringent than applicable WQS, and in others, less stringent. The Regional Board may use its discretion to impose other provisions beyond MEP, as it determines appropriate for the control of pollutants, including ensuring strict compliance with water quality standards. (*Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1168.)
24. The California Supreme Court has ruled that although Water Code section 13263 requires the Water Boards to consider the factors set forth in Water Code section 13241 when issuing an NPDES permit, the Water Boards may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4th 613). However, when the pollutant restrictions in an NPDES are more stringent than federal law requires, Water Code section 13263 requires that the Water Boards consider the factors described in section 13241 as they apply to those specific restrictions.
25. The City of Burbank case related to NPDES permits for publicly owned treatment works, not permits for municipal separate storm sewer systems (MS4s). Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the storm sewers, in addition to requiring controls to reduce the discharge of pollutants to the maximum extent practicable. Therefore, a 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4, or for practicable controls to reduce the discharge of pollutants to the maximum extent, as those requirements are mandated by federal law.
26. The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR122.26 or in U.S. EPA guidance.

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However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA § 402(p)(3)(B)(ii) and (iii) and the related federal regulations. Consistent with federal law, all of the conditions in this permit could have been included in a permit adopted by U.S. EPA in the absence of the in lieu authority of California to issue NPDES permits.

- 27. The Board finds that all requirements in this order are practicable. Moreover, while commenters have alleged that the permit requirements are “beyond MEP,” no commenter has presented evidence that demonstrates that any particular permit requirement that is not dedicated to the effective prohibition on non-storm water discharges into the MS4, is not actually practicable.
- 28. Notwithstanding findings 23 through 27, the Regional Board has developed an economic analysis of the permit’s requirements, consistent with Water Code section 13241. That analysis is contained in the “Economic Considerations of the Proposed Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein , June 2, 2008, which is contained in the administrative record for this Order. The Regional Board has considered all of the evidence that has been presented regarding the 13241 factors in adopting this permit, both as contained in the economic analysis and as reflected in the fact sheet and comments (and responses thereto) submitted to the many drafts of this permit. The Regional Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan, and the economic information related to costs of compliance and other 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, additional time to implement certain measures and achieve water quality objectives can be provided through the iterative storm water management plan process.

**F. Implementation**

- 1. The California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code § 2100 et seq.) requires that public agencies consider the environmental impacts of the projects they approve for development. CEQA applies to projects that are considered discretionary (a governmental agency can use its judgment in deciding whether and how to carry out or approve a project, § 15357) and does not apply to ministerial projects (the law requires a governmental agency to act on a project in a set way without allowing the agency to use its own judgment, § 15369). A ministerial project may be made discretionary by adopting local ordinance provisions or imposing conditions to create decision-making discretion in approving the project.

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In the alternative, Permittees may establish standards and objective criteria administratively for storm water mitigation for ministerial projects. For water quality purposes regardless of whether a project is discretionary or ministerial, the Regional Water Board considers that all new development and significant redevelopment activity in specified categories, that receive approval or permits from a municipality, are subject to storm water mitigation requirements in a manner that is consistent with and complies with the provisions of CEQA.

2. The objective of this Order is to ensure that discharges from the MS4 in Ventura County comply with water quality standards, including protecting the beneficial uses of receiving waters. To meet this objective, the Order requires that Best Management Practices (BMPs) will be implemented to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and achieve water quality objectives and standards. The U.S. EPA envisioned that municipal storm water programs would be implemented in an iterative manner and improved with each iteration by using information and experience gained during the previous permit term (*Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits* - 61 Fed. Reg. 41697). Municipalities are required to evaluate what is effective and make improvements in order to protect beneficial uses of receiving waters. This Order requires implementation of an effective combination of pollution control and pollution prevention measures, education, public outreach, planning, and implementation of source control BMPs and Structural and Treatment Control BMPs. The better-tailored BMPs combined with the performance objectives outlined in this Order have the purpose of attaining water quality objectives and standards (*Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*- 61 Fed. Reg. 43761). Where WLAs have been adopted for storm water (wet weather) and non-storm water (dry weather) discharges from MS4s, this Order requires Permittees to implement controls to achieve the WLAs within the compliance schedule provided in the TMDLs.
3. The implementation of measures set forth in this Order are reasonably expected to reduce the discharge of pollutants conveyed in storm water discharges into receiving waters, and to meet the TMDL WLAs for discharges from MS4s that have been adopted by the Regional Water Board.
4. The U.S. EPA has recommended that all future TMDLs and TMDL amendments be expressed as daily increments consistent with a federal court ruling (*Friends of the Earth, Inc. v. EPA, et al.* No. 05-5015 (D.C. Cir. 2006)). However, this interpretation does not affect the discretionary authority of the Regional Water Board to express NPDES permit limits and conditions in non daily terms because there is no express or implied statutory limitation (CWA §502(11)) (*Establishing TMDL "Daily Loads" in Light of the Decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of the Earth, Inc. v. EPA, et al. (April 2006) and Implications for NPDES Permits, U.S.*

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EPA Office of Water, memorandum, Nov 15, 2006). This Order translates MS4 TMDL WLAs adopted by the Regional Water Board into forms "consistent with the assumptions and requirements of the TMDL".

- 5. During the term of the Order, the Permittees shall implement all necessary control measures to reduce pollutant(s) which cause or continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, to eliminate the water quality impairment(s). Successful efforts to reverse the wet weather impairments during the permit term for such pollutants, may avoid the need for a WLA for wet weather or the need to develop a TMDL in the future.
- 6. This Order promotes land development and redevelopment strategies that consider water quality and water management benefits associated with smart growth techniques. Such measures may include hydromodification mitigation requirements, minimization of effective impervious areasurfaees, integrated water resources planning, and low impact development guidelines. (Reference: *Protecting Water Resources with Smart Growth*, EPA 231-R- 04-002, U.S. EPA 2004; *Using Smart Growth Techniques as Storm Water Best Management Practices*, EPA 231-B-05-002, U.S. EPA 2005; *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*, EPA 231-K-06-001, U.S. EPA 2006; *Protecting Water Resources with Higher-Density Development*, EPA 231-R-06-001, U.S. EPA 2006.)
- 7. The implementation of an effective Public Information and Participation Program is a critical component of a storm water management program. While commercial and industrial facilities are traditionally subject to multiple environmental regulations and receive environmental protection guidance from multiple sources, the general public, in comparison, receives significantly less education in environmental protection. An effective Public Information and Participation Program is required because:
  - (a) Activities conducted by the public such as vehicle maintenance, improper household waste materials disposal, improper pet waste disposal and the improper application of fertilizers and pesticides have the potential to generate a significant amount of pollutants that could be discharged in storm water.
  - (b) An increase in public knowledge of storm water regulations, proper storage and disposal of household wastes, proper disposal of pet wastes and appropriate home vehicle maintenance practices can lead to a significant reduction of pollutants discharged in storm water.
- 8. This Order also provides flexibility for Permittees to seek authorization from the Regional Water Board Executive Officer to substitute a BMP under this Order with an alternative BMP, if they can provide information and documentation on the effectiveness of the alternative, equal to or greater than the prescribed BMP in meeting the objectives of this Order.

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9. This Order contemplates that the Permittees are responsible for considering potential storm water impacts when making planning decisions in order to fulfill the Permittees' CWA requirement to reduce the discharge of pollutants in municipal storm water to the MEP and attain water quality objectives from new development and redevelopment activities. However, the Permittees retain authority to make the final land-use decisions and retain full statutory authority for deciding what land uses are appropriate at specific locations within each Permittee's jurisdiction. This Order and its requirements are not intended to restrict or control local land use decision-making authority.
10. The State Water Board amended the Policy for the Implementation of Toxics Standards In Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy – SIP) on February 24, 2005. The SIP does not apply directly to the stormwater discharges. However, this Order includes a Monitoring Program that incorporates Minimum Levels (MLs) established under the State Implementation Policy. The MLs represent the lowest quantifiable concentration for priority toxic pollutants that is measurable with the use of proper method-based analytical procedures and factoring out matrix interference. The SIP's MLs therefore represent the best available science for determining MLs and are appropriate for a storm water monitoring program. The use of MLs allows the detection of toxic priority pollutants at concentrations of concern using recent advances in chemical analytical methods.
11. This Order establishes Municipal Action Levels (MALs) for selected pollutants based on regional Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were computed using one of three approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). MALs are identified in Attachment "C". Permittees shall utilize the MALs to identify subwatersheds that require additional action to reduce the discharge of pollutants.
12. The International Storm Water Best Management Practices (BMP) Database was established in 1996 as a cooperative initiative between the U.S. EPA and the American Society of Civil Engineers (ASCE) to provide scientifically sound information to improve the design, selection and performance of storm water BMPs. The BMP database includes standardized BMP monitoring and reporting protocols, a storm water BMP database, BMP performance evaluation protocols, and BMP monitoring guidance. The storm water BMP database is updated approximately semi-annually to add new BMP studies and performance data. The International Storm Water Database is now maintained by the Water Environment Research Foundation (WERF).

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13. This Order is not intended to prohibit the inspection for or abatement of vectors by the State Department of Public Health or local vector agencies in accordance with CA Health and Safety Code, § 116110 et seq. Certain Treatment Control BMPs if not properly designed, operated or maintained may create habitats for vectors (e.g. mosquitoes and rodents). This Order contemplates that the Permittees will closely cooperate and collaborate with local vector control agencies and the State Department of Public Health for the implementation, operation, and maintenance of Treatment Control BMPs in order to minimize the risk to public health from vector borne diseases.
14. This Order contemplates that Permittees will ensure that implemented Treatment Control BMPs will not pose a safety or health hazard to the public. This Order contemplates that Permittees will ensure that the maintenance of implemented Treatment Control BMPs will comply with all applicable health and safety regulations, such as, but not limited to requirements for worker entry into confined spaces under OSHA Safety and Training education, § 1926.21(b)(6)(i).
15. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from construction sites to the MEP. The BMPs are identified in Table 6 (BMPs at Construction sites less than 1 acre), Table 7 (BMPs at Construction Sites 1 acre or greater but less than 5 acres), and Table 8 (BMPs at Construction sites 5 acres or greater). These BMPs include erosion control, sediment control, and construction site waste management practices. The BMPs listed in part 5.F of the Order were selected based on the Water Boards' experience of regulating such sites since 1992, and are referenced in the *California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Construction (January 2003)* and from the *Stormwater Quality Handbooks, Project Planning and Design Guide, Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Plan (WPCP) Preparation Manual, Construction Site Best Management Practices (BMPs) Reference Manual, March 2007* (Caltrans Document Number CTSW-RT-06-171.11-1) which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable on a particular site, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.
16. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from commercial and industrial sites to the MEP. The BMPs are identified in Table 2 (BMPs at Restaurants), Table 3 (BMPs at Automotive Service Facilities), Table 4 (BMPs at Retail Gasoline Outlets), and Table 5 (BMPs at Nurseries). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste management practices, and implement control practices to keep pollutants away from

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any entrance to the storm drainage system. The BMPs listed in part 5.D of the Order were selected based on the Water Boards' experience of regulating such sites since 1992 and referenced in the California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Commercial/Industrial Activity (January 2003) and from the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

17. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from Public Agency Activities to the MEP. The BMPs are identified in Table 9 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste management practices, implement control practices to keep pollutants away from any entrance to the storm drainage system and from being deposited or discharged directly into waters of the U.S. The BMPs listed in part 5.G of the Order were selected based on the Water Boards' experience of regulating such sites since 1990, and are referenced in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serves as a statewide standard for the California Department of Transportation (Caltrans). The BMPs identified in the Table are technically feasible, practicable, and cost-effective, and are the standard of practice for Caltrans sites statewide. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.
  
18. This Order incorporates BMPs to ensure that authorized Non-Storm Water Discharges are not a source of pollutants to the MS4, Table 1 (Required Conditions for Non-Storm Water Discharges). The BMPs included are for the purpose of dechlorination and/or for prevention of erosion and sediment loss, or to reduce other harmful pollutants during the discharge of authorized non-storm water discharges to the MS4. The BMPs listed in part 1.B of the Order were selected from the *American Water Works Association AWWA Guidelines For The Development Of Your Best Management Practices (BMP) Manual For Drinking Water System Releases Developed by the CA-NV AWWA Environmental Compliance Committee (2005)* which serves as an industry standard for California, from the results of studies directed by the Los Angeles Water Board, - *Evaluation of Non-Storm Water Discharges to California Storm Drains and Potential Policies for Effective Prohibition Methods, Final Report*, University of California, Los Angeles, Contract No. 5-104-140-0 (1997), and *Water Quality Concerns and Regulatory Controls for Non Storm Water Discharges to Storm Drains*, Duke L.D. and M. Kihara, Journal of

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the American Water Resources Association, Vol. 34: 661-676, (1998), and from the Water Boards' experience of controlling authorized non-storm discharges to the MS4 since 1990. The BMPs identified in the Table are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

- 19. In accordance with Federal regulations at 40 CFR 124.8, a Fact Sheet has been prepared to explain the principal facts and the significant factual, legal, methodological, policy, and economic matters considered in preparing the Tentative Order. ~~Also included are the analyses of factors required under Cal. Water Code 13241.~~ This Fact Sheet has been made a part of the Administrative Record.
- 20. The State Water Board adopted statewide General Waste Discharge Requirements for Sanitary Sewer Systems, (WQ Order No. 2006-0003) on May 2, 2006, to provide a consistent, statewide regulatory framework to address sanitary sewer overflows ("SSO Orders"). The SSO Order establishes requirements for public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and to report SSOs. SSOs that enter MS4s have the potential to impair the recreational use of receiving waters, and to harm public health. This Order establishes coordination, response, and notification requirements for MS4 Permittees when SSOs result in a discharge to the MS4 system.
- 21. This Order takes into consideration the housing needs in the area under the Permittees' jurisdiction by balancing the implementation of Smart Growth and Low Impact Development techniques with the protection of the water resources of the region. Although not required, the Regional Water Board considered the need for housing and the appropriate techniques to allow for reasonable development while protecting the receiving waters from degradation.
- 22. This Order may have an effect on costs required for compliance with the provisions contained herein. Although not required, the Regional Water Board has considered costs in preparing this Order. Though also not required, the Regional Water Board has also considered the factors set forth in Water Code section 13241.

**G. Public Notification**

- 1. The issuance of waste discharge requirements pursuant to California Water Code section 13370 et seq. is exempt from the California Environmental Quality Act in accordance with California Water Code section 13389. *County of Los Angeles et al., v. California Water Boards et al.*, (2006), 143 Cal.App.4<sup>th</sup> 985.

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- 2. The Regional Water Board has notified the Permittees, and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to make statements and submit their comments.
- 3. The Regional Water Board staff has conducted more than 35 meetings from February 9, 2007 through December 19, 2008, with Permittees, their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIAGLA/ VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Collation for Practical Regulation (CPR), Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government commission, Los Angeles City; Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper). On April 5, 2007 and September 20, 2007 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the Permittees and the public regarding proposed changes.
- 4. This Order shall serve as a NPDES permit, pursuant to CWA § 402, and shall take effect 90 days from Order adoption date provided the Regional Administrator of the U.S. EPA has no objections.
- 5. Pursuant to Cal. Water Code § 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board within 30 days of the date of adoption of the Order by the Regional Water Board. A petition must be sent to:  
  
State Water Resources Control Board  
Office of the Chief Counsel  
P.O. Box 100  
Sacramento, CA 95812-0100
- 6. This Order may be modified or alternatively revoked or reissued prior to its expiration date or any administrative extension thereto, in accordance with 40 CFR122.41(f) and 122.62.

**IT IS HEREBY ORDERED** that the Permittees, in order to meet the provisions contained in Division 7 of the Cal. Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, shall comply with the following:

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**PART 1 - DISCHARGE PROHIBITIONS**

**A. Prohibitions - Non-Storm Water Discharges**

1. The Permittees shall, within their respective jurisdictions, effectively prohibit non-storm discharges into the MS4 and ~~water~~courses~~receiving waters~~, except where such discharges:

- (a) Originate from a State, Federal, or other source for which they are pre-empted from regulating by State or Federal law; or
- (b) Are covered by a separate individual or general NPDES permit, or conditional waiver for irrigated lands; or
- (c) Flows from fire fighting activities.

~~(e)~~(d) Fall within one of the categories below, are not a source of pollutants that exceed water quality standards, and meet all conditions where specified by the Regional Water Board Executive Officer:

- (1) Category A – Natural flows
  - (A) Stream diversions authorized by the State Water Board
  - (B) Natural springs and rising ground water
  - (C) Uncontaminated ground water infiltration [as defined by 40 CFR35.2005(20)]<sup>1</sup>
  - ~~(D)~~Flows from riparian habitats or wetlands
- ~~(2)~~(D) – ~~Category B – Flows from emergency fire fighting activities.~~
- ~~(3)~~(2) Category BC – Flows incidental to urban activities, providing conditions listed in table below:
  - ~~(A)~~Flows from non-emergency fire fighting activities
  - ~~(B)~~(A) Discharges from potable water sources<sup>2</sup>
  - ~~(C)~~(B) Gravity flow from foundation, footing and crawl space drains.
  - ~~(D)~~(C) Air conditioning condensate
  - ~~(E)~~(D) Reclaimed and potable landscape irrigation runoff
  - ~~(F)~~(E) Dechlorinated/ debrominated swimming pool discharges [see def. part 7]
  - ~~(G)~~(F) Non-commercial car washing by residents or non-profit organizations
  - ~~(H)~~(G) Sidewalk rinsing
  - ~~(I)~~(H) Pooled non-storm water from treatment BMPs<sup>3</sup>

<sup>1</sup> NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County.

<sup>2</sup> The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro-testing or flushing of water supply and distribution mains and incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

<sup>3</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4

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Table 1 – Required Conditions for Non-Storm Water Discharges

Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Stream diversions permitted by the State Board;	Authorization by the State Water Board	Permittees shall comply with all conditions in the authorization.
Natural springs and rising ground water	1. Ground water dewatering requires a separate NPDES permit. 2. Segregate flow to prevent introduction of pollutants.	Permittees shall comply with all conditions in the authorization.
Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)] (Utility vault dewatering requires a separate NPDES permit.)	NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Flows from riparian habitats or wetlands	Provided that all necessary permits or authorizations are received prior to diverting the stream flow.	Permittees shall comply with all conditions in the authorization.
Flows from emergency fire fighting activity	Pooled water after fire must be controlled.	
Discharges from potable water sources <sup>1</sup>	See Footnote #1.  Provided discharges from water lines and potable water sources shall be dechlorinated, pH adjusted if necessary, reoxygenated, and volumetrically and velocity controlled to prevent resuspension of sediments.	See Footnote #2. To be discharged, this type of water shall be dechlorinated using aeration and/ or sodium thiosulfate and/ or other appropriate means and/or be allowed to infiltrate to the ground. BMPs such as sand bags or gravel bags, or other appropriate means shall be utilized to prevent sediment transport. All sediments shall be collected and disposed of in a legal and appropriate manner.

<sup>1</sup> The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro testing or flushing of water supply and distribution mains and incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Drains for foundation, footing and crawl drains	Dewatering requires a separate NPDES permit.	Permittees shall comply with all conditions in the authorization.
Air conditioning condensate	Segregation of flow to prevent introduction of pollutants. Percolation whenever possible.	Permittees shall comply with all conditions in the authorization.
Water from crawl space pumps	Dewatering requires a separate NPDES permit within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Reclaimed and potable landscape irrigation runoff	Segregation of flow to prevent introduction of pollutants.	Implement conservation programs to minimize this type of discharge by using less water.
Dechlorinated/debrominated swimming pool discharges [see definition Part 8]	<p>Where the discharge is not excepted by the sanitary sewer operator. Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments.</p> <p>Cleaning waste water and filter back wash shall not be discharged to municipal separate storm sewers.</p> <p>No discharges are allowed containing salts in excess of Water Quality Standards.</p> <p>Chlorine residual in discharge shall not exceed 0.1mg/L.</p>	Pool water may be dechlorinated using time, aeration, and/ or sodium thiosulfate.
Non-commercial car washing by residents or non-profit organizations	Preferably at a commercial carwash or designated area where wash water can percolate. Pumps or vacuums may be used to direct water to pervious areas.	Permittees shall comply with all conditions in the authorization.
Sidewalk rinsing	This may be undertaken only if high pressure low volume is used as described in the glossary under "Sidewalk Rinsing".	
Pooled storm water from treatment BMPs <sup>1</sup>	All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer. All storm water BMPs shall be	

<sup>1</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
	designed to drain within 72 hours of the end of the rain event to avoid the breeding of vectors. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. The discharge shall cease before the discharge has become a source of a pollutant(s), (bottom sediment included). Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.	

2. If the Regional Water Board Executive Officer determines that any of the preceding categories of non-storm water discharges are a source of pollutants that exceed water quality standards, the Permittee(s) shall either:
  - (a) Prohibit the discharge from entering the MS4; or
  - (b) Authorize the discharge category and require implementation of appropriate or additional BMPs to ensure that the discharge will not be a source of pollutants; or
  - (c) Require or obtain coverage under a separate RWQCB or SWRCB permit for discharge into the MS4.

3. ~~The following BMPs for non-stormwater discharges are required pursuant to this Order:~~
  - ~~(a) Flows from non-emergency fire fighting activity: Implement a program to reduce pollutants from non-emergency activities such as controlled or practice blazes and maintenance activities identified to be significant sources of pollutants.~~
  - ~~(b) Discharges from potable water system releases: Water shall be dechlorinated using aeration and/or sodium thiosulfate and/or other appropriate means and/or be allowed to infiltrate to the ground. BMPs such as sand bags or gravel bags shall be utilized to prevent sediment transport. All sediments shall be collected and disposed of in a legal and appropriate manner.~~
  - ~~(c) Swimming pool discharges: Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments.~~
  - ~~(d) Sidewalk rinsing: Sidewalk rinsing in commercial areas may be undertaken only if high pressure low volume is used as described in the glossary under "sidewalk rinsing."~~

**PART 2 – MUNICIPAL ACTION LEVELS**

under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.



## Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

1. This Order establishes Municipal Action Levels (MALs) to identify subwatersheds requiring additional Best Management Practices (BMPs) to reduce pollutant loads and prioritize implementation of additional BMPs. MALs for selected pollutants based on a Climate Zone 6 subset of nationwide Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were obtained by computing the 80<sup>th</sup> percentile for selected pollutants. MALs are identified in Attachment "C".
2. Under this Order, the Municipal Action Levels (MALs) shall be utilized by Permittees to identify subwatersheds discharging pollutants at levels in excess of the MALs. Within those subwatersheds where pollutant levels in the discharge are in excess of the MALs, Permittees shall implement controls and measures necessary to reduce the discharge of pollutants.
3. In order to determine if MS4 discharges are in excess of the MALs, Permittees shall conduct outfall monitoring as required in the Monitoring and Reporting Program (MRP). A MAL Assessment Report shall be submitted to the Executive Officer as part of the Annual Report. The Report shall present the monitoring data in comparison to the applicable MALs, and identify those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs listed in Attachment "C" in discharges of storm water from the MS4 to waters of the U.S..
4. At the beginning of Year 3 after Order adoption date, each Permittee shall submit a MAL Action Plan with the Annual Report (first MAL Action Plan due with ~~Dec. 15,~~ 2011/2012 Annual Report) to the Executive Officer, for those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in any discharge of storm water from the MS4 to waters of the U.S.. The plan is to include an assessment of the sources responsible for the MAL exceedances, the existing stormwater programs and BMPs that address those sources, an assessment of potential program enhancements, alternative BMPs and actions the Permittee shall implement to reduce discharges to a level that is equivalent to or below the MALs, and an implementation schedule for such actions for Executive Officer approval. The MAL Action Plan shall provide the technical rationale to demonstrate the proposed measures and controls will attain the MALs. If the MAL Action Plan is not approved within 90 days of the due date, the Executive Officer may establish an appropriate plan with at least 90 day notification and consultation to the Permittees.
5. Within 90 days of the plan approval by the Regional Board Executive Officer, the Permittee shall initiate the BMPs and actions proposed in the MAL Action Plan, together with any other practicable BMPs or actions that the Executive Officer determines to be necessary to meet the MALs. The Permittee shall complete the proposed actions in accordance with the approved implementation schedule.

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- 6. Upon completion of the actions specified in the approved MAL Action Plan, the Permittee shall re-monitor the subject subwatershed in accordance with the MRP, and submit a Post-Project MAL Assessment Report to the Executive Officer. Upon Executive Officer approval, Permittees may coordinate MAL Action Plans and TMDL Implementation Plans, subject to the compliance timeline of the earliest date.
- 7. As additional data become available through the MRP or from the Regional Subset of the National Dataset, MALs may be revised annually by the Executive Officer in accordance with an equivalent statistical method as that used to establish the MALs in Attachment C of this order with at least 90 day notification and consultation to the Permittees.

**PART 3 – RECEIVING WATER LIMITATIONS**

- 1. Discharges from the MS4 that cause or contribute to a violation of water quality standards are prohibited.
- 2. Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible, shall not cause or contribute to a condition of nuisance.
- 3. The Permittee shall comply with Receiving Water Limitations 1 and 2 through timely implementation of control measures and other actions to reduce pollutants in the storm water discharges in accordance with the requirements of this Order including any modifications. The Permittees' Program shall be designed to achieve compliance with Receiving Water Limitations 1 and 2. If exceedance(s) of water quality objectives or water quality standards (collectively WQS) persist, notwithstanding implementation of this permit, the Permittees shall ensure compliance with Receiving Water Limitations 1 and 2 by complying with the following procedure:
  - (a) Upon determination by either the Permittees or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee(s) upstream of the point of discharge shall promptly notify and thereafter submit a report to the Regional Water Board Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSS. The report may be included with the Annual Report, unless the Regional Water Board Executive Officer directs an earlier submittal. The Regional Water Board Executive Officer may require modifications to the report.
  - (b) Submit any modifications to the report required by the Regional Water Board Executive Officer within 30 days of notification.
  - (c) Within 30 days following approval of the Report described above by the Regional Water Board Executive Officer, the Permittees shall revise their Program and monitoring program to incorporate the approved modified BMPs that have been

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and will be implemented, the implementation schedule, and any additional monitoring required.

(d) Implement the revised Program and monitoring program according to the approved schedule.

- 4. Permittees shall annually report the effectiveness of BMPs in reducing exceedances of receiving water limitations. The Regional Board Executive Officer may direct implementation of additional BMPs if there are continuing or recurring exceedances of the same receiving water limitation.

**PART 4 - STORM WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION**

**A. General Requirements**

- 1. Each Permittee shall, at a minimum, adopt and implement applicable terms of this Order within its jurisdictional boundary. The Principal Permittee shall be responsible for program coordination as described in this Order as well as compliance with applicable portions of the permit within its jurisdiction. This Order shall be implemented no later than (90 days after Order adoption date), unless a later date has been specified for a particular provision in this Order and provided the Regional Administrator of the U.S. EPA has no objections.
- 2. Each Permittee shall comply with the requirements of 40 CFR122.26(d)(2) and implement programs and control measures so as to reduce the discharges of pollutants in storm water to the MEP and achieve water quality standards.
- 3. Each Permittee shall require that treatment control BMPs being implemented under the provisions of this Order shall be designed, at a minimum, to achieve the BMP performance criteria for storm water pollutants likely to be discharged as identified in Attachment "C", Table 3, for an 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87. (1998). E Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database. Permittees shall select Treatment BMPs based on the primary class of pollutants likely to be discharged from the site/facility (e.g. metals from an auto repair shop). Permittees may develop guidance for appropriate Treatment BMPs for project type based on Attachment "C". For the treatment of pollutants causing impairments within the drainage of the impaired waterbody, permittees shall select BMPs from the top three performing BMP categories or alternative BMPs that are designed to meet or exceed the performance of the highest performing BMP for the pollutant causing impairment.

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4. Each Permittee shall implement programs and measures to comply with the TMDLs' WLAs for the MS4 as specified in Part 6.
5. If TMDL requirements, including Implementation Plans and Reports, address substantially similar requirements as the MS4 permit, the Executive Officer may approve the applicable reports, plans, data or submittals under the applicable TMDL as fulfilling requirements under the MS4.

**B. Legal Authority**

1. Permittees shall possess the necessary legal authority to prohibit, including, but not limited to:
  - (a) Illicit connections and illicit discharges, and to remove illicit connections.
  - (b) The discharge of non-storm water to the MS4 from:
    - (1) Washing or cleaning of gas stations, auto repair garages, or other types of automotive service facilities
    - (2) Mobile auto washing, carpet cleaning, steam cleaning, sandblasting and other such mobile commercial and industrial operations
    - (3) Areas where repair of machinery and equipment which are visibly leaking oil, fluid or antifreeze, is undertaken
    - (4) Storage areas for materials containing grease, oil, or other hazardous substances, and uncovered receptacles containing hazardous materials
    - (5) Swimming pools<sup>1</sup> that have a concentration greater than:
      - (A) Chlorine/ bromine- 0.1mg/L
      - (B) Chloride- 250mg/L
    - (6) Swimming pool filter backwash
    - (7) Decorative fountains and ponds
    - (8) Industrial/ Commercial areas, including restaurant mats
    - (9) Concrete truck cement, pumps, tools, and equipment washout
    - (10) Spills, dumping, or disposal of materials other, such as:
      - (A) Litter, landscape and construction debris, garbage, food, animal waste, fuel or chemical wastes, batteries, and any other materials which have the potential to adversely impact water quality; and
      - (B) Any pesticide, fungicide or herbicide
    - (11) Stationary and mobile pet grooming facilities
    - (12) Trash container leachate
2. The Permittees shall possess adequate legal authority to:
  - (a) Control through interagency agreement, the contribution of pollutants from one portion of the MS4 to another portion of the MS4.

<sup>1</sup> MS4s discharging directly to the ocean are not subject to this prohibition.

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- (b) Require persons within their jurisdiction to comply with conditions in the Permittees' ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows).
  - (c) Utilize enforcement measures (e.g., stop work orders, notice of violations, fines, referral to City, County, and/ or District Attorneys, referral to strikeforces, etc.) by ordinances, permits, contracts, orders, administrative authority, and civil and criminal prosecution.<sup>1</sup>
  - (d) Control pollutants, including potential contribution<sup>2</sup> in discharges of storm water runoff associated with industrial activities, including construction activities to its MS4, and control the quality of storm water runoff from industrial sites, including construction sites.
  - (e) Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges to the MS4.
  - (f) Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality objectives.
  - (g) Require that Treatment Control BMPs be properly operated and maintained.
3. Each Permittee has adopted a Storm Water Quality Ordinance based upon a countywide model. Each Permittee shall ensure, no later than (~~two~~ years after Order adoption date), that its Storm Water Quality Ordinance authorizes the Permittee to enforce all requirements of this Order.
  4. Each Permittee shall submit no later than two years after Order adoption date, a statement by its legal counsel that the Permittee has obtained and possesses all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.

**C. Fiscal Resources**

1. The Permittees shall implement the activities required to comply with the provisions of this Order.<sup>3</sup> Each Permittee shall:
  - (a) Submit an Annual Budget Summary that shall include:
    - (1) Budgets for the upcoming report year (estimated expenditure) for the following specific categories (estimated percentages and written explanations where necessary):
      - (A) Program Management Activities.

<sup>1</sup>In the case of private responsible parties such as, HOAs, the Permittee must retain enforcement authority.

<sup>2</sup>“Potential contributions” and “potential to discharge,” means adequate legal authority to prevent an actual discharge of pollutants to the municipal separate storm sewer system.

<sup>3</sup> The sources of funding may be the general funds, and/or Benefit Assessment, plan review fees, permit fees, industrial/ commercial user fee, revenue bonds, grants or other similar funding mechanism.

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- (i) Overall Administrative costs
- (B) Program Implementation Activities (~~permitted storm water~~ related activities only). Provide figures breakdown of expenditures for the categories below:
  - (i) Illicit connection/ illicit discharge program.
  - (ii) Development planning and approval
  - (iii) Construction program including inspection activities
  - (iv) Industrial/ Commercial program including inspection activities
  - (v) Public Agency Activities
    - (I) Maintenance and inspection of Treatment Control BMPs
    - (II) Municipal Street Sweeping
    - (III) Municipal Drainage Maintenance including catch basin clean-outs
    - (IV) Other costs associated with storm water management (describe)
  - (vi) Public Information and Participation.
  - (vii) Monitoring Program
  - (viii) Miscellaneous Expenditures (describe)

**D. Modifications/ Revisions**

1. No later than two years after the Order adoption date, each Permittee shall modify its storm water management programs, protocols, practices, and municipal codes to make them consistent with the requirements herein.

**E. Designation and Responsibilities of the Principal Permittee**

1. The Ventura County Watershed Protection District is hereby designated as the Principal Permittee. The Principal Permittee shall:
  - (a) Participate in the County Environmental Crimes Task Force
  - (b) Coordinate and facilitate activities necessary to comply with the requirements of this Order, but the Principal Permittee is not responsible for ensuring compliance of any other individual Permittee
  - (c) Coordinate permit activities among Permittees and act as liaison between the Permittees and the Regional Water Board on permitting issues
  - (d) Provide technical and administrative support for committees that will be organized to implement this Order and its requirements
  - (e) Evaluate, assess, and synthesize the results of the monitoring program and the effectiveness of the implementation of BMPs

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- (f) Convene the Committee Meetings constituted pursuant to subpart 4.F.1., below, upon designation of representatives
- (g) Implement the Countywide Monitoring Program required under the Order and evaluate, assess and synthesize the results of the monitoring program
- (h) Provide personnel and fiscal resources for the collection, processing and submittal to the Regional Water Board of monitoring and annual reports, and summaries of other reports required under this Order
- (i) ~~Comply with the "Responsibilities of the Permittees" in part 4.F. below~~

**F. Responsibilities of the Permittees**

1. Each Permittee is required to comply with the requirements of this Order applicable to discharges within its boundaries (see Findings- Permit Coverage D.1 and D.2). Permittees are not responsible for the implementation of the provisions applicable to the Principal Permittee or other Permittees. Each Permittee shall:
  - (a) Comply with the requirements of this Order and any modifications thereto
  - (b) Coordinate among its internal departments and agencies, as necessary, to facilitate the implementation of the requirements of this Order applicable to such Permittees in an efficient and cost-effective manner
  - (c) Participate in intra-agency coordination (e.g., Planning Department, Fire Department, Building and Safety, Code Enforcement, Public Health, Parks and Recreation, and others) necessary to successfully implement the provisions of this Order
  - (d) Report, in addition to the Budget Summary, any supplemental dedicated budgets for the same categories
  - (e) Participate in Committee Meetings, as necessary

**PART 5 - SPECIAL PROVISIONS (BASELINE)**

**A. General Requirements**

1. This Order and the provisions herein, are intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the MEP and not cause or contribute to exceedances of water quality standards for the permitted areas in the County of Ventura.
2. Best Management Practice Substitution

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- (a) The Regional Water Board Executive Officer may approve any site-specific BMP substitution upon written request by a Permittee(s) and after public notice, if the Permittee can document that:
  - (1) The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants.
  - (2) The fiscal burden of the original BMP or program is greater than the proposed alternative and does not achieve a greater improvement in storm water quality.
  - (3) The proposed alternative BMP or program will be implemented within a similar period of time.
  - (4) BMP substitution will be in accordance with the public review provisions of the Order (Part 8C.1 and Part 8C.2).

**B. Watershed Initiative Participation**

- 1. The Principal Permittee shall participate in water quality meetings for watershed management and planning, including but not limited to the following:
  - (a) Southern California Stormwater Monitoring Coalition (SMC)
  - (b) Other Watershed planning groups as appropriate
- 2. The Principal Permittee shall participate in the following regional water quality programs, and projects for watershed management and planning:
  - (a) SMC Regional Monitoring Programs
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six
        - (ii) Integrator sites per watershed
          - (I) Ventura River - One
          - (II) Santa Clara River - One
          - (III) Calleguas Creek - One
        - (iii) Fixed bioassessment sites
          - (I) The Permittees shall perform bioassessment at one fixed urban site in each major watershed. Site selection shall be determined by the results of the first year SMC results, as approved by the Executive Officer.
    - (b) Southern California Bight Projects
      - (1) Regional Monitoring Survey - 2008, and successive years.

**C. Public Information and Participation Program (PIPP)**

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1. The Principal Permittee shall implement a Public Information and Participation Program (PIPP) that includes, but is not limited to, the requirements listed in this part. The Principal Permittee shall coordinate with Permittees to implement specific PIPP requirements. The objectives of the PIPP are as follows:
- (a) To increase the knowledge of the target audience about the MS4, the adverse impacts of storm water pollution on receiving waters and potential solutions to mitigate the impacts
  - (b) To change the waste disposal and storm water pollution generation behavior of target audiences by encouraging implementation of appropriate solutions
  - (c) To involve and engage communities in Ventura County to participate in mitigating the impacts of storm water pollution
2. Residential Program
- (a) "No Dumping" Message  
Each Permittee shall label all storm drain inlets that they own with a legible "no dumping" message. In addition, signs with prohibitive language discouraging illegal dumping shall be posted at designated public access points to creeks, other relevant waterbodies, and channels. Signage and storm drain messages shall be legible and maintained.
  - (b) Public Reporting  
Each Permittee shall identify staff who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/dumping, faded or missing catch basin labels, and general storm water management information. Permittees shall include this information, updated by July 1 of each year, in public information media such as the government pages of the telephone book, and internet web sites. The Principal Permittee shall compile a list of the general public reporting contacts submitted by all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request. Each Permittee is responsible for providing current, updated information to the Principal Permittee.
  - (c) Outreach and Education
    - (1) Collaboratively, the Permittees shall implement the following activities:
      - (A) Conduct a Storm Water pollution prevention advertising campaign.
      - (B) Conduct Storm Water pollution prevention public service announcements.
      - (C) Distribute storm water pollution prevention public education materials within 365 days to:
        - (i) Automotive parts stores
        - (ii) Home improvement centers/ lumber yards/ hardware stores
        - (iii) Pet shops/ feed stores
      - (D) Public education materials shall include, but are not limited to information on the proper disposal, storage, and use of:

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- (i) Vehicle waste fluids
  - (ii) Household waste materials
  - (iii) Construction waste materials
  - (iv) Pesticides and fertilizers (including integrated pest management practices-IPM)
  - (v) Green waste (including lawn clippings and leaves)
  - (vi) Animal wastes
  - (E) Work with existing local watershed groups or organize watershed Citizen Advisory Groups/ Committees to develop effective methods to educate the public about storm water pollution no later than (365 days after Order adoption date).
  - (F) Organize events targeted to residents and population subgroups; and
  - (G) Maintain the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), which shall include educational material listed in the preceding subpart C.1(c)(1)(C).
- (2) The Principal Permittee shall develop a strategy to educate ethnic communities through culturally effective methods. Details of this strategy should be incorporated into the PIPP, and implemented, no later than (365 days after Order adoption date).
  - (3) Each Permittee shall continue the existing outreach program to residents on the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices.
  - (4) Each Permittee shall conduct educational activities within its jurisdiction and participate in countywide events.
  - (5) The Permittees shall make a minimum of 5 million impressions per year to the general public related to storm water quality, with a minimum of 2.5 million impressions via newspaper, local TV access, local radio and/ or internet access.
  - (6) The Principal Permittee, in cooperation with the Permittees, shall provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution. Alternatively, a Permittee may submit a plan to the Regional Water Board Executive Officer for consideration no later than (90 days after adoption of the Order), to provide outreach in lieu of the school curriculum. Pursuant to Water Code section 13383.6, the Permittees, in lieu of providing educational materials/ funding to School Districts in the County, may opt to provide an equivalent amount of funds or fraction thereof to the Environmental Education Account established within the State Treasury.
  - (7) Each Permittee shall provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal

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Permittee and contact information changes no later than 30 days after a change occurs.

- (8) The Permittees shall develop and implement a behavioral change assessment strategy no later than (365 days after Order adoption date), in order to determine whether the PIPP is demonstrably effective in changing the behavior of the public. The strategy shall be developed based on current sociological data and studies.

(d) Pollutant-Specific Outreach

The Principal Permittee, in cooperation with the Permittees, shall coordinate to develop outreach programs that focus on metals, urban pesticides, bacteria and nutrients as the pollutants of concern no later than (365 days after Order adoption date). Metals may be appropriately addressed through the Industrial/ Commercial Facilities Program (e.g. the distribution of educational materials on appropriate BMPs for metal fabrication and recycling facilities that have been identified as a potential source). Region-wide pollutants may be included in the Principal Permittee's mass media outreach program.

3. Businesses Program

(a) Corporate Outreach

- (1) The Permittees shall work with other regional or statewide agencies and, associations such as the California Storm Water Quality Association (CASQA), to develop and implement a Corporate Outreach program to educate and inform corporate franchise operators and/or local facility managers about storm water regulations and BMPs. Once developed, the program shall target a minimum of four Retail Gasoline Outlets (RGO) franchisers and cover a minimum of 80% of RGO franchisees in the county, four retail automotive parts franchisers, two home improvement center franchisers and six restaurant franchisers. Corporate outreach for all target facilities shall be conducted not less than twice during the term of this Order, with the first outreach contact to begin no later than two years after Order adoption date. At a minimum, this program shall include:

- (A) Confer with franchise operators and/or local facility managers to explain storm water regulations.
- (B) Distribution and discussion of educational material regarding storm water pollution and BMPs, and provide managers with recommendations to facilitate employee and facility compliance with storm water regulations.

(b) Business Assistance Program

- (1) The Permittees shall implement a Business Assistance Program to provide technical information to small businesses to facilitate their efforts to reduce the discharge of pollutants in storm water. The Program shall include:

## Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

- (A) On-site, telephone or e-mail consultation regarding the responsibilities of businesses to reduce the discharge of pollutants, procedural requirements, and available guidance documents.
- (B) Distribution of storm water pollution prevention education materials to operators of auto repair shops, car wash facilities (including mobile car detailing), mobile carpet cleaning services, commercial pesticide applicator services and restaurants.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures, unless precluded by local ordinances, at industrial and commercial facilities, with the objective of reducing pollutants in storm water. Except where specified otherwise in this Order, pollutant reduction and control measures may be used alone or in combination, and may include Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollutant generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program shall include requirements to:

- (a) Track
  - (b) Inspect
  - (c) Ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water
1. Inventory of Critical Sources
- (a) Each Permittee shall maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of storm water pollution. Critical Sources to be tracked are summarized below, and specified in Attachment "D":
    - (1) Commercial Facilities
      - (A) Restaurants
      - (B) Automotive service facilities
      - (C) RGOs and automotive dealerships
      - (D) Nurseries and nursery centers
    - (2) U.S. EPA Phase I, II Facilities
    - (3) Other Federally-mandated Facilities [as specified in 40 CFR122.26(d)(2)(iv)(C)]
      - (A) Municipal landfills
      - (B) Hazardous waste treatment, disposal, and recovery facilities
      - (C) Facilities subject to SARA Title III (also known as the Emergency Planning and Community Right-to-Know Act (EPCRA))
  - (b) Each Permittee shall include the following minimum fields of information for each critical source industrial and commercial facility
    - (1) Name of facility and name of owner/ operator.
    - (2) Address of facility

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- (3) Coverage under the IASGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
  - (4) A narrative description including Standard Industrial Classification (SIC) System/ North American Industry Classification System (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
  - (c) The Regional Water Board recommends that Permittees include additional fields of information, such as material usage and/ or industrial output, and discrepancies between SIC System/ NAICS Code designations (as reported by facility operators) and identify the actual type of industrial activity that has the potential to pollute storm water. In addition, the Regional Water Board recommends the use of an automated database system, such as a Geographical Information System (GIS) or Internet-based system.
  - (d) Each Permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available inter and intra-agency informational databases (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, and similar information).
2. Inspect Critical Sources
- (a) Commercial Facilities
 

Permittee shall inspect all facilities identified in subpart 5.D.12. twice during the 5-year term of the Order, provided that the first inspection occurs no later than (2 years after Order adoption date). A minimum interval of 6 months between the first and the second mandatory compliance inspection is required. In addition, each Permittee shall implement the activities outlined in the following subparts. At each facility, inspectors shall verify that the operator is implementing the source control BMPs. The Permittees may require implementation of additional BMPs where storm water flows from the MS4 discharge to an environmentally sensitive area (ESA, see part 7 for definition) or a CWA § 303(d) listed waterbody (see subpart 3(b) below).

    - (1) Restaurants-
 

Level of inspections: Each Permittee, ~~in cooperation with its appropriate department (such as health or public works),~~ shall inspect all restaurants within its jurisdiction to confirm that storm water BMPs are being effectively implemented in compliance with State law, County and municipal ordinances. BMPs in Table 2 (BMPs at Restaurants) shall be implemented, unless the pollutant generating activity does not occur.

Table 2 - BMPs at Restaurants

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<b>Pollutant-Generating Activity</b>	<b>BMP Narrative Description</b>	<b>2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #</b>
Waste/ Hazardous Materials Storage, Handling and Disposal	Implementation of effective storage, handling and disposal procedures for hazardous materials.	By Municipality
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

## (2) Automotive Service Facilities-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 3 (BMPs at Automotive Service Facilities) are being implemented, unless the pollutant generating activity does not occur.

Table 3 - BMPs at Automotive Service Facilities

<b>Pollutant-Generating Activity</b>	<b>BMP Narrative Description</b>	<b>2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #</b>
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Vehicle/ Equipment Fueling.	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning.	Implementation of effective equipment/ vehicle cleaning practices and appropriate wash water management practices	SC-21
Vehicle/ Equipment Repair	Implementation of effective vehicle/ equipment repair practices and source control devices.	SC-22
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance Practices	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

(3) Retail Gasoline Outlets and Automotive Dealerships-

Level of Inspections: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 4 (BMPs at Retail Gasoline Outlets) are being implemented, unless the pollutant generating activity does not occur.

Table 4 - BMPs at Retail Gasoline Outlets

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10

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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning	Implementation of effective wash water control devices.	SC-21
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43

- (4) Commercial Nurseries and Nursery Centers (Merchant Wholesalers, Nondurable Goods, and Retail Trade)-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 5 (BMPs at Nurseries) are being implemented, unless the pollutant generating activity does not occur.

Table 5 - BMPs at Nurseries

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Outdoor Loading/ Unloading	Implementation of effective outdoor loading/ unloading practices.	SC-30



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Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices.	SC-32
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41

(b) Industrial Facilities

Each Permittee shall conduct compliance inspections as specified below.

(1) **Frequency of Inspection**

- (A) Each Permittee shall perform an initial inspection at all industrial facilities identified by the U.S. EPA in 40 CFR122.26(c) no later than 2 years after Order adoption date. After the initial inspection, all facilities determined as having exposure of industrial activities to storm water are subject to a second mandatory compliance inspection. A minimum interval of 6 months between the first and the second compliance inspection is required.
- (B) Following the first mandatory compliance inspection, a Permittee shall perform a second mandatory compliance inspection yearly at a minimum of 20% of the facilities determined not to have exposure of industrial activities to storm water. The purpose of this inspection is to verify the continuity of the no exposure status. Facilities determined as having exposure will be notified that they must obtain coverage under the IASGP. A facility need not be inspected more than twice during the term of the Order unless subject to an enforcement action. A minimum interval of 6 months in between the first and the second compliance inspection is required.
- (C) Applicable to all facilities: A Permittee need not inspect facilities that have been inspected by the Regional Water Board within the previous 24 month interval. However, if the Regional Water Board performed only one inspection, the Permittee shall conduct the second required mandatory compliance inspection.

(2) **Level of Inspection:** Each Permittee shall confirm that each operator:

- (A) Has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity,

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and that a Storm Water Pollution Prevention Plan (SWPPP) is available on-site.

- (B) Is effectively implementing BMPs in compliance with County and municipal ordinances. Facilities must implement the source control BMPs identified in subpart 5.D.3. and Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*; ~~The Permittees shall require implementation of additional BMPs where the storm water from the MS4 discharges to a CWA § 303(d) listed waterbody; or \*keep this?\*~~
- (C) Has applied and has a current No Exposure Certification (and WDID number) for facilities subject to this requirement.

3. Ensure Compliance of Critical Sources

- (a) **BMP Implementation:** Facilities must implement the source control BMPs identified in Part 5. D. 23. and, as applicable, Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*. In the event that a Permittee determines that a BMP is infeasible at any site, the Permittee shall require implementation of similar BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not protective of water quality standards, Permittees may require additional site-specific controls.
- (b) **Environmentally Sensitive Areas (ESAs) and Impaired Waters:** For critical sources that discharge to MS4s that directly discharge to ESAs or to CWA § 303(d) listed impaired waterbodies, the Permittees shall require operators to implement additional pollutant specific controls to reduce pollutants in storm water runoff that are causing or contributing to exceedances of water quality objectives. A Regional Board approved TMDL Implementation Plan for the receiving water will substitute for this requirement.
- (c) **Progressive Enforcement:** Each Permittee shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable time period as specified below.
- (1) In the event that a Permittee determines, based on an inspection conducted, that an operator has failed to adequately implement all necessary BMPs, that Permittee shall take progressive enforcement actions which, at a minimum, shall include a follow-up inspection within 4 weeks from the date of the initial inspection.
  - (2) In the event that a Permittee determines that an operator has failed to adequately implement BMPs after a follow-up inspection, that Permittee shall take further enforcement action as established through authority in its municipal code and ordinances or through the judicial system.
  - (3) Each Permittee shall maintain records and make them available on request to the Regional Water Board, including inspection reports, warning letters,

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notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

4. Interagency Coordination

- (a) **Referral of Violations of the Municipal Storm Water Ordinances and California Water Code § 13260:** A Permittee may refer a violation(s) of § 13260 by Industrial and Commercial facilities to the Regional Water Board provided that under its municipal storm water ordinance the Permittee has made a good faith effort of progressive enforcement. At a minimum, a Permittee's good faith effort must be documented with:
- (1) Two follow-up inspections
  - (2) Two warning letters or notices of violation
- (b) **Referral of Violations of the Industrial Activities Storm Water General Permit (IASGP), including Requirements to File a Notice of Intent or No Exposure Certification:** For those facilities in violation of the municipal storm water ordinance and subject to the IASGP, Permittees may escalate referral of such violations to the Regional Water Board (electronically on a quarterly basis to the Regional Water Board's Storm Water Site at [MS4stormwaterrb4@waterboards.ca.gov](mailto:MS4stormwaterrb4@waterboards.ca.gov)) after one inspection and one written notice (copied to the Regional Water Board) to the operator regarding the violation. In making such referrals, Permittees shall include, at a minimum, the following documentation:
- (1) Name of the facility
  - (2) Operator of the facility
  - (3) Owner of the facility
  - (4) WDID Number (if applicable)
  - (5) Industrial activity being conducted at the facility that is subject to the IASGP
  - (6) Records of communication with the facility operator regarding the violation, which shall include at least an inspection report
  - (7) The written notice of the violation copied to the Regional Water Board
- (c) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:** Each Permittee shall initiate, within one business day,<sup>1</sup> investigation of complaints (~~other than~~ non-storm water discharges) to the MS4 from facilities within its jurisdiction (~~other than non-storm water discharges~~). The initial investigation shall include, at a minimum, a limited inspection of the facility to confirm the complaint to determine if the facility is effectively complying with the municipal storm water urban runoff ordinances, and, if necessary, to oversee corrective action.

<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to "initiate" the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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- (d) **Assistance of Regional Water Board Enforcement Actions:** As directed by the Regional Water Board Executive Officer, Permittees shall assist Regional Water Board enforcement actions by: helping in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Water Board inspectors; appearing as witnesses in Regional Water Board enforcement hearings; and providing copies of inspection reports and other progressive enforcement documentation.
- (e) **Participation in a Task Force:** The Permittees shall participate with the Regional Water Board, and other public agencies on an enforcement task force such as the Storm Water Task Force, to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

**E. Planning and Land Development Program**

**I. Purpose**

- 1. The Permittees shall implement a Planning and Land Development Program pursuant to part 5.E. for all New Development and Redevelopment projects subject to this Order to:

- (a) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.
- (b) Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of waterbodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100).
- ~~(b)~~(c) Minimize the percentage of effective impervious surfaces on land developments to mimic predevelopment water balance through infiltration, evapotranspiration and reuse.
- ~~(e)~~(d) Minimize pollutant loadings from impervious surfaces such as roof-tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), Low Impact Development Strategies, and Treatment Control BMPs.
- ~~(d)~~(e) Properly select, design and maintain Treatment Control BMPs and Hydromodification Control BMPs to address pollutants that are likely to be generated, assure long-term function, and to avoid the breeding of vectors.<sup>1</sup>
- ~~(e)~~(f) Prioritize the selection of BMPs suites to remove storm water pollutants, reduce storm water runoff volume, and beneficially reuse storm water to support

<sup>1</sup> Treatment BMPs when designed to drain within 7248 hours of the end of rainfall minimize the potential for the breeding of vectors.

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an integrated approach to protecting water quality and managing water resources in the following order of preference:

- (1) Infiltration BMPs
- (2) BMPs that store and reuse storm water runoff.
- (3) BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses
- (4) BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly
- (5) Approved modular/ proprietary treatment control BMPs that are based on LID concepts and that meet pollution removal goals

**II. Applicability**

1. New Development Projects.

(a) Development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:

- (1) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area
- (2) Industrial park 10,000 square feet or more of impervious surface area
- (3) Commercial strip mall 10,000 square feet or more of impervious surface area
- (4) Retail gasoline outlet 5,000 square feet or more of impervious surface area
- (5) Restaurant (SIC 5812) 5,000 square feet or more of impervious surface area
- (6) Parking lot 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
- (7) Streets, roads, highways, and freeway construction of 10,000 square feet or more of impervious surface area shall incorporate USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets to the maximum extent practicable.
- (8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of impervious surface area]
- (9) Redevelopment projects in subject categories that meet Redevelopment thresholds (identified in subpart E.II.2 below)
- (10) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
  - (A) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
  - (B) Create 2,500 square feet or more of impervious surface area
- (11) Single-family hillside homes. To the extent that a Permittee may lawfully impose conditions, mitigation measures or other requirements on the development or construction of a single-family home in a hillside area as defined in the applicable Permittee's Code and Ordinances, each Permittee

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shall require that during the construction of a single-family hillside home, the following measures to be implemented:

- (A) Conserve natural areas
- (B) Protect slopes and channels
- (C) Provide storm drain system stenciling and signage
- (D) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability
- (E) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability

2. Redevelopment Projects

(a) Redevelopment projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:

- (1) Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on development categories identified in subpart 5.E.II.1.
- (2) Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, the entire project must be mitigated.
- (3) Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

(b) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

(c) Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

3. Effective Date –The New Development and Redevelopment requirements contained in Section E of the Order shall begin 90 calendar days after Regional Board Executive Officer approval of the changes to the Technical Guidance Manual needed to comply with this permit. After that date all discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects

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without vesting tentative maps that have not requested and received an extension of previously granted approvals must comply with the requirements in Section E. Projects that have been deemed complete prior to the update of the technical design manual are not subject to this section. For Permittee's projects the effective date shall be the date the governing body ~~approves authorization to advertise to bid the project~~ or their designee approves initiation of the project design.

### III. New Development/ Redevelopment Performance Criteria

1. Integrated Water Quality/ Flow Reduction/ Resources Management Criterion
  - (a) Permittees shall establish standards for all New Development and Redevelopment projects identified in subpart 5.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through percolation, infiltration, storage, or evapo-transpiration, by reducing the percentage of Effective Impervious Area (EIA). The standards shall be based on the type of development, site conditions (including soils and groundwater), community constraints, and shall consider USEPA's "Managing Wet Weather with Green Infrastructure, Action Strategy, 2008".
  - (b) The goal of the New Development and Redevelopment standards shall be to minimize pollutant loads and runoff volume from impervious surfaces by reducing the effective impervious area of new and redevelopment projects. This goal may be implemented through use of site features, a Redevelopment Project Area Master Plan (RPAMP), or payment of an in-lieu fee as described in this section. For projects in undeveloped areas, the project shall comply with the goal of 5% or less of effective impervious area (EIA). For development and redevelopment projects which can be demonstrated that the 5% EIA goal is infeasible, the project shall comply with the surface discharge requirements of 5.E.III.3. Permittees shall submit the criteria for determining infeasibility to the Regional Board within 180 days of permit adoption. The infeasibility criteria shall become effective for determining feasibility upon Executive Officer approval.
  - (c) Impervious surfaces may be rendered "ineffective" if the storm water runoff is:
    - (1) Collected and stored for beneficial use such as irrigation, or other reuse purpose; or
    - (2) Infiltrated; or,
    - (3) Evapotranspired; or
    - (4) Biofiltrate.
  - (d) All features and structures implemented to render impervious surfaces "ineffective" to attain the EIA requirement as described in provision (b), above, shall be properly sized to infiltrate, store for beneficial reuse, evapotranspire, or biofiltrate at least the volume of water that meets the criteria in subpart 5.E.III.3.

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- ~~(e) Any surface discharge of the storm water runoff from projects that cannot attain the 5% EIA goal shall be mitigated in accordance with subpart 5.E.III.3~~
- ~~(b) The goal of the New Development and Redevelopment standards shall be to reduce the effective impervious area (EIA) to 5% or less. This goal may be implemented through use of site features, a Redevelopment Project Area Master Plan (RPAMP), payment of an in-lieu fee, or use of stormwater mitigation credits as described in this section. For development projects in undeveloped areas, the project shall comply with the goal of 5% EIA or less. For redevelopment projects, or development projects that can be demonstrated that the 5% EIA goal is infeasible, the project shall comply with the surface discharge requirements of 5.E.III.4~~
- ~~(c) All features structured constructed to render impervious surfaces "ineffective" as described in provision (b), above, shall be properly sized to impervious surfaces may be rendered "ineffective" if the storm water runoff is:~~
  - ~~(1) Drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; or~~
  - ~~(2) Collected and stored for beneficial use such as irrigation, or other reuse purpose; or~~
  - ~~(3) Discharged into an infiltration trench~~
- ~~(e) Any excess surface discharge of the storm water runoff shall be mitigated in accordance with subpart 5.E.III.3~~

2. Hydromodification (Flow/ Volume/ Duration) Control Criteria

- (a) Each Permittee shall require all New Development and Redevelopment projects identified in subpart 5.E.II to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and duration. This shall be achieved by maintaining the project's pre-project storm water runoff flow rates and durations.
  - (1) Description
    - (A) Hydromodification control in natural drainage systems shall be achieved by maintaining the Erosion Potential ( $E_p$ ) in streams at a value of 1, unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat (see Attachment "E" - Determination of Erosion Potential)
    - (B) Hydromodification control may include one, or a combination of on-site, regional subregional hydromodification control BMPs, LID strategies, or stream restoration measures, with preference given to LID strategies and hydromodification control BMPs. Any in-stream



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restoration measure shall not adversely affect the beneficial uses of the natural drainage systems

- (C) Natural drainage systems, which include unlined or unimproved (not engineered) creeks, streams, rivers and their tributaries, are located in the following watersheds:
    - (i) Ventura River
    - (ii) Santa Clara River
    - (iii) Calleguas Creek
    - (iv) Miscellaneous Ventura Coastal
  - (D) The Southern California Storm Water Monitoring Coalition (SMC) is developing a regional methodology to eliminate or mitigate the adverse impacts of hydromodification as a result of urbanization, including hydromodification assessment and management tools.
    - (i) The SMC has identified the following objectives for the Hydromodification Control Study (HCS):
      - (I) Establishment of a stream classification for Southern California streams
      - (II) Development of a deterministic or predictive relationship between changes in watershed impervious cover and stream-bed/ stream bank enlargement
      - (III) Development of a numeric model to predict stream-bed/ stream bank enlargement and evaluate the effectiveness of mitigation strategies
  - (E) The Permittees shall participate in the SMC HCS to develop:
    - (i) A regional stream classification system
    - (ii) A numerical model to predict the hydrological changes resulting from new development
    - (iii) A numerical model to identify effective mitigation strategies
  - (F) Until the completion of the SMC HCS, Permittees shall implement the Interim Hydromodification Control Criteria, described in subpart 5.E.III.3(a)(32)(A) below, to control the potential adverse impacts of changes in hydrology that may result from new development and redevelopment projects identified in subpart 5.E.II
  - (G) Existing single-family structures are exempt from the Hydromodification control requirements unless such projects disturb one acre or more of land or create, add, or replace 10,000 square feet or more of impervious surface area
- (2) Exemptions to Hydromodification Controls. Permittees may exempt the following New Development and Redevelopment projects from implementation of Hydromodification controls where assessments of downstream channel conditions and proposed discharge hydrology indicate that adverse Hydromodification effects to present and future beneficial uses of Natural Drainage Systems are unlikely:

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- (A) All projects that disturb less than one acre.
- (B) Projects that are replacement, maintenance or repair of a Permittee's existing flood control facility, storm drain, or transportation network.
- (C) Redevelopment Projects in the Urban Core that do not increase the effective impervious area or decrease the infiltration capacity of pervious areas compared to the pre-project conditions.
- (D) Projects that have any increased discharge go directly or via a storm drain to a sump, lake, area under tidal influence, into a waterway that has a 100-year peak flow (Q100) of 25,000 cfs or more, or other receiving water that is not susceptible to Hydromodification impacts;
- (E) Projects that discharge directly or via a storm drain into concrete or improved (not natural) channels (e.g., rip rap, sackcrete, etc.), which, in turn, discharge into receiving water that is not susceptible to Hydromodification impacts (as in D above).
- (3) Interim Hydromodification Control Criteria
- (A) The Interim Hydromodification Control Criteria to protect natural drainage systems until Permittees complete Hydromodification Control Plans (HCPs), described in subpart 5.E.III.3(a)(43) below, are as follows:
- (i) **Projects disturbing land area of less than fifty acres** will be subject to LID and/or source or treatment BMPs as addressed in this permit. The combined effects of LID and the treatment BMPs are considered adequate for Hydromodification control for projects that disturb less than 50 acres.
- (ii) **Projects disturbing land areas of fifty acres or greater** Projects in this category shall develop and implement a Hydromodification Analysis Study (HAS) that demonstrates that post development conditions are expected to approximate the pre-project erosive effect of sediment transporting flows in receiving waters. The HAS must lead to the incorporation into the project design features intended to approximate, to the extent feasible, an Erosion Potential value of 1 or any alternative value that can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage systems, or

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(iii)

(4) Alternatively, project proponents in this category may elect to develop, in partnership with Permittees, an equivalent implementation method based on flow duration control in the form of nomographs relating planned impervious area and local soil type (infiltration rates) to determine hydromodification control BMP volume and land area requirements for the proposed project. The nomographs shall be derived from continuous simulation modeling using Ventura County specific rain gauge records and soil types, and calibrated using data from a local undeveloped watershed with similar conditions; or

~~(5) Alternatively, the Co-Permittees may revise the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures to address projects that disturb more than 50 acres.~~

## (4) Final Criteria

(A) The Permittees shall develop and implement watershed specific HCPs no later than 180 days after the completion of the SMC HCS.

(i) The HCP shall identify:

- (I) Stream classifications
- (II) Flow rate and duration control methods
- (III) Sub-watershed mitigation strategies
- (IV) Stream restoration measures, which will maintain the stream and tributary Erosion Potential at 1 unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage system tributaries

(B) The HCP shall contain the following elements:

- (i) Hydromodification Management Standards
- (ii) Natural Drainage Areas and Hydromodification Management Control Areas
- (iii) New Development and Redevelopment Projects subject to the HCP
- (iv) Description of authorized Hydromodification Management Control BMPs
- (v) Hydromodification Management Control BMP Design Criteria.
- (vi) For flow duration control methods, the range of flows to control for, and goodness of fit criteria
- (vii) Allowable low critical flow,  $Q_c$ , which initiates sediment transport
- (viii) Description of the approved Hydromodification Model.

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- (ix) Any alternate Hydromodification Management Model and Design
- (x) Stream Restoration Measures Design Criteria
- (xi) Monitoring and Effectiveness Assessment
- (xii) Record Keeping

The HCP shall be deemed in effect upon Executive Officer approval.

## 3. Water Quality Mitigation Criteria

(a) Each Permittee shall require all New Development and Redevelopment projects identified in subpart 5.E.II to implement post-construction storm water treatment BMPs and control measures to mitigate storm water pollution as follows:

- (1) Projects disturbing land areas less than 50 acres
  - (A) Volumetric Treatment Control BMP
    - (i) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998)*; or
    - (ii) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or
    - (iii) The volume of runoff produced from a 0.75 inch storm event, prior to its discharge to a storm water conveyance system;<sup>1</sup> and/ or
  - (B) Flow Based Treatment Control BMP
    - (i) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
    - (ii) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records; or
    - (iii) Eight percent of the 50-year storm design flow rate as determined from the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions)
- (2) Projects disturbing land area of 50 acres or greater
  - (A) Eighty percent of the average runoff volume using an appropriate public domain continuous flow model (such as Storm Water Management Model (SWMM) or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF), using the local rainfall record and relevant BMP Performance data.

<sup>1</sup> This option is available only for construction projects that disturb land area less than 5 acres.

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**IV. Implementation**

1. Maintenance Agreement and Transfer

(a) Prior to issuing approval for final occupancy each Permittee shall require that all new development and redevelopment projects subject to post-construction BMP requirements provide an operation and maintenance plan and verification of ongoing maintenance provisions for LID practices, Treatment Control BMPs, and Hydromodification Control BMPs including but not limited to: final map conditions, legal agreements, covenants, conditions or restrictions, CEQA mitigation requirements, conditional use permits, and/ or other legally binding maintenance agreements.

(1) Verification at a minimum shall include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either

(A) A signed statement from the public entity assuming responsibility for BMP maintenance; or

(B) Written conditions in the sales or lease agreement, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or

(C) Written text in project covenants, conditions, and restrictions (CCRs) for residential properties assigning BMP maintenance responsibilities to the Home Owners Association (HOA); or

(D) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of BMPs.

(b) Each Permittee shall require all development projects subject to post-construction BMP requirements to provide a plan for the operation and maintenance of all structural and treatment controls. The Operation and Maintenance plan shall follow the Technical Guidance Manual Appendix D "Maintenance Plan Guidance" (or subsequent guidance manual) for each BMP component. The plan shall be submitted for examination of relevance to keeping the BMPs in proper working order. Where BMPs are transferred to Permittee for ownership and maintenance, the plan shall also include all relevant costs for upkeep of BMPs in the transfer. Operation and Maintenance plans for private BMPs shall be kept on site for periodic review by Permittee inspectors.

2. Tracking, Inspection, and Enforcement of Post-Construction BMPs

(a) Each Permittee shall implement a tracking system, and an inspection and enforcement program for new development and redevelopment post-construction storm water BMPs as set fort in part 5.E no later than (365 days after Order adoption date).

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- (1) Implement a GIS or other electronic system for tracking projects that have been conditioned for post-construction BMPs. The electronic system, at a minimum, should contain the following information:
    - (A) Municipal Project ID
    - (B) State WDID No
    - (C) Project Acreage
    - (D) BMP Type and Description
    - (E) BMP Location (coordinates)
    - (F) Date of Acceptance
    - (G) Date of Maintenance Agreement
    - (H) Maintenance Records
    - (I) Inspection Date and Summary
    - (J) Corrective Action
    - (K) Date Certificate of Occupancy Issued
    - (L) Replacement or Repair Date
  - (b) Inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and Hydromodification control BMPs. The inspection may be combined with other inspections provided it is conducted by trained personnel.
  - (c) Verify proper maintenance and operation of post-construction BMPs previously approved for new development and redevelopment and operated by the Permittees. The post construction BMP maintenance inspection program shall incorporate the following elements:
    - (1) Post-construction BMP Maintenance Inspection checklist.
    - (2) Inspection at least once every 2 years, beginning (365 days after Order adoption date), of post-construction BMPs to assess operation conditions with particular attention to:
    - (3) Criteria and procedures for post construction Treatment Control and Hydromodification Control BMP repair, replacement, or re-vegetation.
  - (d) For post construction BMPs operated and maintained by parties other than the Permittees the Permittees shall require annual reports by the other parties demonstrating proper maintenance and operations.
  - (e) Undertake enforcement as appropriate based on the results of the inspection.
3. Alternative Post Construction Storm Water Mitigation Programs
- (a) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within the Redevelopment Project Areas, in consideration of exceptional site constraints that inhibit site-by-site or project-by-project implementation of post-construction requirements.

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- (b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:
- (1) Result in equivalent or superior reduction of storm water pollutant loads in comparison to individual projects regulated by this permit.
  - (2) Satisfy, on a Redevelopment Project Area-wide basis, the hydromodification criteria of this section.
  - (3) Reduce the percentage of Effective Impervious Area (EIA) to a target of less than 5 percent or less of the Redevelopment Project Area, using properly sized storm water treatment/collection features, as described in this Section.
  - (4) Be fiscally sustainable and have secure funding; and
  - (5) Be completed in four years of the adoption date of this permit.
- (c) The RPAMP should prioritize the implementation of LID storm water mitigation measures, as described in this section.
- (d) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) that takes into consideration the balancing of water quality protection with the needs for adequate housing, population growth, public transportation and management, land recycling, and urban revitalization.
- (e) For the RPAMP to be considered, a technical panel of the Local Government Commission or an equivalent state or regional planning agency must have reviewed and approved the proposed RPAMP, prior to its submittal to the Regional Water Board. The Regional Water Board Executive Officer may then consider the RPAMP for approval, or elect to submit it to the Regional Water Board for consideration.
- (f) The RPAMP, on approval, may substitute in part or wholly for post-construction requirements.
- (g) Redevelopment Project Areas include the following:
- (1) City Center areas
  - (2) Historic District areas
  - (3) Brownfield areas
  - (4) Infill Development areas
  - (5) Urban Transit Villages
  - (6) Any other redevelopment area so designated by the Regional Water Board
- (h) Nothing in these provisions shall be construed as to delay the implementation of post-construction control requirements, as approved in this Order.

## 4. Mitigation Funding

- (a) The Principal Permittee or a coalition of Permittees shall create a Mitigation Funding Plan ~~management framework~~ to fund regional or subregional solutions to storm water pollution, where any of the following situations occur:
- (1) A waiver for impracticability is granted
  - (2) Funds become available

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- (3) Off-site mitigation is required because of loss of environmental habitat; or
- (4) An approved watershed management plan, or an integrated water resources management plan, or a regional storm water mitigation plan, or a wetlands recovery plan exists that incorporates an equivalent or improved strategy for storm water pollution mitigation
- (5) When a Permittee determines that a project is infeasible in accordance with 5.(E).III.(1)(c), the project application shall provide sufficient funds to the Permittee for a public project that will retain or mitigate a volume of stormwater equivalent to the onsite retention volume that was not retained on site.

The Permittees shall submit the Mitigation Funding Plan to the Executive Officer for approval 445 days after Permit adoption. The Mitigation Funding Plan shall be deemed in effect upon Executive Officer approval.

## 5. Developer Technical Guidance and Information

- (a) The Permittees shall update the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures to include, at a minimum, the following:
  - (1) Hydromodification Control criteria described in this Order, including numerical criteria.
  - (2) Expected BMP pollutant removal performance including effluent quality (ASCE/ U.S. EPA International BMP Database, CASQA New Development BMP Handbook, technical reports, local data on BMP performance, and the scientific literature appropriate for southern California geography and climate).
  - (3) Selection of appropriate BMPs for storm water pollutants of concern.
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs.
  - (5) BMP Maintenance and Cost Considerations.
  - (6) Guiding principles to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits.
  - (7) LID principles and specifications, including the objectives and specifications for integration of LID strategies in the areas of:
    - (A) Site Assessment.
    - (B) Site Planning and Layout.
    - (C) Vegetative Protection, Revegetation, and Maintenance.
    - (D) Techniques to Minimize Land Disturbance.
    - (E) Techniques to Implement LID Measures at Various Scales
    - (F) Integrated Water Resources Management Practices.
    - (G) LID Design and Flow Modeling Guidance.
    - (H) Hydrologic Analysis.
    - (I) LID Credits.



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- (b) Permittees shall update the Technical Guidance Manual within 365 days of the adoption of this Order.
- (c) The Permittees shall facilitate implementation of LID by providing key industry, regulatory, and other stakeholders with information regarding LID objectives and specifications contained in the LID Technical Guidance Section through a training program. The LID training program will include the following:
  - (1) LID targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders
  - (2) A combination of awareness on national efforts and local experience gained through LID pilot projects and demonstration projects
  - (3) Materials and data from LID pilot projects and demonstration projects including case studies
  - (4) Guidance on how to integrate LID requirements into the local regulatory program(s) and requirements
  - (5) Availability of the LID Technical Guidance regarding integration of LID measures at various project scales
  - (6) Guidance on the relationship among LID strategies, Source Control BMPs, Treatment Control BMPs, and Hydromodification Control requirements

The Permittees shall submit revisions to the Ventura County Technical Guidance Manual to the Regional Board for Executive Officer approval.

6. Project Coordination

- (a) Each Permittee shall facilitate a process for effective approval of post-construction storm water control measures. The process shall include:
  - (1) Detailed BMP review including BMP sizing calculations, BMP pollutant removal performance, and municipal approval; and
  - (2) An established structure for communication and delineated authority between and among municipal departments that have jurisdiction over project review, plan approval, and project construction through memoranda of understanding (MOU) or an equivalent agreement.

V. State Statute Conformity

1. California Environmental Quality Act (CEQA) Document Update

- (a) Each Permittee shall incorporate into its CEQA process no later than (6 months from Order adoption date), those additional procedures necessary for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents.
  - (1) The procedures shall require consideration of the following:
    - (A) Potential impact of project construction on storm water runoff.
    - (B) Potential impact of project post-construction activity on storm water runoff.

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- (C) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
- (D) Potential for discharge of storm water to impair the beneficial uses of the receiving waters.
- (E) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and waterbodies.
- (F) Potential for significant changes in the flow velocity or volume of storm water runoff to cause harm to or impair the beneficial uses of natural drainage systems.
- (G) Potential for significant increases in erosion at the project site or surrounding areas.

2. General Plan Update

(a) Each Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended:

- (1) Land Use
- (2) Housing
- (3) Conservation
- (4) Open Space

(b) Each Permittee shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq.*

**F. Development Construction Program**

I. Each Permittee shall implement a construction program that prevents illicit construction-related discharges of pollutants into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.

- 1. BMP Implementation - Construction Sites Less Than One Acre

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- (a) Each Permittee shall require the implementation of an effective combination of erosion and sediment control BMPs from Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes.<sup>1</sup>

Table 6 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Sand Bag Barrier	SE-8	SC-8
Stabilized Construction Site Entrance/Exit	TC-1	TC-1
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>2</sup>	NS-2	NS-2
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

2. BMP Implementation - Construction Sites One Acre but Less than 5 acres.

- (a) Each Permittee shall require the implementation of an effective combination of appropriate erosion and sediment control BMPs from Table 7 in addition to the ones identified in Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 7 - BMPs at Construction sites 1 acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8

<sup>1</sup> The BMPs are taken from the *California BMP Handbook, Construction, January 2003* and the *Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March 2003*, and addenda.

<sup>2</sup> Poned storm water may be discharged at a concentration of Total Suspended Solids (TSS) of 100mg/L or less.

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<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

3. BMP Implementation - Construction Sites 5 acres and Greater

- (a) Each Permittee shall require the implementation of an effective combination of the following BMPs in Table 8 (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) and Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes. Erosion control BMPs shall be preferred to sediment control BMPs.

Table 8 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
<b>Sediment Controls</b>		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
<b>Tracking Control BMPs</b>		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

4. Enhanced Construction BMP Implementation.

- (a) Each Permittee shall implement, or require implementation of, enhanced practices that preclude impacts to water quality posed by all construction sites on hillsides as defined in this Order and construction sites that directly discharge to a waterbody listed on the CWA § 303 (d) list for siltation or sediment, or that occur within or directly adjacent to an Environmentally Sensitive Area (ESAs).

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Construction sites located on hillsides, adjacent to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to ESAs are termed "High risk sites."

- (b) Each Permittee shall require implementation of enhanced practices for high risk sites which shall include increased BMP inspection and maintenance requirements.
  - (1) Each Permittee shall require that high risk sites shall be inspected by the project proponent's Qualified SWPPP Developer or Qualified SWPPP Practitioner or personnel or consultants who are Certified Professionals in Erosion and Sediment Control (CPESC) at the time of BMP installation, at least weekly during the wet season, and at least once each 24 hour period during a storm event that generates runoff from the site, to identify BMPs that need maintenance to operate effectively, that have failed or could fail to operate as intended.
  - (2) During the wet season, the area of disturbance shall be limited to the area that can be controlled with an effective combination of erosion and sediment control BMPs. Enhanced sediment controls should be used in combination with erosion controls and should target portions of the site that cannot be effectively controlled by standard erosion controls described above. Effective sediment and erosion control BMPs proposed by the proponent shall include the BMPs listed in Table 9 below. The project proponents are responsible to implement the BMPs below unless shown unnecessary. The Permittee shall require that the project proponent retain records of the inspection and a determination and rationale of the BMPs selected to control runoff.

**Table 9-9** Enhanced Construction BMP Implementation.

<del>Construction Site</del> <b>CONSTRUCTION SITE</b> BMPs	CASQA Handbook <sup>17</sup>	Caltrans Handbook <sup>18</sup>
<b>Erosion Controls</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
Slope Drains	EC-11	SS-11
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Fiber Rolls	SE-5	SC-5

<sup>17</sup> BMPs of equivalent effectiveness may also be utilized.

<sup>18</sup> BMPs of equivalent effectiveness may also be utilized.

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<del>Construction Site</del> <b>CONSTRUCTION SITE</b> BMPs	CASQA Handbook <sup>17</sup>	Caltrans Handbook <sup>18</sup>
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/or Vacuum	SE-7	SC-7
Sand Bag Barrier	SE-8	SC-8
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/Exit Tire Wash	TC-3	TC-3
Advanced Treatment Systems <sup>1</sup>		
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>19</sup>	NS-2	NS-2
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/Septic Waste Management	WM-9	WM-9

~~(c) The Permittees shall require the project proponent to collect representative samples during wet weather events in accordance with the SWRCB general construction permit or equivalent monitoring program as developed by the Permittees on approval by the Executive Officer.~~

5. Local Agency Requirements

(a) Each Permittee shall require for all construction sites 1 acre or greater, compliance with all conditions identified in the preceding subparts F.1- F.45, and the following requirements:

(1) Local Storm Water Pollution Prevention Plan (Local SWPPP),

(A) Each Permittee shall require the preparation and submittal of a Local SWPPP, for the Permittee's review and written approval prior to issuance of a grading or construction permit for construction or

<sup>1</sup> If appropriate given natural background stormwater runoff and receiving water quality conditions.

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demolition projects. The Permittees' approval signature shall be contained within the first pages of the Local SWPPP

- (i) The Permittee shall not approve any Local SWPPP unless it contains appropriate site-specific construction site BMPs, specific locations, and maintenance schedules.
- (ii) The Local SWPPP must include the rationale used for selecting or rejecting BMPs for various construction phases and weather conditions. The project architect, or engineer of record, or authorized qualified designee, must sign a statement on the Local SWPPP to the effect:

(I) *"As the architect/ engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project's construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity."*

(2) Certification Statement

(A) Each Permittee shall require that each landowner or the landowner's agent sign a statement on the Local SWPPP to the effect:

- (i) *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/ or adequately implement the Local SWPPP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

- (ii) The Local SWPPP certification shall be signed by the property owner or owner's representative/designee. If the Local SWPPP or SWPPP is being prepared by the local agency then the appropriate authority of the local agency shall sign the document.

6. Roadway Paving or Repaving Operations (For Private or Public Projects)

- (a) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project:-

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- (b)(1) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
- (2) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat
- (3) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- (4) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt
- (5) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
- (6) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly
- (7) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly
- (8) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm
- (9) Cover loads with tarp before haul-off to a storage site, and do not overload trucks
- (10) Minimize airborne dust by using water spray during grinding
- (11) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters
- (12) Protect stockpiles with a cover or sediment barriers during a rain

- (c) ~~Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat~~
- (d) ~~Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses~~
- (e) ~~Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt~~
- (f) ~~Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly~~
- (g) ~~Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly~~
- (h) ~~Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly~~
- (i) ~~Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm~~
- (j) ~~Cover loads with tarp before haul-off to a storage site, and do not overload trucks~~
- (k) ~~Minimize airborne dust by using water spray during grinding~~
  - (b) ~~Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses~~



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~~(m) Protect stockpiles with a cover or sediment barriers during a rain~~

## 7. Electronic Site Tracking System

- (a) Each Permittee shall use an electronic system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.

## 8. Inspections

- (a) Each Permittee shall inspect all construction sites for the implementation of storm water quality controls a minimum of once during the wet season. Concurrently, each Permittee shall ensure that:
- (1) The Local SWPPP is reviewed for compliance with local codes, ordinances, and permits.
  - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Local SWPPP.
- (b) Each Permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
- (c) Each Permittee can refer sites to the Regional Water Board for ~~further~~ joint enforcement actions for violation of municipal storm water ordinances and the Construction Activities Storm Water General Permit (CASGP), or Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), after conducting a minimum of 2 site inspections and issuing a minimum of 2 written notices to the operator regarding the violation (copied to the Regional Water Board). In making such referrals, Permittees shall include, at a minimum, the following documentation:
- (1) Name of the site
  - (2) WDID number
  - (3) Site developer
  - (4) Site owner
  - (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report
  - (6) Written notice of the violation copied to the Regional Water
- (d) Prior to approving and/ or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each Permittee shall inspect the constructed site design, source control and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. The initial/ acceptance BMP verification inspection does not constitute a maintenance and operation inspection, as required in the preceding subpart E.IV.2(c).

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9. State Conformity Requirements

(a) Each Permittee shall ensure that no grading permit, encroachment permit, demolition permit, building permit, electrical permit, or construction permit (or any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) is issued for any project requiring coverage under the CASGP or Small LUP General Permit<sup>1</sup> unless:

- (1) Proof of filing a Notice of Intent for coverage under a State NPDES permit is demonstrated).
- (2) Demonstration or Certification that a SWPPP has been prepared by the project developer.
- (3) Proof of Change of Information form (COI) and a copy of the modified SWPPP(s) at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

10. Interagency Coordination

(a) Referral of Violations:

A Permittee may refer a violator of the municipal storm water ordinance and CWC § 13260 to the Regional Water Board provided that the Permittee has made a good faith effort at progressive enforcement consistent with the preceding subpart F.8(c). At a minimum, the Permittee's good faith effort shall be documented with:

- (1) A minimum of 2 follow-up inspection reports (inspections completed within 3 months).
- (2) A minimum of two warning letters or NOVs.

(b) Referral of Non-filers under the CASGP or the Small LUP General Permit:

Each Permittee shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) under the CASGP or Small LUP General Permit, to the Regional Water Board, no later than 15 days after making a determination of failure to file. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Project location address
- (2) Project description
- (3) Developer or owners name with complete mailing address
- (4) Project size
- (5) Records of communication with the developer or owner regarding filing requirements

(c) Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:

<sup>1</sup> NPDES Permit No. CAS000005, Waste Discharge Requirements For Discharges of Storm Water Runoff Associated with Small Linear Underground/ Overhead Construction Projects (Small LUP General Permit) for any linear land disturbing activity or activities (cumulatively) that will cause one acre or more of land disturbance but not more than 5 acres.

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(1) Each Permittee shall initiate, within one business day,<sup>1</sup> an initial investigation of complaint(s) (other than non-storm water discharges) on the construction site(s) within its jurisdiction.

(A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water/ urban runoff ordinances, and to oversee corrective action.

**(d) Support of Regional Water Board Enforcement Actions – As directed by the Regional Water Board Executive Officer:**

(1) Each Permittee shall support Regional Water Board enforcement actions by:

(A) Assisting in identification of current owners, operators, and lessees of properties and sites.

(B) Providing staff, when available, for joint inspections with Regional Water Board inspectors.

(C) Appearing to testify as witnesses in Regional Water Board enforcement hearings.

(D) Providing copies of inspection reports and other progressive enforcement documentation.

**G. Public Agency Activities Program**

I. Each Permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:

- i. Public Construction Activities Management.
- ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
- iii. Vehicle and Equipment Wash Areas
- iv. Landscape and Recreational Facilities Management
- v. Storm Drain Operation and Management
- vi. Streets and Roads Maintenance
- vii. Public Industrial Activities Management
- viii. Emergency Procedures
- ix. Employee Training
- x. Infrastructure Maintenance

1. Public Construction Activities Management

<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to “initiate” the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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- (a) Each Permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. of this Order at Permittee owned or operated public construction projects for project types identified in part 5.E of this Order.
  - (b) Each Permittee shall implement and comply with the appropriate Development Construction Program requirements in part 5.F. of this Order at Permittee owned or operated construction projects as applicable.
  - (c) For public projects including those under a Capital Improvement Project Plan that disturb less than one acre of soil the Permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Tables 5, 9 and 10.
2. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Long Term Maintenance Programs
- (a) Each Permittee shall implement the activity specific BMPs<sup>1</sup> listed in Table 10<sup>9</sup> when such activities occur at Permittee owned/leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Tables. Additionally, for any activity or area described in the footnote below,<sup>2</sup> each Permittee shall also implement the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 10 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards).

Table 10 - BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards

From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide	Appendix B
<b>Activity Specific BMPs</b>	<b>Page</b>
<b>General BMPs</b>	B-4
<b>Flexible Pavement</b>	B-9
Asphalt Cement Crack and Joint Grinding/ Sealing	B-9
Asphalt Paving	B-10
Structural Pavement Failure (Digouts) Pavement Grinding and Paving	B-11
Emergency Pothole Repairs	B-13
Sealing Operations	B-14
<b>Rigid Pavement</b>	B-15
Portland Cement Crack and Joint Sealing	B-15
Mudjacking and Drilling	B-16
Concrete Slab and Spall Repair	B-17
<b>Slope/ Drains/ Vegetation</b>	B-19
Shoulder Grading	B-19

<sup>1</sup> These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda. Other BMPs may be substituted upon approval by the Executive Officer.

<sup>2</sup> Scheduling and Planning; Spill Prevention and Control; Sanitary/ Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/ Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill / Discharge Control and Maintenance Facility Housekeeping Practices.

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3. Vehicle and Equipment Wash Areas
  - (a) Each Permittee shall eliminate discharges of wash waters from vehicle and equipment washing no later than (365 days after Order adoption date) by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:
    - (1) Self-contain, and haul off for disposal
    - (2) Equip with a clarifier
    - (3) Equip with an alternative pre-treatment device; or
    - (4) Plumb to the sanitary sewer
  - (b) Each Permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced has all vehicle and equipment wash areas plumbed to the sanitary sewer or be self contained and all wastewater/ washwater hauled for legal disposal.
  
4. Landscape, Park, and Recreational Facilities Management
  - (a) Integrated Pest Management (IPM)
 

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each Permittee shall implement an IPM program within 365 days that includes the following:

    - (1) Pesticides are used only if, ~~after~~ monitoring indicates they are needed according to established guidelines.
    - (2) Treatments are made with the goal of removing only the target organism.
    - (3) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.

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- (4) Its use of pesticides, including Organophosphates and Pyrethroids do not threaten water quality.
- (5) Partner with other agencies and organizations to encourage the use of IPM.
- (6) Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the Permittees' overall operations and on municipal property.
- (7) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
  - (A) Quantify pesticide use by its staff and hired contractors.
  - (B) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
  - (C) Demonstrate reductions in pesticide use.
- (b) Each Permittee shall implement the following requirements no later than (180 days after Order adoption date):
  - (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers.
  - (2) Ensure no application of pesticides or fertilizers are applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area.
  - (3) Ensure that no banned or unregistered pesticides are stored or applied.
  - (4) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.
  - (5) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs; and
  - (6) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment.
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills.
    - (B) Regularly inspect storage areas.
  - (7) Comply with the provisions and the monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2004-0008-DWQ).

5. Storm Drain Operation and Management

(a) Catch Basin Cleaning

- (1) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:
  - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash.

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Priority B: Catch basins that are designated as consistently generating moderate volumes of trash.

Priority C: Catch basins that are designated as generating low volumes of trash.

Within one year of Order adoption, Permittees shall submit a map or list of Catch Basins with their GPS coordinates and their designations. The map or list shall contain the rationale or data to support designations.

(2) Each Permittee shall inspect catch basins according to the following schedule:

Priority A: A minimum of 3 times during the wet season and once during the dry season every year.

Priority B: A minimum of once during the wet season and once during the dry season every year.

Priority C: A minimum of once per year.

Catch basins shall be cleaned as necessary on the basis of inspections.

Permittees shall maintain inspection records for Regional Board review.

(3) In addition to the preceding schedule, Permittees shall ensure that any catch basin that is determined to be at least 25% full of trash shall be cleaned out.

(b) Trash Management at Public Events

(1) Each Permittee shall require for any event in the public right of way or wherever it is foreseeable that substantial quantities of trash and litter may be generated, the following measures:

(A) Proper management of trash and litter generated; and

(B) Arrangement for temporary screens to be placed on catch basins; or

(C) Provide clean out of catch basins, trash receptacles, and grounds in the event area within 24 hours subsequent to the event.

(c) Trash Receptacles

(1) Each Permittee shall install trash receptacles, or equivalent trash capturing devices in areas subject to high trash generation within its jurisdiction no later than (one year after Order adoption date).

(2) Each Permittee shall ensure that all trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.

(d) Catch Basin Labels

(1) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest each catch basin and inlet before the wetrainy season begins.

(2) Each Permittee shall record and re-stencil or re-label within 15 days of inspection, catch basins with illegible stencils.

(e) Additional Trash Management Practices

(1) Each Permittee shall install trash excluders, or equivalent devices on or in catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water no later than two years after Order adoption date in areas defined as Priority A (Provision 1a(2)) except in sites where the application of such BMP(s) alone will cause flooding. Lack of maintenance

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that causes flooding is not an acceptable exception to the requirement to install BMPs. Alternatively the Permittee may implement alternative or enhanced BMPs beyond the provisions of this permit (such as but not limited to increased street sweeping, adding trash cans near trash generation sites, prompt enforcement of trash accumulation, increased trash collection on public property, increased litter prevention messages or trash nets within the MS4) that provide substantially equivalent removal of trash. Permittees shall demonstrate that BMPs, which substituted for trash excluders provide equivalent trash removal performance as excluders. When outfall trash capture is provided, revision of the schedule for inspection and cleanout of catch basins in task (a) may be proposed by the Permittee for approval by the Executive Officer.

## (f) Storm Drain Maintenance

- (1) Each Permittee shall implement a program for Storm Drain Maintenance no later than (180 days after Order adoption date) that includes the following:
  - (A) Visual monitoring of Permittee-owned open channels and other drainage structures for debris at least annually.
  - (B) Remove trash and debris from open channel storm drains a minimum of once per year before the ~~wet~~ season.
  - (C) Eliminate the discharge of contaminants during MS4 maintenance and clean outs.
  - (D) Quantify the amount of materials removed using techniques appropriate for quantifying solid waste and ensure the materials are properly disposed of.

## (g) Spill Response Plan

- (1) Each Permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response Plan shall clearly identify agencies responsible and telephone numbers and e-mail address for contact and shall contain at a minimum the following:
  - (A) Investigation of all complaints received within 24 hours of the incident report.
  - (B) Response within 2 hours to spills for containment upon notification, except where such overflows occur on private property, in which case the response should be within 2 hours of gaining legal access to the property.
  - (C) Notification to appropriate public health agencies and the Office of Emergency Services (OES).

## (h) Permittee Owned Treatment Control BMPs

- (1) Each Permittee shall implement an inspection and maintenance program for all Permittee owned treatment control BMPs, including post-construction treatment control BMPs.

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- (2) Each Permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
- (3) Any residual water produced by a treatment control BMP and not being internal to the BMP performance when being maintained shall be:
  - (A) Hauled away and legally disposed of; or
  - (B) Applied to the land without runoff; or
  - (C) Discharged to the sanitary sewer system (with permits or authorization); or
  - (D) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 11 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

Table 11 - Discharge Limitations for Dewatering Treatment BMPs<sup>1</sup>

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

6. Streets and Roads Maintenance

(a) Maintenance

- (1) Each Permittee shall perform street sweeping of curbed streets in commercial areas and areas subject to high trash generation to control trash and debris at least two times per month.

(b) Road Reconstruction

- (1) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.
  - (A) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall<sup>2</sup> unless required by emergency conditions.
  - (B) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
  - (C) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters/watereourses.
  - (D) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
  - (E) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.

<sup>1</sup> Technology based effluent limits.

<sup>2</sup> A probability of precipitation (POP) of 50% is required.

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- (F) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- (G) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- (H) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- (I) Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- (J) Minimize airborne dust by using water spray during grinding.
- (K) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters ~~watereourses~~.
- (L) Protect stockpiles with a cover or sediment barriers during a rain.

7. Emergency Procedures

- (a) Each Permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.
  - (1) Where the self-waiver has been invoked, the Permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
  - (2) Minor repairs of essential public service systems and infrastructure in emergency situations (can be completed in less than one day) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

8. Municipal Employee and Municipal Contractor Training

- (a) Each Permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors in targeted positions (whose interactions, jobs, and activities affect storm water quality) on the requirements of the overall storm water management program to:
  - (1) Promote a clear understanding of the potential for activities to pollute storm water.
  - (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
- (b) Each Permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training programs shall address:
  - (1) The potential for pesticide-related surface water toxicity.

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- (2) Proper use, handling, and disposal of pesticides.
- (3) Least toxic methods of pest prevention and control, including IPM.
- (4) Reduction of pesticide use.
- (c) Each Permittee shall, no later than (12 months after Order adoption date) and annually thereafter before June 30, train all of their employees and contractors who are responsible for illicit connections and illicit/ illegal discharges. Training programs shall address:
  - (1) Identification
  - (2) Investigation
  - (3) Termination
  - (4) Cleanup
  - (5) Reporting of Incidents
  - (6) Documentation of Incidents

**H. Illicit Connections and Illicit Discharges Elimination Program**

- I. Each Permittee shall implement an Illicit Connections and Illicit Discharges (IC/ IDs) program to eliminate IC/IDs to the storm drain system, and shall document, track, and report all such cases in accordance with the elements and performance measures specified in the following subsections.
  - 1. General
    - (a) Implementation - Each Permittee shall implement an IC/ ID Program. The IC/ ID procedures shall be documented and made available for public review.
    - (b) Tracking - All Permittees shall, no later than (3 years after Order adoption date), map at a scale and in a format specified by the Principal Permittee all known connections to their storm drain system. All Permittees shall map at a scale and in a format specified by the Principal Permittee incidents of illicit connections and discharges since January 2009 on their baseline maps, and shall transmit this information to the Principal Permittee no later than (3 years after Order adoption date). Permittees shall use this information to identify priority areas for further investigation and elimination of IC/ ID.
  - 2. Public Reporting
    - (a) Permittees shall establish and maintain a phone hotline and internet site to receive all reports of IC/ ID complaints.
    - (b) Permittees shall document the location of the reported IC/ ID and the actions undertaken in response to all IC/ ID complaints.
  - 3. Illicit Connections
    - (a) Screening for Illicit Connections
      - (1) Each Permittee shall submit to the Principal Permittee:
        - (A) A map at a scale and in a format specified by the Principal Permittee showing the location and length of underground pipes 18 inches and

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- greater in diameter, and channels within their permitted area and operated by the Permittee in accordance with the following schedule:
- (i) All channeled portions of the storm drain system no later than (365 days after Order adoption date).
  - (ii) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, (no later than 3 years after Order adoption date). This provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual.
  - (iii) All portions of the storm drain system consisting of storm drain pipes 18 inches in diameter or greater, (no later than 5 years after Order adoption date).
- (B) The status of suspected, confirmed, and terminated illicit connections.
- (2) Permittees shall conduct field screening of their storm drain systems in accordance with screening procedures described in the Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments (2004)<sup>1</sup>. Permittees shall conduct field screening of their storm drain system that has not been previously screened and reported to the Regional Board, for illicit connections in accordance with the following schedule:
- (A) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, no later than (3 years after Order adoption date).
  - (B) High priority areas identified during the mapping of illicit connections and discharges, no later than (3 years after Order adoption date).
  - (C) All portions of storm drain systems 50 years or older in age, no later than (3 years after Order adoption date).
- (3) Each Permittee shall maintain a list containing all connections under investigation for possible illicit connection and their status.
- (b) Response to Illicit Connections
- (1) Investigation -  
Each Permittee, upon discovery or upon receiving a report of a suspected illicit connection, shall complete an investigation within 21 days, to determine the following:
    - (A) Source of the connection.
    - (B) Nature and volume of discharge through the connection.
    - (C) Responsible party for the connection.
  - (2) Termination -  
Each Permittee, upon confirmation of an illicit storm drain connection, shall ensure the following:

<sup>1</sup> *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*. The Center for Watershed Protection, Pitt R., October 2004. Chapter 13, 13.1, 13.2, 13.3, 13.4

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(A) Termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection.

(3) Documentation -

Each Permittee shall keep records of all illicit connection investigations and the formal enforcement taken to eliminate all illicit connections.

4. Illicit Discharges

(a) Investigation -

Each Permittee shall investigate an illicit/ illegal discharge during or immediately following containment and cleanup activities, and shall take appropriate enforcement action to eliminate the illegal discharge.

(b) Abatement and Cleanup -

Each Permittee shall respond, within 1 business day of discovery or a report of a suspected illicit/ illegal discharge, with actions to abate, contain, and/or clean up all illegal discharges, including hazardous waste.

(c) Documentation -

Each Permittee shall maintain records of all illicit/ illegal discharge discoveries, reports of suspected illicit/ illegal discharges, their response to the illicit/ illegal discharges and suspected illicit/ illegal discharges, and the formal enforcement taken to eliminate all illicit/ illegal discharges.

**I. REPORTING PROGRAM**

1. The Principal Permittee in consultation with the Permittees and Regional Water Board staff shall convene an adhoc working group to develop an Electronic Reporting Program, the basis of which shall be the requirements in this Order. The Committee shall no later than (12 months after Order adoption date) submit the electronic reporting form in each subsequent year.
2. Each Permittee shall submit information required in the Reporting Program in a method as appropriate to the format approved by the Regional Water Board Executive Officer.
3. The Principal Permittee shall submit by December 15<sup>th</sup> of each year, an Annual Report to the Regional Water Board Executive Officer in the form one hard copy and three compact disk (CD) copies (or an electronic equivalent).
4. The Annual Report shall document the status of the Municipal Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1- Monitoring Report.
  - (b) The requirements described under Part 2- Program Report.

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5. Plans shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
6. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
7. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).

**PART 6 - TOTAL MAXIMUM DAILY LOAD PROVISIONS**

I. Part 6 of this Order incorporates provisions to assure that Ventura County MS4 Permittees comply with WLAs and other requirements of TMDLs covering impaired waters impacted by the Permittees' discharges.

II. H. — Each Permittee shall attain the storm water WLAs incorporated into this Order by implementing BMPs in accordance with the TMDL Technical Reports, Implementation Plans, or as identified as a result of TMDL special studies specified in the Basin Plan Amendment.

III. The Permittees shall comply with the following Wasteload Allocations, consistent with the assumptions and requirements of the Wasteload Allocations documented in the Implementation Plans, including compliance schedules, associated with the State adoption and approval of the TMDL at compliance monitoring points established in each TMDL (40CFR122.44(d)(1)(vii)(B), MS4 effluent quality workplan and source identification approved by the Executive Officer.

IV. TMDLs in effect and covered in this Order are the following:

1. TMDL for Nutrients for Malibu Creek Watershed (Effective date: March 21, 2003)
2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek (Effective date: July 16, 2003)
3. TMDL for Nitrogen Compounds for the Santa Clara River (Effective date: March 23, 2004).
4. TMDL for Chloride in Santa Clara River, Reach 3 (Effective date: June 18, 2003)
5. TMDL for Chloride in Upper Santa Clara River (Effective date: May 4, 2005)
6. TMDL for Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon - (Effective date: March 24, 2006).
7. TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 24, 2006).
8. TMDL for Bacteria in Malibu Creek and Lagoon (Effective date: January 24, 2006).

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- 9. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 26, 2007)
- 10. TMDL for Trash in Revolon Slough and Beardsley Wash (Effective date: March 6, 2008).
- 11. TMDL for Boron, Chloride, Sulfate, and TDS in Calleguas Creek Watershed (Effective date: December 2, 2008)
- 12. TMDL for Trash in the Ventura River Estuary (Effective date: March 6, 2008).
- 13. TMDL for Bacteria in Harbor Beaches of Ventura County (Effective date: September 23, 2008).

IV. TMDL Interim WLAs incorporated into this Order due to compliance dates which exceed the term of this Order are the following:

- 1. Final Wet Weather Bacteria WLAs for Malibu Creek and Lagoon – (Compliance date: January 24, 2016).
- 2. Final Chloride WLAs for Upper Santa Clara River – (Compliance date: May 4, 2016)
- 3. Final Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon – (Compliance date: March 24, 2026).
- 4. Final Metals and Selenium WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 26, 2022)
- 5. Final Boron, Chloride, Sulfate, and TDS WLAs for Calleguas Creek watershed (Compliance date: December 2, 2023)

V. TMDL WLAs and Other TMDL Provisions Incorporated into this Order are as follows:

1. TMDL for Nutrients for Malibu Creek Watershed

(a) Summer Load Allocations

	Nitrogen (lbs/day)	Phosphorus (lbs/day)
- Runoff from developed areas	26	2.6
- Golf Course Fertilization	37	6.6
- Dry Weather Urban Runoff	52	4.6
- Other	56	4.1

(b) Winter concentration-based Load Allocations

	Nitrogen (Nitrate-N + Nitrite-N) (mg/L)
- Runoff from Developed Areas	8
- Golf Course Fertilization	8
- Dry Weather Urban Runoff	8

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(c) Compliance Monitoring:

This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(d) Actions and Special Studies required for Malibu Creek MS4 permittees

(1) Extent of algal impairment. EPA recommends studies to investigate the current extent of impairment due to excessive algal growth in the creek by surveying algal biomass and species composition at multiple sites within the creek.

(2) Limiting factor analysis. EPA recommends further study to assess whether total nitrogen or total phosphorus or other parameters such as flow and light limit algal growth in the Malibu Creek watershed.

(3) Fate of nutrients in Malibu Lagoon. EPA recommends this special study to determine if the expected upstream reductions in nutrient loadings would result in desired improvements in water quality in the lagoon.

2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek Watershed

The stormwater permitted discharges were considered minor sources of nitrogen to the Calleguas Creek. Therefore, WLAs are not assigned to storm water permitted discharges. The monitoring program of this TMDL includes data collection to quantify loadings and associated WLAs from these sources.

3. TMDL for Nitrogen Compounds in the Santa Clara River

(a) Waste Load Allocations:

(1) The Ventura County MS4 permittees discharging to the Santa Clara River (the cities of Fillmore and Santa Paula) ("Santa Clara MS4 permittees") shall implement BMPs to achieve the following MS4 wasteload allocations applicable to River Reach 3:

<u>Ammonia nitrogen 30-day average</u>	<u>2.0 mg/L</u>
<u>Ammonia nitrogen 1-hour average</u>	<u>4.2 mg/L</u>
<u>Nitrate + Nitrite nitrogen 30-day average</u>	<u>8.1 mg/L</u>

(b) Compliance Monitoring:

(1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies

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identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

- (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

4. TMDL for Chloride in Santa Clara River, Reach 3

(a) Waste Load Allocation:

MS4 permittees discharging to Santa Clara River, Reach 3 shall implement BMPs to achieve the following MS4 WLAs:

Chloride (mg/L) 80

(b) Compliance Monitoring: This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

- (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

5. TMDL for Chloride in Upper Santa Clara River

(a) Waste Load Allocation:

MS4 permittees discharging to Upper Santa Clara River shall implement BMPs to achieve the following WLAs

Chloride (mg/L) 100

(b) Compliance monitoring:

(1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports and Implementation Plans. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

- (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

6. TMDL for Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

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- (1) MS4 permittees discharging to Calleguas Creek, its tributaries and Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the following MS4 WLAs:

<u>Toxicity WLA</u>	<u>1.0 TUc</u>
<u>Chlorpyrifos WLA</u>	<u>0.014 ug/L</u>
<u>Diazinon WLA</u>	<u>0.10 ug/L</u>

- (2) Pursuant to the TMDL, the final storm water WLAs for Toxicity, Chlorpyrifos and Diazinon, listed above, are receiving water concentrations measured in-stream at the base of each subwatershed within the Calleguas Creek watershed.

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (3) If as a result of compliance monitoring and subsequent investigations it is determined that a Calleguas MS4 permittee is responsible for exceedance of the in-stream Toxicity WLA, that permittee shall initiate the TRE/TIE process as outlined in U.S. EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000) or the approved Toxicity TMDL monitoring plan, and take appropriate action to eliminate the identified source of the toxicity.

(c) Actions and Special Studies required of Calleguas MS4 permittees:

- (1) Special Study #1. Together with Calleguas POTW permittees, investigate the pesticides that will replace diazinon and chlorpyrifos in the urban environment, their potential impact on receiving waters and potential control measures. Special Study #1 was completed by March 24, 2008.
- (2) Special Study #2. Together with Calleguas Agricultural Dischargers, consider results of monitoring of sediment concentrations by source/land use type through the special study required in the Calleguas OC Pesticide, PCB, and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.
- (3) Pesticide Collection Program. Together with Calleguas POTW permittees, develop and implement a collection program for diazinon and chlorpyrifos and an educational program. Collection and education could occur through

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existing programs such as household hazardous waste collection events. The Pesticide Collection Program is to be implemented by March 24, 2009.

- (4) Special Study #3. Together with Calleguas Agricultural Dischargers, consider the findings of transport rates developed through the OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.

7. TMDL for Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, and Simi Valley) ("Calleguas MS4 permittees") shall implement BMPs to achieve the interim WLAs listed in Table 14.2.

Table 12. Interim Sediment Concentration WLAs (ng/g)

Constituent	Subwatershed					
	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Chlordane	25	17	48	3.3	3.3	3.4
4,4-DDD	69	66	400	290	140	5.3
4,4-DDE	300	470	1600	950	170	20
4,4-DDT	39	110	690	670	25	2
Dieldrin	19	3	5.7	1.1	1.1	3
PCBs	180	3800	7600	25700	25700	3800
Toxaphene	22900	260	790	230	230	260

- (2) Pursuant to the TMDL, the interim storm water WLAs for OC Pesticides, PCBs and Siltation, listed above, are annual average, sediment-based concentrations measured in surface waters at the base of each subwatershed within the Calleguas Creek watershed.

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Calleguas MS4 permittees:

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- (1) Pesticide Collection Program. Together with Calleguas POTW permittees, implement a collection program and source control measures pursuant to a work plan approved by the Executive Officer. The Pesticide Collection Program is to be implemented by March 24, 2011.
- (2) Special Study #1. Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, submit a work plan to quantify sedimentation in the Calleguas Creek Watershed, evaluate management methods to control siltation and contaminated sediment transport to Calleguas Creek, identify appropriate BMPs to reduce sediment loadings and evaluate the effect of sediment on habitat preservation in Mugu Lagoon for approval by the Executive Officer. This special study is also to evaluate the concentration of OC pesticides and PCBs in sediments from various sources/land use types. Special Study #1 is to be completed by March 24, 2014.
- (3) Special Study #2. Together with Calleguas Agricultural Dischargers, identify areas of high OC concentrations and evaluate the effects of watershed protection and land use practices on water quality. Such practices include but are not limited to management of sediment reduction practices and structures, streambank stabilization, and other projects related to stormwater conveyance and flood control improvements in the Calleguas Creek watershed. Special Study #2 is to be completed based on the schedule provided in the workplan, submitted in March, 2007
- (4) Special Study #3 – Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, evaluate natural attenuation rates and evaluate methods to accelerate organochlorine pesticide and polychlorinated biphenyl attenuation and examine the attainability of wasteload and load allocations in the Calleguas Creek Watershed. Special Study #3 is to be completed by March 24, 2016.

8. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) (“Calleguas MS4 permittees”) shall implement BMPs to achieve the interim WLAs listed in Table 123 and Table 134.

Table 13. Interim WLAs for Copper, Nickel and Selenium (ug/L)

Constituent	Calleguas and Conejo Creek (a)			Revolon Slough		
	Dry Daily Maximum	Dry Monthly	Daily Maximum	Dry Daily Maximum	Dry Monthly	Daily Maximum

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	(ug/L)	Average (ug/L)	(ug/L)	(ug/L)	Average (ug/L)	(ug/L)
Copper	23	19	204	23	19	204
Nickel	15	13	(a)	15	13	(a)
Selenium	(b)	(b)	(b)	14(c)	13(c)	(a)

- (A) The current loads do not exceed the TMDL under wet conditions, interim limits are not required
- (B) Selenium allocations have not been developed for this reach as it is not on the 303(d) list
- (C) Attainment of interim limits will be evaluated in consideration of background loading data, if available

(2) Pursuant to the TMDL, the interim storm water WLAs for copper, nickel, and selenium are receiving water concentrations measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.

Table 14. Mass-based WLAs for copper, nickel and selenium

<u>Annual Cumulative Flow (million gallons per year)</u>	<u>Calleguas Creek (lbs/yr)</u>	<u>Revolon Slough (lbs/yr)</u>
0-15,000	3.3	1.7
15,000-25,000	10.5	4
Above 25,000	64.6	10.2

- (3) Pursuant to the TMDL, the interim storm water WLAs for mercury are suspended sediment loads measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.
- (4) Determination of the applicable interim WLA will be determined by calculating the total annual flow (October 1-September 30) in the Calleguas Creek watershed as measured by the flow gage at CSUCI.

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality and total suspended solids (TSS) at the base of Calleguas Creek, Revolon Slough and in Mugu Lagoon, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Calleguas MS4 permittees:

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- (1) Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium. Complete by March 26, 2009.
- (2) Implement the UWQMP within one year of approval by Executive Officer.
- (3) In cooperation with agricultural dischargers, evaluate the results of the OCs TMDL special study on sediment transport rates for applicability to the metals and selenium TMDL. Complete within 6 months of completion of the OCs TMDL special study #1.
- (4) In cooperation with agricultural dischargers, include monitoring for copper, mercury, nickel and selenium in the OC pesticides TMDL special study – Monitoring of Sediment by Source and Land Use Type. The special study is to be completed by March 26, 2014.
- (5) Evaluate the results of the OC Pesticides TMDL Special Study – Effects of BMPs on Sediment and Siltation, to determine the impacts on metals and selenium. Complete within 6 months of completion of the OC Pesticides special study #1.
- (6) Evaluate the effectiveness of BMPs implemented under the UWQMP in controlling metals and selenium discharges. This is to be completed by March 26, 2013.
- (7) Re-evaluate agricultural and urban waste load allocations for copper, mercury, nickel and selenium based on the evaluation of BMP effectiveness. By March 26, 2012, urban dischargers will have a required 25% reduction in the difference between the loadings at the time of the TMDL preparation and the final WLAs effective in 2022.
- (8) In cooperation with POTW permittees and agricultural dischargers, conduct a study to identify selenium contaminated groundwater sources. Special Study is to be completed within one year of the approval of the workplan.
- (9) In cooperation with agricultural dischargers, conduct a study to investigate metals “hot spots” and natural soils concentrations. This special study is to be completed within 2 years of the approval of the workplan.

9. TMDL for Bacteria in Malibu Creek and Lagoon

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Malibu Creek or its tributaries (Ventura County Watershed Protection District, County of Ventura and the cities of Thousand Oaks and Simi Valley) (“Malibu MS4 permittees”) shall achieve the WLAs identified in Resolution 2004-19. . These WLAs are expressed as the number of daily or weekly sample days that may exceed the single sample limits or 30-day geometric mean bacteria targets in Resolution 2004-19.

Table 15 - Bacteria Targets

Parameters	Unit	Fresh Water Targets	
		Geometric Mean	Single Sample

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E. coli	mg	126/ 100	235/ 100
Fecal coliform	mg	200/ 100	400/ 100

(2) The wasteload allocations are to be achieved no later than January 26, 2012.

(b) Compliance Monitoring:

(1) Achievement of the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Monica Bacteria TMDL Compliance Monitoring Program approved by the Executive Officer.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Malibu MS4 permittees:

(1) If TMDL compliance monitoring indicates that the Malibu MS4 permittees are causing or contributing to an exceedance of the WLAs in the receiving waters, the permittees shall conduct a source identification study and implement additional controls sufficient to achieve the WLAs in the receiving waters.

10. TMDL for Trash in Revolon Slough and Beardsley Wash

(a) Wasteload Allocations

(1) MS4 permittees discharging to Revolon Slough and Beardsley Wash (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo and Oxnard) shall implement BMPs to achieve the WLAs of zero trash.

(b) Compliance Monitoring

(1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Revolon Slough and Beardsley Wash and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees

(1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.



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11. TMDL for Trash in the Ventura River Estuary

(a) Wasteload Allocations

(1) MS4 permittees discharging to the Ventura River Estuary (Ventura County Watershed Protection District, County of Ventura and the City of Ventura) shall implement BMPs to achieve the WLAs of zero trash.

(b) Compliance Monitoring

(1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in the Ventura River Estuary and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees

(1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.

12. TMDL for Boron, Chloride, Sulfate and TDS in Calleguas Creek Watershed

(a) Waste Load Allocation

(1) Table 16. Interim Dry Weather WLAs for Permitted Stormwater Dischargers

<u>Constituent</u>	<u>Interim Limit 30-day average (mg/L)</u>
<u>Boron Total</u>	<u>1.3</u>
<u>Chloride Total</u>	<u>230</u>
<u>Sulfate Total</u>	<u>1289</u>
<u>TDS Total</u>	<u>1720</u>

(2) Table 17. —Final Dry Weather WLAs for Permitted Stormwater Dischargers

<u>Subwatershed</u>	<u>Critical Condition Flow Rate (mgd)</u>	<u>Chloride Allocation (lb/day)</u>	<u>TDS Allocation (lb/day)</u>	<u>Sulfate Allocation (lb/day)</u>	<u>Boron Allocation (lb/day)</u>
<u>Simi</u>	<u>1.39</u>	<u>1,738</u>	<u>9,849</u>	<u>2,897</u>	<u>12</u>

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<u>Las Posas</u>	<u>0.13</u>	<u>157</u>	<u>887</u>	<u>261</u>	<u>N/A</u>
<u>Conejo</u>	<u>1.26</u>	<u>1,576</u>	<u>8,931</u>	<u>2,627</u>	<u>N/A</u>
<u>Camarillo</u>	<u>0.06</u>	<u>72</u>	<u>406</u>	<u>119</u>	<u>N/A</u>
<u>Pleasant Valley (Calleguas)</u>	<u>0.12</u>	<u>150</u>	<u>850</u>	<u>250</u>	<u>N/A</u>
<u>Pleasant Valley (Revolon)</u>	<u>0.25</u>	<u>314</u>	<u>1,778</u>	<u>523</u>	<u>2</u>

(b) Compliance Monitoring

(1) A monitoring plan will be submitted to the RWQCB for Executive Officer approval on June 2, 2009. Monitoring will begin one year after Executive Officer approval of the monitoring plan to allow time for the installation of automated monitoring equipment.

(2) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.

(3) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Calleguas Creek Watershed MS4 permittees

Responsible jurisdictions including MS4 permittees shall submit compliance monitoring plan to the Los Angeles Regional Board for Executive Officer approval on June 2, 2009. Monitoring shall begin monitoring as outlined in the approved monitoring plan six months after approval of the work plan.

Responsible jurisdictions including MS4 permittees shall demonstrate that implementation actions have reduced the boron, sulfate, TDS, and chloride imbalance by 20%, 40%, 70% by December 2 of 2011, 2015, and 2018 respectively. Stormwater dischargers shall achieve WLAs, which shall be expressed as NPDES mass-based limits specified in accordance with federal regulations and state policy on water quality control by December 2, 2023.

13. TMDL for Bacteria in Harbor Beaches of Ventura County

(a) Waste Load Allocations

(1) MS4 permittees discharging to the Channel Islands Harbor Beaches (the County of Ventura, the Ventura County Watershed Protection District

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(VCWPD) and associated Municipal Separate Storm Sewer System (MS4) permittees in the Channel Islands Harbor subwatershed, and the City of Oxnard shall implement BMPs to achieve the interim WLAs listed in Table 15. All WLAs for summer dry-weather single sample bacteria densities at the Harbor Beaches of Ventura County are zero (0) days of allowable exceedances; winter dry weather and wet weather final WLAs are listed in Table 17 below.

The Basin Plan objectives that serve as the numeric targets for this TMDL are (single sample limits):

- a. Total coliform density shall not exceed 10,000/100 ml.
- b. Fecal coliform density shall not exceed 400/100 ml.
- c. Enterococcus density shall not exceed 104/100 ml.
- d. Total coliform density shall not exceed 1,000/100ml, if the ratio of fecal-to-total coliform exceeds 0.1.

Table 18-16. Interim WLAs for Single Sample Exceedance Days

Location	Summer Dry Weather		Winter Dry Weather		Wet Weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Kiddie Beach	54	8	23	4	32	5
Hobie Beach	40	6	25	4	38	6

Table 19-17. Final Allowable Exceedance Days by Location

Location	Summer Dry-weather		Winter Dry-weather		Wet-weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Hobie Beach	0	0	3	1	17	3
Kiddie Beach	0	0	3	1	17	3

(2) Pursuant to the TMDL, the interim storm water WLAs for bacteria are from samples taken at existing monitoring sites in ankle to knee- high depths.

(b) Compliance Monitoring

(1) Compliance and monitoring for Harbor Beaches of Ventura County is based on existing monitoring protocols and locations. Monitoring shall continue at sampling locations (VCEHD 36000 and VCEHD37000) and at the current weekly monitoring frequency, consistent with AB411 compliance monitoring. Monitoring shall be conducted on a year-round basis at the

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current monitoring locations including the summer months (i.e., April to October) and winter months (i.e., November to March). Bacteria sampling shall be conducted in ankle- to knee-high water, consistent with AB411. However, if additional monitoring stations are added or if changes are made to the sampling frequencies or existing monitoring locations, then submittal of a monitoring plan is required for Executive Officer approval.

- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Harbor Beaches of Ventura County MS4 permittees

- (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through structural and non-structural BMPs or implementation of other measures to attain the required source control.
- (2) Special studies are not required for implementation of the TMDL though conducting special studies is within the discretion of the responsible parties.

~~III. TMDLs in effect and covered in this Order are the following:~~

- ~~1. TMDL for Nitrogen Compounds for the Santa Clara River (Effective date: March 23, 2004).~~
- ~~2. TMDL for Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 24, 2006).~~
- ~~3. TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 24, 2006).~~
- ~~4. TMDL for Bacteria in Malibu Creek and Lagoon (Effective date: January 24, 2006).~~
- ~~5. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 26, 2007)~~
- ~~6. TMDL for Trash in Revolon Slough and Beardsley Wash (Effective date: March 6, 2008).~~
- ~~7. TMDL for Trash in the Ventura River Estuary (Effective date: March 6, 2008).~~
- ~~8. TMDL for Bacteria in Harbor Beaches of Ventura County (Effective date: September 23, 2008).~~

~~IV. TMDL Interim WLAs incorporated into this Order due to compliance dates which exceed the term of this Order are the following:~~

- ~~1. Final Wet Weather Bacteria WLAs for Malibu Creek and Lagoon (Compliance date: January 24, 2016).~~

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~~2. Final Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 24, 2026).~~

~~3. Final Metals and Selenium WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 26, 2022)~~

~~V. TMDL WLAs and Other TMDL Provisions Incorporated into this Order are as follows:~~

~~1. TMDL for Nitrogen Compounds in the Santa Clara River~~

~~(a) Waste Load Allocations:~~

~~(1) The Ventura County MS4 permittees discharging to the Santa Clara River (the cities of Fillmore and Santa Paula) ("Santa Clara MS4 permittees") shall implement BMPs to achieve the following MS4 wasteload allocations applicable to River Reach 3:~~

Ammonia nitrogen 30 day average	_____	2.0 mg/L
Ammonia nitrogen 1 hour average	_____	4.2 mg/L
Nitrate + Nitrite nitrogen 30 day average	_____	8.1 mg/L

~~(b) Compliance Monitoring:~~

~~(1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.~~

~~(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~

~~(c) Actions and Special Studies required of Santa Clara MS4 permittees:~~

~~(1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.~~

~~2. TMDL for Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon.~~

~~(a) Waste Load Allocations:~~

~~(1) MS4 permittees discharging to Calleguas Creek, its tributaries and Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the following MS4 WLAs:~~

Toxicity WLA	_____	1.0 TUe
Chlorpyrifos WLA	_____	0.014 ug/L
Diazinon WLA	_____	0.10 ug/L

~~(2) Pursuant to the TMDL, the final storm water WLAs for Toxicity, Chlorpyrifos and Diazinon, listed above, are receiving water concentrations~~

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~~measured in-stream at the base of each subwatershed within the Calleguas Creek watershed.~~

~~(b) Compliance Monitoring:~~

- ~~(1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.~~
- ~~(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~
- ~~(3) If as a result of compliance monitoring and subsequent investigations it is determined that a Calleguas MS4 permittee is responsible for exceedance of the in-stream Toxicity WLA, that permittee shall initiate the TRE/TIE process as outlined in U.S. EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000) or the approved Toxicity TMDL monitoring plan, and take appropriate action to eliminate the identified source of the toxicity.~~

~~(c) Actions and Special Studies required of Calleguas MS4 permittees:~~

- ~~(1) Special Study #1. Together with Calleguas POTW permittees, investigate the pesticides that will replace diazinon and chlorpyrifos in the urban environment, their potential impact on receiving waters and potential control measures. Special Study #1 was completed by March 24, 2008.~~
- ~~(2) Special Study #2. Together with Calleguas Agricultural Dischargers, consider results of monitoring of sediment concentrations by source/land use type through the special study required in the Calleguas OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.~~
- ~~(3) Pesticide Collection Program. Together with Calleguas POTW permittees, develop and implement a collection program for diazinon and chlorpyrifos and an educational program. Collection and education could occur through existing programs such as household hazardous waste collection events. The Pesticide Collection Program is to be implemented by March 24, 2009.~~
- ~~(4) Special Study #3. Together with Calleguas Agricultural Dischargers, consider the findings of transport rates developed through the OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.~~

~~3. TMDL for Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in the Calleguas Creek, its Tributaries and Mugu Lagoon.~~

~~(a) Waste Load Allocations:~~

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- (1) ~~MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, and Simi Valley) ("Calleguas MS4 permittees") shall implement BMPs to achieve the interim WLAs listed in Table 11.~~

Table 12. Interim Sediment Concentration WLAs (ng/g)

Constituent	Subwatershed					
	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Chlordane	25	17	48	3.3	3.3	3.4
4,4 DDD	69	66	400	290	140	5.3
4,4 DDE	300	470	1600	950	170	20
4,4 DDT	39	110	690	670	25	2
Dieldrin	19	3	5.7	1.1	1.1	3
PCBs	180	3800	7600	25700	25700	3800
Toxaphene	22900	260	790	230	230	260

- (2) ~~Pursuant to the TMDL, the interim storm water WLAs for OC Pesticides, PCBs and Siltation, listed above, are annual average, sediment based concentrations measured in surface waters at the base of each subwatershed within the Calleguas Creek watershed.~~
- (b) ~~Compliance Monitoring:~~
  - (1) ~~Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.~~
  - (2) ~~If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~
- (c) ~~Actions and Special Studies required of Calleguas MS4 permittees:~~
  - (1) ~~Pesticide Collection Program. Together with Calleguas POTW permittees, implement a collection program and source control measures pursuant to a work plan approved by the Executive Officer. The Pesticide Collection Program is to be implemented by March 24, 2011.~~
  - (2) ~~Special Study #1. Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, submit a work plan to quantify sedimentation in the Calleguas Creek Watershed, evaluate management methods to control siltation and contaminated sediment transport to Calleguas Creek, identify appropriate BMPs to reduce sediment loadings and evaluate the effect of sediment on habitat preservation in Mugu~~

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~~Lagoon for approval by the Executive Officer. This special study is also to evaluate the concentration of OC pesticides and PCBs in sediments from various sources/land use types. Special Study #1 is to be completed by March 24, 2014.~~

- ~~(3) Special Study #2. Together with Calleguas Agricultural Dischargers, identify areas of high OC concentrations and evaluate the effects of watershed protection and land use practices on water quality. Such practices include but are not limited to management of sediment reduction practices and structures, streambank stabilization, and other projects related to stormwater conveyance and flood control improvements in the Calleguas Creek watershed. Special Study #2 is to be completed based on the schedule provided in the workplan, submitted in March, 2007~~
- ~~(4) Special Study #3. Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, evaluate natural attenuation rates and evaluate methods to accelerate organochlorine pesticide and polychlorinated biphenyl attenuation and examine the attainability of wasteload and load allocations in the Calleguas Creek Watershed. Special Study #3 is to be completed by March 24, 2016.~~

4. ~~TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon:~~

~~(a) Waste Load Allocations:~~

- ~~(1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the interim WLAs listed in Table 12 and Table 13.~~

~~Table 13. Interim WLAs for Copper, Nickel and Selenium (ug/L)~~

Constituent	Calleguas and Conejo Creek (a)			Revolon Slough		
	Dry-Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)	Dry-Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)
Copper	23	19	204	23	19	204
Nickel	15	13	(a)	15	13	(a)
Selenium	(b)	(b)	(b)	14(e)	13(e)	(a)

~~(A) The current loads do not exceed the TMDL under wet conditions; interim limits are not required~~

~~(B) Selenium allocations have not been developed for this reach as it is not on the 303(d) list~~



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~~(C) Attainment of interim limits will be evaluated in consideration of background loading data, if available~~

- ~~(2) Pursuant to the TMDL, the interim storm water WLAs for copper, nickel, and selenium are receiving water concentrations measured in stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.~~

Table 14. Mass-based WLAs for copper, nickel and selenium

Annual Cumulative Flow (million gallons per year)	Calleguas Creek (lbs/yr)	Revolon Slough (lbs/yr)
0-15,000	3.3	1.7
15,000-25,000	10.5	4
Above 25,000	64.6	10.2

- ~~(3) Pursuant to the TMDL, the interim storm water WLAs for mercury are suspended sediment loads measured in stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.~~
- ~~(4) Determination of the applicable interim WLA will be determined by calculating the total annual flow (October 1-September 30) in the Calleguas Creek watershed as measured by the flow gage at CSUCI.~~

~~(b) Compliance Monitoring:~~

- ~~(1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality and total suspended solids (TSS) at the base of Calleguas Creek, Revolon Slough and in Mugu Lagoon, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.~~
- ~~(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~

~~(c) Actions and Special Studies required of Calleguas MS4 permittees:~~

- ~~(1) Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium. Complete by March 26, 2009.~~
- ~~(2) Implement the UWQMP within one year of approval by Executive Officer.~~
- ~~(3) In cooperation with agricultural dischargers, evaluate the results of the OCs TMDL special study on sediment transport rates for applicability to the metals and selenium TMDL. Complete within 6 months of completion of the OCs TMDL special study #1.~~
- ~~(4) In cooperation with agricultural dischargers, include monitoring for copper, mercury, nickel and selenium in the OC pesticides TMDL special study—Monitoring of Sediment by Source and Land Use Type. The special study is to be completed by March 26, 2014.~~

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- (5) Evaluate the results of the OC Pesticides TMDL Special Study—Effects of BMPs on Sediment and Siltation, to determine the impacts on metals and selenium. Complete within 6 months of completion of the OC Pesticides special study #1.
- (6) Evaluate the effectiveness of BMPs implemented under the UWQMP in controlling metals and selenium discharges. This is to be completed by March 26, 2013.
- (7) Re-evaluate agricultural and urban waste load allocations for copper, mercury, nickel and selenium based on the evaluation of BMP effectiveness. By March 26, 2012, urban dischargers will have a required 25% reduction in the difference between the loadings at the time of the TMDL preparation and the final WLAs effective in 2022.
- (8) In cooperation with POTW permittees and agricultural dischargers, conduct a study to identify selenium contaminated groundwater sources. Special Study is to be completed within one year of the approval of the workplan.
- (9) In cooperation with agricultural dischargers, conduct a study to investigate metals “hot spots” and natural soils concentrations. This special study is to be completed within 2 years of the approval of the workplan.

5. TMDL for Bacteria in Malibu Creek and Lagoon

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Malibu Creek or its tributaries (Ventura County Watershed Protection District, County of Ventura and the cities of Thousand Oaks and Simi Valley) (“Malibu MS4 permittees”) shall achieve the WLAs identified in Resolution 2004-19. These WLAs are expressed as the number of daily or weekly sample days that may exceed the single sample limits or 30-day geometric mean bacteria targets in Resolution 2004-19.

Table 15 – Bacteria Targets

Parameters	Unit	Fresh Water Targets	
		Geometric Mean	Single Sample
E. coli	mg	126/100	235/100
Fecal coliform	mg	200/100	400/100

- (2) The wasteload allocations are to be achieved no later than January 26, 2012.

(b) Compliance Monitoring:

- (1) Achievement of the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Monica Bacteria TMDL Compliance Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies

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~~identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~

~~(e) Actions and Special Studies required of Malibu MS4 permittees:~~

- ~~(1) If TMDL compliance monitoring indicates that the Malibu MS4 permittees are causing or contributing to an exceedance of the WLAs in the receiving waters, the permittees shall conduct a source identification study and implement additional controls sufficient to achieve the WLAs in the receiving waters.~~

~~6. TMDL for Trash in Revolon Slough and Beardsley Wash~~

~~(a) Wasteload Allocations~~

- ~~(1) MS4 permittees discharging to Revolon Slough and Beardsley Wash (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo and Oxnard) shall implement BMPs to achieve the WLAs of zero trash.~~

~~(b) Compliance Monitoring~~

- ~~(1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Revolon Slough and Beardsley Wash and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.~~

- ~~(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~

~~(e) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees~~

- ~~(1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.~~

~~7. TMDL for Trash in the Ventura River Estuary~~

~~(a) Wasteload Allocations~~

- ~~(1) MS4 permittees discharging to the Ventura River Estuary (Ventura County Watershed Protection District, County of Ventura and the City of Ventura) shall implement BMPs to achieve the WLAs of zero trash.~~

~~(b) Compliance Monitoring~~

- ~~(1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in the Ventura River Estuary and/or within responsible jurisdiction~~

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~~land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.~~

~~(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~

~~(e) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees~~

~~(1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.~~

8. TMDL for Bacteria in Harbor Beaches of Ventura County

(a) Waste Load Allocations

(1) MS4 permittees discharging to the Channel Islands Harbor Beaches (the County of Ventura, the Ventura County Watershed Protection District (VCWPD) and associated Municipal Separate Storm Sewer System (MS4) permittees in the Channel Islands Harbor subwatershed, and the City of Oxnard shall implement BMPs to achieve the interim WLAs listed in Table 15. All WLAs for summer dry weather single sample bacteria densities at the Harbor Beaches of Ventura County are zero (0) days of allowable exceedances; winter dry weather and wet weather final WLAs are listed in Table 17 below.

The Basin Plan objectives that serve as the numeric targets for this TMDL are (single sample limits):

- a. Total coliform density shall not exceed 10,000/100 ml.
- b. Fecal coliform density shall not exceed 400/100 ml.
- c. Enterococcus density shall not exceed 104/100 ml.
- d. Total coliform density shall not exceed 1,000/100ml, — if the ratio of fecal to total coliform exceeds 0.1.

Table 16. Interim WLAs for Single Sample Exceedance Days

Location	Summer Dry Weather		Winter Dry Weather		Wet Weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Kiddie Beach	54	8	23	4	32	5
Hobie Beach	40	6	25	4	38	6

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Table 17. Final Allowable Exceedance Days by Location

Location	Summer Dry weather		Winter Dry weather		Wet weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Hobie Beach	0	0	3	1	17	3
Kiddie Beach	0	0	3	1	17	3

(2) Pursuant to the TMDL, the interim storm water WLAs for bacteria are from samples taken at existing monitoring sites in ankle to knee high depths.

(b) Compliance Monitoring

(1) Compliance and monitoring for Harbor Beaches of Ventura County is based on existing monitoring protocols and locations. Monitoring shall continue at sampling locations (VCEHD 36000 and VCEHD37000) and at the current weekly monitoring frequency, consistent with AB411 compliance monitoring. Monitoring shall be conducted on a year round basis at the current monitoring locations including the summer months (i.e., April to October) and winter months (i.e., November to March). Bacteria sampling shall be conducted in ankle to knee high water, consistent with AB411. However, if additional monitoring stations are added or if changes are made to the sampling frequencies or existing monitoring locations, then submittal of a monitoring plan is required for Executive Officer approval.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.

(c) Actions and Special Studies required of Harbor Beaches of Ventura County MS4 permittees

(1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through structural and non-structural BMPs or implementation of other measures to attain the required source control.

(2) Special studies are not required for implementation of the TMDL though conducting special studies is within the discretion of the responsible parties.

**PART 7 - DEFINITIONS**

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The following are definitions for terms in this Order:

**Adverse Impact** - means a detrimental effect upon water quality or beneficial uses caused by a discharge or loading of a pollutant or pollutants.

**Agriculture** - means the science, art, and business of cultivating the soil, producing crops, and raising livestock.

**Antidegradation Policies** - means policies which protect surface and ground waters from degradation, and federal policies, which protect high quality surface waters. In particular, this policy protects waterbodies where existing quality is higher than that necessary for the protection of beneficial uses including the protection of fish and wildlife propagation and recreation on and in the water (*Statement of Policy with Respect to Maintaining High Quality Water in California*, State Board Resolution No. 68-16; 40 CRF 131.12).

**Applicable Standards and Limitations** - means all State, interstate, and Federal standards and limitations to which a "discharge" or a related activity is subject under the CWA, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, and pretreatment standards under § 301, § 302, § 303, § 304, § 306, § 307, § 308, § 403, and § 404 of CWA.

**Areas of Special Biological Significance (ASBS)** - means all those areas of this state listed as ASBS, listed specifically within the California Ocean Plan or so designated by the State Board which, among other areas, includes the area from Mugu Lagoon to Latigo Point: Oceanwater within a line originating from Laguna Point at 34° 5' 40" north, 119° 6'30" west, thence southeasterly following the mean high tideline to a point at Latigo Point defined by the intersection of the mean high tide line and a line extending due south of Benchmark 24; thence due south to a distance of 1000 feet offshore or to the 100 foot isobath, whichever distance is greater; thence northwesterly following the 100 foot isobath or maintaining a 1,000-foot distance from shore, whichever maintains the greater distance from shore, to a point lying due south of Laguna Point, thence due north to Laguna Point.

**Authorized Discharge** - means any discharge that is authorized pursuant to an NPDES permit, waste discharge requirement, conditional waiver from waste discharge requirements, or meets the conditions set forth in this Order.

**Automotive Repair Shop** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

**Automotive Service Facilities** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes

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5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to storm water.

SIC Code	Corresponding NAICS Code
5013	425120, 441310, 425110, & 423120
5014	425120, 425110, 423130, & 441320
5511	441110
5541	447110, & 447190
7532	811121
7533	811112
7534	326212, & 811198
7536	811122
7537	811113
7538	811111
7539	811198, & 811118

**Bacteria Total Maximum Daily Load (TMDL) Dry Weather** - defined in the Bacteria TMDLs as those days with less than 0.1 inch of rainfall and those days occurring more than 3 days after a rain.

**Bacteria Total Maximum Daily Load (TMDL) Wet Weather** - defined in the Bacteria TMDLs as a day with 0.1 inch or more of rain and 3 days following the rain event.

**Basin Plan** - means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments.

**Beneficial Uses** - means the existing or potential uses of receiving waters in the permit area as designated by the Regional Water Board in the Basin Plan.

**Best Management Practices (BMPs)** - means methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

**California Environmental Quality Act (CEQA)** - means a California statute that requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible (Reference: California Public Resources Code § 21000 et seq.)

**Channel** - means an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two waterbodies.

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**Chronic Toxicity** - means a measurement of a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.

**Commercial Area(s)** - means any geographic area of the Permittees' jurisdiction that is not heavy industrial or residential. A commercial area includes, but is not limited to areas surrounding: commercial activity, hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Commercial Development** - means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Construction** - Construction activity includes any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain original line and grade, hydraulic capacity, or original purpose of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage is required if more than one acre is disturbed or the activities are part of a larger plan.

**Construction Activities Storm Water General Permit (CASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from construction activities under certain conditions.

**Control** - means to minimize, reduce, eliminate, or prohibit by technological, legal, contractual or other means, the discharge of pollutants from an activity or activities.

**Critical Sources** - means commercial facilities and businesses that have a potential to contribute pollutants to stormwater runoff if effective BMPs are not implemented. Attachment "D" specifies the commercial facilities and businesses that have been identified as Critical Sources.

**Dechlorinated/ Debrominated Swimming Pool Discharge** - means any swimming pool discharge with a residual chlorine or bromine level of 0.1mg/L or less; and does not contain any detergents, wastes, algacides, or cyanuric acid in excess of 50 ppm, or any other chemicals

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including salts from pools commonly referred to as "salt water pools". The term does not include swimming pool filter backwash or swimming pool water containing bacteria.

**Development** - means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and any other non-residential projects, including public agency projects; or mass grading for future construction.

**Directly Adjacent** - means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area.

**Directly Discharging** - means outflow from a drainage conveyance system that is composed entirely or predominately of flows from the subject, property, development, subdivision, or industrial facility and not commingled with the flows from adjacent lands.

**Discharge** - means when used without qualification the "discharge of a pollutant."

**Discharging Directly** - means outflow from a drainage conveyance system that is composed entirely or predominantly of flows from the subject, property, development, subdivision, or industrial facility, and not commingled with the flows from adjacent lands.

**Discharge of a Pollutant** - means any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or, any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft, which is being used as a means of transportation. The term discharge includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**Disturbed Area** - means any area that is altered as a result of land disturbance. Examples include but are not limited to: clearing, grading, grubbing, stockpiling and/ or excavation, etc...

**Dry Day** - means a non-wet day for Malibu Creek and Lagoon Bacteria TMDL WLA. A wet day is defined as a day with a 0.1 inch or more of rain and 3 days following the rain event is a non-wet day for Bacteria TMDL WLA.

**Effect Concentration (EC)** is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g., Probit Model). EC<sub>25</sub> is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

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**Effective Impervious Surface** - means that portion of the surface area that is hydrologically connected via sheet flow over a hardened conveyance or impervious surface without any intervening medium to mitigate flow volume.

**Effluent limitation** - means any restriction imposed by the Permitting Authority (PA) on quantities, discharge rates, concentrations, and/ or mass loadings of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

**Emergency** - means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. (Reference: California Public Resources Code § 21060.3. Emergency).

**End-of-Pipe** - means the end of the major outfall as defined in 40 CFR122.26 (b)(5) and 40 CFR122.26 (b)(6).

**Endpoint** - means a biological measurement used to quantify the results obtained from analytical methods such as whole effluent toxicity testing [e.g., lethal concentration (LC<sub>50</sub>); inhibition concentration (IC<sub>25</sub>); and no observed effect concentration (NOEC)]. Such endpoints are quantitative measurements of the responses of test organisms (e.g., survival, growth, mobility, reproduction, and weight gain or loss) in response to exposure to a serial dilution of effluent.

**Environment** - means the physical conditions, which exist within the area and which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

**Environmentally Sensitive Area (ESA)** - means an area "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments" (Reference: California Public Resources Code § 30107.5). ESAs will include Clean Water Act 303d Listed Water Bodies in all reaches that are unimproved, all California Coastal Commission's Environmentally Sensitive Habitat Areas as delineated on maps in Local Coastal Plans and Regional Water Quality Control Board's Basin Plan Rare, Threatened or Endangered Species (RARE) and Preservation of Biological Habitats (BIOL) designated waterbodies. The California Department of Fish and Game's Significant Natural Areas map will be considered for inclusion as the department field verifies the designated locations. Watershed restoration projects will be considered for inclusion as the department field verifies the designated locations.

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**Erosivity Factor** - The Erosivity Factor is a criterion that to assess the risk of erosion on disturbed land. It is described in "Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE), Agricultural Handbook 703, USDA-ARS, U.S. Government Printing Office, Washington, D.C., 1997 by Renard, K.C., G.R. Foster, G.A. Weesies, D.K. McCool, and D.C. Yoder.

**Federal Clean Water Act (CWA)** - means (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92—500, as amended by Public Law 95—217, Public Law 95—576, Public Law 96—483 and Public Law 77—117, codified at 33 U.S.C. 1251 et seq.

**First Storm Event** - means the first storm event of the wet season that produces at least 0.25 inches of rain.

**Forest Land** - means land at least 10 percent stocked with live trees, or land that had this minimum tree stocking in the past and is not currently developed for nonforest use. The minimum area recognized is 1 acre.

**Groundwater Dewatering** - means the active practice of removing standing water from soil excavations using a pump(s) or other means.

**Hillside** - means property located in an area with known erosive soil conditions, where the development will result in grading on any slope that is 20% or greater or an area designated by the Municipality under a General Plan or ordinance as a "hillside area".

**Horse Stables** - means a property where at least one horse is stabled at least part of the year.

**Hydromodification** - means the alteration away from a natural state of stream flows or the beds or banks of rivers, streams, or creeks, including ephemeral washes, which results in hydrogeomorphic changes.

**Illegal Discharge** - means any discharge to the municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illegal discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to an NPDES permit, discharges that are identified in part 1, "Discharge Prohibitions" of this order, or discharges authorized by the Regional Water Board Executive Officer.

**Illicit Connection** - means any engineered conveyance that is connected to the storm drain system without a permit or municipal authorization. It also means any engineered conveyance through which discharges of pollutants to the separate storm drainage systems, which are not composed entirely of storm water or are not authorized by an NPDES permit, may occur.

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**Illicit Discharge** - means any discharge to a municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges that are identified in part 1, "Discharge Prohibitions" of this order, or authorized by the Regional Water Board Executive Officer.

**Illicit Disposal** - means any disposal, either intentionally or unintentionally, of material(s) or waste(s) that can pollute storm water.

**Industrial/ Commercial Facility** - means any facility involved and/ or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/ or commodities, and any facility involved and/ or used in providing professional and non-professional services. This category of facilities includes, but is not limited to, any facility defined by either the Standard Industrial Classifications (SIC) or the North American Industry Classification System (NAICS). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition.

**Industrial Activities Storm Water General Permit (IASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from certain industrial activities under certain conditions.

**Industrial Park** - means a land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry.

**Inhibition Concentration (IC)** - means a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). IC25 is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

**Inspection** - means entry and the conduct of an on-site review of a facility and its operations, at reasonable times, to determine compliance with specific municipal or other legal requirements. The steps involved in performing an inspection, include, but are not limited to:

1. Pre-inspection documentation research
2. Request for entry
3. Interview of facility personnel
4. Facility walk-through
5. Visual observation of the condition of facility premises

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- 6. Examination and copying of records as required
- 7. Sample collection (if necessary or required)
- 8. Exit conference (to discuss preliminary evaluation)
- 9. Report preparation, and if appropriate, recommendations for coming into compliance

**Integrated Pest Management (IPM)** - means a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health, and environmental risks.

**Large Municipal Separate Storm Sewer System (MS4)** - means all MS4s that serve a population greater than 250,000 (1990 Census) as defined in 40 CFR122.26 (b)(4). The Regional Water Board designated Ventura County as a large MS4 in 1990, based on: (i) the U.S. Census Bureau 1990 population count of 669,016 thousand, and (ii) the interconnectivity of the MS4s in the incorporated and unincorporated areas within the County.

**Local SWPPP** - means the Local Storm Water Pollution Prevention Plan (LSWPPP) required by the local agency for a project that disturbs one or more acres of land. Shall mean a plan identifying potential pollutant sources from a construction site and describing proposed design, placement and implementation of BMPs, to effectively prevent non-storm water discharges and reduce pollutants in storm water discharges to the storm drain system, during construction activities. Also referred as a Storm Water Pollution Control Plan (SWPCP).

**Low Impact Development (LID)** – means a design strategy with the goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable (mature) trees, flood plains, woodlands, and highly permeable soils.

**Major Municipal Separate Storm Sewer Outfall (“or major outfall”)** - means a major municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more), as defined in 40 CFR122.26 (b)(5).

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**Major Outfall** - means a major municipal separate storm sewer outfall, as defined in 40 CFR122.26 (b)(6).

**Maximum Extent Practicable (MEP)** – The technology-based permit requirement established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based requirements, including MEP, establish a level of pollutant control that is derived from available technology or other controls. MEP requires municipal dischargers to perform at maximum level that is practicable. Compliance with MEP may be achieved by emphasizing pollution prevention and source control BMPs in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving and advancing concept, which considers technical and economic feasibility.

**Method Detection Limit (MDL)** - means the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR136, Appendix "G" of this Order.

**Minimum Level (ML)** - means the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed. The ML value represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique.

**Minimum Significant Difference (MSD)** - means a measure of test sensitivity that establishes the minimum difference required between a control and a test treatment in order for that difference to be considered statistically significant.

**Municipal Action Levels (MALs)** – means an action level that is derived from a statistical analysis of relevant data that is utilized to identify areas and subwatersheds that require additional or improved BMPs to reduce the discharge of pollutants to the maximum extent practicable. MALs may be revised as additional data are obtained so that MALs can continue to be used to effectively prioritize BMP implementation as the storm water program progresses. MALs are one measure of the effectiveness of the storm water program. MALs are not effluent limitations as defined by this Order, and/or as defined by Water code section 13385.1(c).

**Municipal Separate Storm Sewer System (MS4)** - means a conveyance or system of conveyances (including roads w/ drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR122.26(b)(8):

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1. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the Federal Clean Water Act (CWA) that discharges into waters of the United States
2. Designed or used for collecting or conveying storm water
3. Which is not a combined sewer
4. Which is not part of a Publicly Owned Treatment Works (POTW), as defined in 40 CFR122.2

**NAICS** - means North American Industry Classification System.

**National Pollutant Discharge Elimination System (NPDES)** - means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA § 307, 402, 318, and 405.

**Natural Drainage Systems** - means unlined or unimproved (not engineered) creeks, streams, rivers or similar waterways.

**New Development** - means land disturbing activities; structural development, including construction or installation of a building or structure, creation and replacement of impervious surfaces; and land subdivision.

**Non-Storm Water Discharge** - means any discharge to a storm drain that is not composed entirely of storm water.

**No Observed Effect Concentration (NOEC)** - means the highest tested concentration of an effluent or toxicant that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically different from the controls).

**Nuisance** - means anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.; (3) occurs during, or as a result of, the treatment or disposal of wastes.

**Nursery** - means NAICS classification to describe nursery operations and determine the type of operations covered under this Order and those covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Conditional Waiver).

1. There are 3 broad NAICS sectors available to classify nurseries:

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- (1) 111xxx - Crop Production - Agriculture
- (a) 424xxx - Merchant Wholesalers, Nondurable Goods
- (b) 44xxxx - Retail Trade
- (1) **Nursery (Agricultural Facilities - Crop Production)** - means Nursery and Floriculture Production under NAICS Code 11142x. These operations are subject to the **Conditional Waiver**. This industry comprises establishments primarily engaged in (1) growing nursery and floriculture products (e.g., nursery stock, shrubbery, cut flowers, flower seeds, foliage plants, sod) under cover or in open fields and/ or (2) growing short rotation woody trees with a growing and harvesting cycle of 10 years or less for pulp or tree stock (e.g., cut Christmas trees, cottonwoods).
- (2) **Nursery (Commercial Facilities - Merchant Wholesalers, Nondurable Goods, and Retail Trade)** - means industries Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers under NAICS Code 424930; and Nursery, Garden Center, and Farm Supply Stores under NAICS Code 444220. This Order covers these types of operations. The industry in NAICS Code 424930 comprises establishments primarily engaged in the merchant wholesale distribution of flowers, florists' supplies, and/ or nursery stock (except plant seeds and plant bulbs). The industry in NAICS Code 444220 comprises establishments primarily engaged in retailing nursery and garden products, such as trees, shrubs, plants, seeds, bulbs, floriculture products and sod, which are predominantly grown elsewhere. These establishments may sell a limited amount of a product they grow themselves.

**Open Channel** - means a storm drainage channel that is not a natural water course.

**Parking Lot** - means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use.

**Percent Minimum Significant Difference (PMSD)** - means the minimum significant difference divided by the control mean, expressed as a percent (see minimum significant difference).

**Permit** - means an authorization, license, or equivalent control document issued by U.S. EPA or an "approved State" to implement the requirements of 40 CFR Parts 122, 123, and 124.

"Permit" includes an NPDES "general permit" (§ 122.28). Permit does not include any permit, which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

**Permittee(s)** - means co-permittee(s) and any agency named in this Order as being responsible for permit conditions within its jurisdiction, as defined by Federal Regulation. Permittees to this Order include the Ventura Water Protection District, Ventura County, and the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley and Thousand Oaks.



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**Point Source** - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

**Point Zero** - means in the context of the TMDLs, the point at which water from the storm drain or creek initially mixes with water. Point zero has been selected as the compliance point for the TMDL numeric target because access to these drains is, on the whole, not restricted.

**Pollutants** - means those "pollutants" defined in CWA § 502(6) (33.U.S.C. § 1362(6)), and incorporated by reference into California Water Code § 13373.

**Pollutants of Concern** - means constituents that have exceeded Basin Plan Objectives, and CTR- Chronic or Acute Objectives during monitoring at Mass Emission, Receiving Water, and Land Use stations.

**Potable Water Sources** - means the potable water system for the treatment, distribution, and provision of water for residential, commercial, industrial, or institutional use that meets all California safe drinking water regulatory standards for human consumption.

**Pre-Developed Condition** - means native vegetation and soils that existed at a site prior to first development. The pre-developed condition may be assumed to be an area with the typical vegetation, soil, and storm water runoff characteristics of open space areas in coastal Southern California unless reasonable historic information is provided that the area was atypical.

**Priority Pollutants** - means those constituents referred to in 40 CFR401.15 and listed in the U.S. EPA NPDES Application Form 2C, pp. V-3 through V-9.

**Project** - means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Reference: California Public Resources Code § 21065).

**Qualified SWPPP Developer or Qualified SWPPP Practitioner** – refer to State of California General Construction Stormwater Permit for definition.

**Rare, Threatened, or Endangered Species (RARE)** - means a beneficial use for waterbodies in the Los Angeles Region, as designated in the Basin Plan (Table 2-1), that supports habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

**Redevelopment** - means land-disturbing activity that results in the creation, addition, or

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replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

**Regional Administrator** - means the Regional Administrator of the Regional Office of the U.S. EPA or the authorized representative of the Regional Administrator.

**Report of Waste Discharge (ROWD)** - means an application for renewal of the NPDES Permit for Waste Discharge Requirements for Municipal Separate Storm Sewer Discharges Within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein.

**Restaurant** - means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812).

**Restoration** - means the reestablishment of predisturbance aquatic functions and related physical, chemical and biological characteristics (Reference: National Research Council. 1992. Restoration of Aquatic Ecosystems: Science, Technology and Public Policy. National Academy Press, Washington, D.C.).

**Retail Gasoline Outlet (RGO)** - means any facility engaged in selling gasoline and lubricating oils- SIC 5541 and NAICS 447110 & 447190.

1. RGOs: 447190 Other Gasoline Stations:

This industry comprises establishments known as gasoline stations (except those with convenience stores) primarily engaged in one of the following: (1) retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) or (2) retailing these fuels in combination with activities, such as providing repair services; selling automotive oils, replacement parts, and accessories; and/ or providing food services.

2. RGOs: 447110 Gasoline Stations with Convenience Stores:

Retailing automotive fuels in combination with a convenience store or food mart.

**Routine Maintenance** –Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.

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- 4. Update existing lines\* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
- 5. Repair leaks

Routine maintenance does not include construction of new\*\* lines or facilities resulting from compliance with applicable codes, standards and regulations.

\* Update existing lines includes replacing existing lines with new materials or pipes.

\*\* New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

**Screening** - means using proactive methods to identify illicit connections through a continuously narrowing process. The methods may include: performing baseline monitoring of open channels, conducting special investigations using a prioritization approach, analyzing maintenance records for catch basin and storm drain cleaning and operation, and verifying all permitted connections into the storm drains. Special investigation techniques may include: dye testing, visual inspection, smoke testing, flow monitoring, infrared, aerial and thermal photography, and remote control camera operation.

**Sidewalk Rinsing** - means only sidewalk rinsing using high pressure and low volume of water with no additives and at an average usage of 0.006 gallons per square foot of surface area to be rinsed. Any waste generated from the activity must be collected and properly and legally disposed of. It does not mean hosing of any sidewalk or street with a garden hose with a pressure nozzle.

**Site** - means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

**Small Construction** - means any soil disturbing activities less than 5 acres.

**Smart Growth**- development in or near cities intended to lessen or reverse suburban sprawl, decrease the use of automobiles, and shorten daily travel. It uses compact building design to cluster together residential, shopping, and work areas and encourages walkind and public transportation. Smart Growth is considered a stormwater BMP in the 2005 publication *Using Smart Growth Techniques as Stormwater Best Management Practices*, EPA 231-B-05-002.

**Source Control BMP** - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

**Southern California Stormwater Monitoring Coalition (SMC)** - means the Stormwater Monitoring Coalition, which is a collaborative research/ monitoring partnership of the Southern California Water Boards, Municipal Storm Water Agencies, and municipalities to develop the methodologies and assessment tools to more effectively understand urban storm water and non-storm water (anthropogenic) impacts to receiving waters and to conduct research/

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monitoring through Subsequent Research Implementation Agreements. The first original cooperative agreement was entered into on February 8, 2001.

**Stream** - means a body of flowing water; natural water course containing water at least part of the year. In hydrology, it is generally applied to the water flowing in a natural channel as distinct from a canal (Reference: US Geological Survey).

**Strip Mall** - means a commercial development that is a shopping center where the stores are arranged in a row, with a sidewalk in front. Strip malls are typically developed as a unit and have large parking lots in front. They face major traffic arterials and tend to be self-contained with few pedestrian connections to surrounding neighborhoods. It is also called a plaza.

**Storm Event Monitoring**- means a rainfall event that produces more than 0.25 inch of precipitation and is separated from the previous storm event by at least 1 week of dry weather, for the purpose of monitoring.

**Storm Water** - means storm water runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR122.26(b)(13).

**Storm Water Discharge Associated with Industrial Activity** - means industrial discharge, as defined in 40 CFR122.26(b)(14).

**Storm Water Quality Management Program** - means the Ventura Countywide Storm Water Quality Management Plan, which includes descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time.

**Structural BMP** - means any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

**Summer Dry Weather** - means dry weather days occurring from April 1 through October 31 of each year.

**t-Test** (formally Student's t-test) - means a statistical analysis comparing two sets of replicate observations, in the case of WET, only two test concentrations (e.g., a control and 100% effluent). The purpose of this test is to determine if the means of the two sets of observations are different [e.g., if the 100% effluent concentration differs from the control (i.e., the test pass or fails)].

**Targeted Employees** - means management and staff who perform or direct activities that directly or indirectly have an effect of storm water quality. The employees generally are employed in the following areas: department of public works, engineering, sanitation, storm

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water maintenance, drainage and flood control, transportation, streets and roads, parks and recreation, public landscaping and corporation yards, planning or community development, code enforcement, building and safety, harbor or port departments, airports, or general services and fleet services.

**Total Maximum Daily Load (TMDL)** - means the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background.

**Toxicity Identification Evaluation (TIE)** - means a set of procedures to identify the specific chemical(s) responsible for toxicity through a process of chemical/ physical manipulations of samples followed by toxicity tests. These procedures are performed in 3 phases (Phase I- Toxicity Characterization Procedure, Phase II- Toxicity Identification Procedure, and Phase III- Toxicity Confirmation Procedure) using aquatic organism toxicity tests.

**Toxicity Reduction Evaluation (TRE)** - means a study conducted in a step-wise process to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity.

**Toxicity Test** - means a procedure using living organisms to determine whether a chemical or an effluent is toxic. A toxicity test measures the degree of the effect of a specific chemical or effluent on exposed test organisms.

**Toxic Unit (TU)** - means a measure of toxicity in an effluent as determined by the acute toxicity units (TUa) or chronic toxicity units (TUc) measured. The larger the TU, the greater the toxicity.

**Toxic Unit - Chronic (TUc)** - means 100 times the reciprocal of the effluent concentration that causes no observable effect on the test organisms in a chronic toxicity test ( $TUc = 100/NOEC$  or  $100/EC25$ ) (see NOEC).

**Treatment** - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media absorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

**Treatment Control BMP** - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Urbanization** - means the process of changing of land use and land patterns from rural characteristics to urban (city-like) characteristics. These changes include (i) the replacement of pervious surfaces with impervious surfaces such as rooftops and buildings, and impervious materials such as asphalt and concrete; and (ii) the conversion of rural land to house new residents, support new businesses, and facilitate vehicular traffic flow.

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**U.S. EPA Phase I Facilities** - means facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR122.26(c).

These categories include:

1. Facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N)
2. Manufacturing facilities
3. Oil and gas/ mining facilities
4. Hazardous waste treatment, storage, or disposal facilities
5. Landfills, land application sites, and open dumps
6. Recycling facilities
7. Steam electric power generating facilities
8. Transportation facilities
9. Sewage of wastewater treatment works
10. Light manufacturing facilities

**Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards** - means any Permittee owned or operated facility or portion thereof that:

1. Conducts industrial activity, operates or stores equipment or materials, and provides services similar to Federal Phase I facilities;
2. Performs fleet vehicle service/ maintenance including repair, maintenance, washing, or fueling;
3. Performs maintenance and/ or repair of machinery/ equipment; or
4. Stores chemicals, raw materials, or waste materials.

**Waste Load Allocations (WLAs)** - means a portion of a receiving water's Total Maximum Daily Pollutant Load (TMDL) that is allocated to one of its existing or future point sources of pollution (Reference: 40 CFR130.2(h)).

**Water Quality Objectives** - means water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federally approved surface water quality plans. Such plans are used by the Regional Water Board to regulate all discharges, including storm water discharges.

**Water Quality Standards** - means the State Water Quality Standards, which are comprised of beneficial uses, water quality objectives and the State's Antidegradation Policy.

**Waters of the State** - means any surface water or groundwater, including saline waters, within boundaries of the state (Reference: California Water Code § 13050).

**Waters of the United States or Waters of the US** - means:

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the

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ebb and flow of the tide;

- 2. All interstate waters, including interstate "wetlands";
- 3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used for industrial purposes by industries in interstate commerce
- 4. All impoundment's of waters otherwise defined as waters of the United States under this definition;
- 5. Tributaries of waters identified in the preceding paragraph (1) through (4) of this definition;
- 6. The territorial sea; and
- 7. "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in the preceding paragraph (1) through (6) of this definition.  
(Reference: 33 CFR328)

**Watercourse** - means any natural or artificial channel for passage of water, including the VCFCD jurisdictional channels included in the List of Channels within the Comprehensive Plan of the VCFCD, as approved by the Board of Supervisors of the VCFCD on October 4, 1993, and any amendments thereto.

**Watershed Management** - means approach for water resources protection. It is a strategy for integrating and managing resources, both human and fiscal that focuses on regulation of point sources, to a more regional approach that acknowledges environmental impacts from other activities.

**Watershed Management Areas (WMA)** - means the geographically-defined watershed areas where the Regional Water Board will implement the watershed approach. These generally involve a single large watershed within which exists smaller subwatersheds but in some cases may be an area that does not meet the strict hydrologic definition of a watershed e.g., several small Ventura coastal waterbodies in the region are grouped together into one WMA.

**Wet Season** - means the calendar period beginning October 1 through April 15.

**Winter Dry Weather** - means dry weather days occurring from November 1 - March 31 of each year.

**Whole Effluent Toxicity** - means the aggregate toxic effect of an effluent measured directly by a toxicity test.

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**PART 8 - STANDARD PROVISIONS**

**A. General Requirements**

- 1. The Permittee shall comply with all provisions and requirements of this Order.
- 2. Should the Permittee discover that it failed to submit any relevant facts or that it submitted incorrect information in a report it shall promptly submit the missing or correct information.
- 3. The Permittee shall report all instances of non-compliance not otherwise reported at the time monitoring reports are submitted.
- 4. This Order includes Attachment "H", the Reporting Program, which is a part of this Order and must be complied with.

**B. Regional Water Board Review**

- 1. The Regional Water Board may review any formal determinate or approval made by the Regional Water Board Executive Officer pursuant to the provisions of this Order.
  - (a) Permittee(s) or a member of the public may request such review upon petition within 30 day of the effective date of the notification of such decision to the Permittee(s) and interested parties on file at the Regional Water Board.

**C. Public Review**

- 1. All documents submitted to the Regional Water Board in compliance with the terms and conditions of this Order shall be made available to members of the public pursuant to the Freedom of Information Act (5 U.S.C. § 552), as amended, and the Public Records Act (California Government Code § 6250 et seq.).
- 2. All documents submitted to the Regional Water Board Executive Officer for approval shall be made available to the public for a 30-day period to allow for public comment.

**D. Duty to Comply [40 CFR122.41(a)]**

- 1. Each Permittee must comply with all of the terms, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for



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reissuance, or a combination thereof [40 CFR122.41(a), CAL. WATER CODE § 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].

- 2. A copy of these waste discharge specifications shall be maintained by each Permittee so as to be available during normal business hours to Permittee employees and members of the public.
- 3. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

**E. Duty to Mitigate [40 CFR122.41 (d)]**

- 1. Each Permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

**F. Inspection and Entry; Investigations; Responsibilities [40 CFR122.41(i), Cal. Water Code § 13225 and § 13267]**

- 1. The Regional Water Board, U.S. EPA, and other authorized representatives shall be allowed:
  - (a) Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;
  - (b) Access to copy any records, at reasonable times that are kept under the conditions of this Order;
  - (c) To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order;
  - (d) To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA and the CAL. WATER CODE;
  - (e) To review any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement to investigate the quality of any waters of the state within its region; and,
  - (f) To require as necessary any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.

**G. Proper Operation and Maintenance [40 CFR122.41 (e), Cal. Water Code § 13263(f)]**

- 1. The Permittees shall at all times properly operate and maintain all facilities and systems of treatment (and related appurtenances) that are installed or used by the Permittees to achieve compliance with this Order. Proper operation and maintenance includes:

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- (a) adequate laboratory controls; and
- (b) appropriate quality assurance procedures.
- 2. This provision requires the operation of backup or auxiliary facilities or similar system that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order.

**H. Signatory Requirements [40 CFR122.41(k) & 122.22]**

- 1. Except as otherwise provided in this Order, all applications, reports, or information submitted to the Regional Water Board shall be signed by the City Manager or Mayor, or authorized designee and certified as set forth in 40 CFR122.22.

**I. Reopener and Modification [40 CFR122.41(f) & 122.62]**

- 1. This Order may only be modified, revoked, or reissued, prior to the expiration date, by the Regional Water Board, in accordance with the procedural requirements of the CAL. WATER CODE and CCR Title 23 for the issuance of waste discharge requirements, 40 CFR122.62, and upon prior notice and hearing, to:
  - (a) Address changed conditions identified in the required reports or other sources deemed significant by the Regional Water Board;
  - (b) Incorporate applicable requirements or statewide water quality control plans adopted by the State Board or amendments to the Basin Plan, including TMDLs;
  - (c) Comply with any applicable requirements, guidelines, and/ or regulations issued or approved pursuant to CWA § 402(p); and/ or,
  - (d) Consider any other federal, or state laws or regulations that became effective after adoption of this Order.
- 2. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
  - (a) Violation of any term or condition contained in this Order;
  - (b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts; or,
  - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- 3. The filing of a request by the Principal Permittee or Permittees for a modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
- 4. This Order may be modified to make corrections or allowances for changes in the permitted activity listed in this section, following the procedures at 40 CFR122.63, if processed as a minor modification. Minor modifications may only:
  - (a) Correct typographical errors; or

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(b) Require more frequent monitoring or reporting by the Permittee.

**J. Severability**

1. The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected.

**K. Duty to Provide Information [40 CFR122.41(h)]**

1. The Permittees shall furnish, within a reasonable time, any information the Regional Water Board or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order.
2. The Permittees shall also furnish to the Regional Water Board, upon request, copies of records required to be kept by this Order.

**L. Twenty-Four Hour Reporting [40 CFR122.41(l)(6)]<sup>1</sup>**

1. The Permittees shall report to the Regional Water Board any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time any Permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
2. The Regional Water Board may waive the required written report on a case-by-case basis.

**M. Bypass [40 CFR122.41(m)]<sup>2</sup>**

1. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Water Board may take enforcement action against Permittees for bypass unless:

<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

<sup>2</sup> This provision applies to the operation and maintenance of storm water controls and BMPs as provided in this Order or in the Ventura County SMP.

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- (a) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);
- (b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance;
- (c) The Permittee submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or,
- (d) Permittees may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The Permittee shall submit notice of an unanticipated bypass as required.

**N. Upset [40 CFR122.41(n)]<sup>1</sup>**

1. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. A Permittee that wishes to establish the affirmative defense of an upset in an action brought for non compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (a) An upset occurred and that the Permittee can identify the cause(s) of the upset;
  - (b) The permitted facility was being properly operated by the time of the upset;
  - (c) The Permittee submitted notice of the upset as required; and,
  - (d) The Permittee complied with any remedial measures required.
3. No determination made before an action for noncompliance, such as during administrative review of claims that non-compliance was caused by an upset, is final administrative action subject to judicial review.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

**O. Property Rights [40 CFR122.41(g)]**

1. This Order does not convey any property rights of any sort, or any exclusive privilege.

**P. Enforcement**

1. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The CWA provides the following:
  - (a) Criminal Penalties for:
    - (1) Negligent Violations [CWA 309 (c)(1)(B)]:  
The CWA provides that any person who negligently violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$2,500 nor more than \$25,000 per day for each violation, or by imprisonment for not more than 1 year, or both.
    - (2) Knowing Violations [CWA 309 (c)(2)(B)]:  
The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.
    - (3) Knowing Endangerment [CWA 309 (c)(3)(A)]:  
The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 307, 308, 318, or 405 and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.
    - (4) False Statement [CWA 309 (c)(4)]:  
The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.
  - (b) Civil Penalties [[CWA 309 (d)]  
The CWA provides that any person who violates a permit condition implementing

Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a civil penalty not to exceed \$27,500 per day for each violation.

- 2. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The Cal Water Code § 13885 provides the following:
  - (a) Any person who violates any of the following shall be liable civilly in accordance with this section:
    - (1) Section 13375 or 13376.
    - (2) Any waste discharge requirements or dredged or fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.
    - (3) Any requirements established pursuant to Section 13383.
    - (4) Any order or prohibition issued pursuant to Section 13243 or Article 1 (commencing with Section 13300) of Chapter 5, if the activity subject to the order or prohibition is subject to regulation under this chapter.
    - (5) Any requirements of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the Clean Water Act, as amended.
    - (6) Any requirement imposed in a pretreatment program approved pursuant to waste discharge requirements issued under Section 13377 or approved pursuant to a permit issued by the administrator.

**Q. Need to Halt or Reduce Activity not a Defense [40 CFR122.41(c)]**

- 1. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

**R. Termination~~Rescission~~ of Board Order**

- 1. Regional Water Board Order No. 00-108 is hereby terminated~~rescinded~~.

**S. Board Order Expiration Date**

- 1. This Order expires on ~~XX~~May 7-, 2014. The Permittees must submit a Report of Waste Discharge (ROWD) and a proposed Storm Water Quality Management

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Program in accordance with CCR Title 23 as application for reissuance of waste discharge requirements no later than 180 days in advance of such date.

**T. MS4 Annual Reporting Program [40 CFR122.42(c)]**

1. The Annual Program Reporting shall include the following information:

(a) *Municipal separate storm sewer systems.*

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
- (2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with 40 CFR122.26(d)(2)(iii) of this part;
- (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR122.26(d)(2)(iv) and (d)(2)(v) of this part;
- (4) A summary of data, including monitoring data that is accumulated throughout the reporting year;
- (5) Annual expenditures and budget for year following each annual report;
- (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
- (7) Identification of water quality improvements or degradation.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on mm dd, 2009.

\_\_\_\_\_  
Tracy J. Egoscue  
Executive Officer

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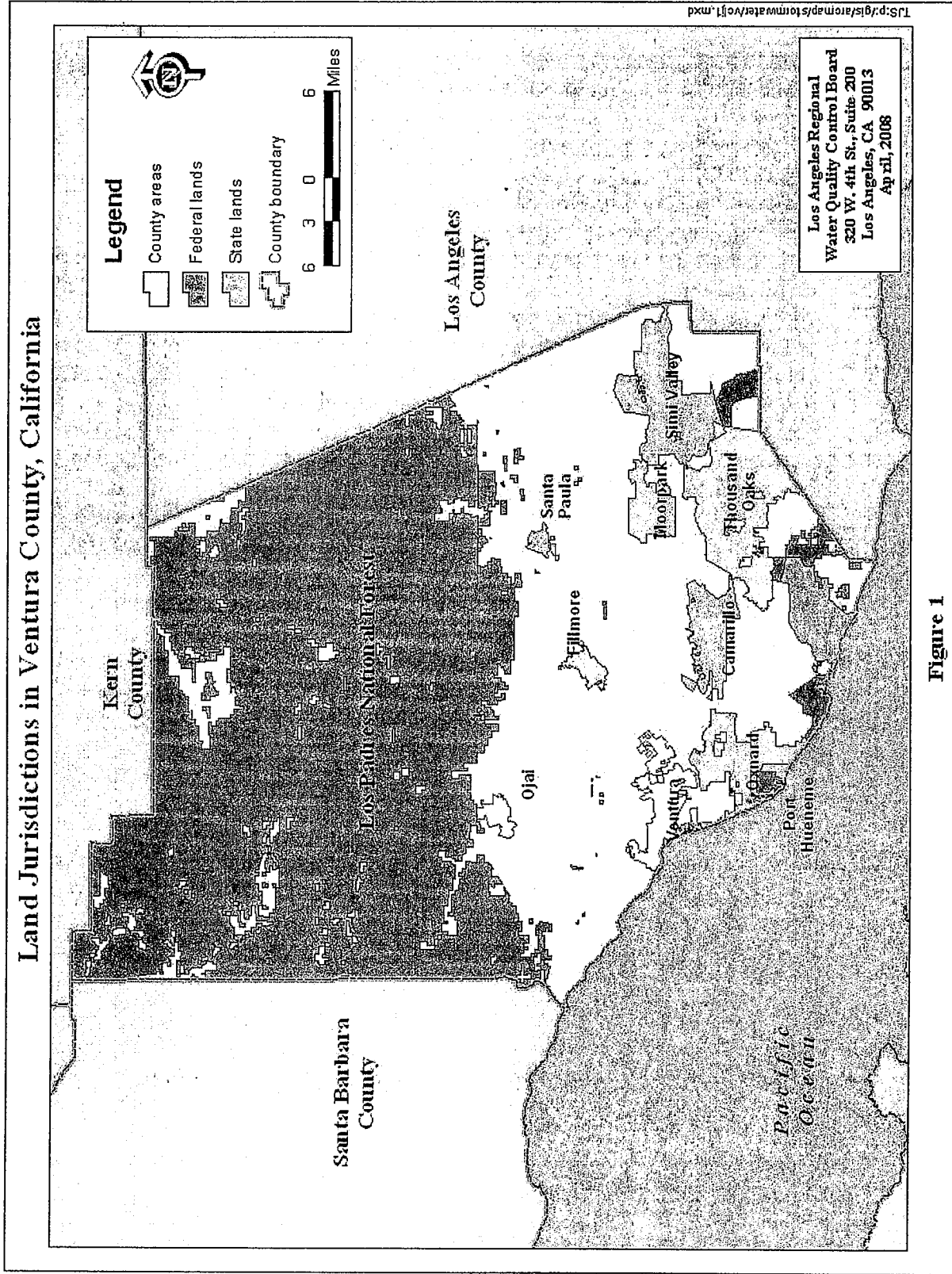


Figure 1



Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

R E V I S E D T E N T A T I V E

ATTACHMENT A  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Ventura River	402.10 402.20 402.31 402.32	Ventura River Ventura River Estuary Canada Larga Matilija Creek Matilija Creek Reservoir San Antonio Creek	Algae Coliform (fecal, total) Eutrophic Low DO Nitrogen Trash	City of Ojai City of San Buenaventura Ventura County Watershed Protection District
Santa Clara River	403.11 403.21 403.22 403.31 403.32 403.41 403.42 403.43 403.44 403.51 403.52 403.53 403.54 403.55	Santa Clara River Santa Clara River Estuary Brown Barranca/Long Canyon Elizabeth Lake Hopper Creek Lake Hughes Mint Canyon Creek Munz Lake Piru Creek Pole Creek Sespe Creek Torrey Canyon Creek Wheeler Canyon/Todd Barranca	Algae Ammonia Chema* (tissue) Chloride Coliform Enrichment Eutrophic Fish kills Low DO/Organic Enrichment Nitrate + Nitrite Odors pH Sulfate Trash Total Dissolved Solids Toxaphene	City of Fillmore City of Oxnard City of San Buenaventura City of Santa Paula Ventura County Watershed Protection District

Tentative Order Ventura County Municipal Separate Storm Sewer System Permit

**ATTACHMENT A**

Watershed Management Areas

R E V I S E D T E N T A T I V E

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Calleguas Creek	403.11 403.12 403.61 403.62 403.63 403.64 403.67 403.66 403.68	Calleguas Creek Calleguas Creek Estuary Arroyo Conejo Arroyo Las Posas Arroyo Simi Beardsley Channel Conejo Creek Fox Barranca Mugu Lagoon Mugu Drain/Oxnard Drain Rio de Santa Clara/Oxnard Drain Revolon Slough Tapo Canyon	Algae Ammonia Boron Chema* (tissue) Chlordane (tissue, sediment) Chloride Chlorpyrifos (tissue) Coliform, fecal Copper (total, dissolved) Dacthal (sediment) DDT (tissue, sediment) Dieldrin (tissue) Endosulfan (tissue, sediment) Hexachlorocyclohexane (tissue) Mercury Nickel Nitrate + Nitrite Nitrate as Nitrogen (NO3) Nitrogen Organophosphorus Pesticides PCBs (tissue) Sediment Toxicity Sedimentation/Siltation Selenium Sulfate Total Dissolved Solids Toxaphene (tissue, sediment) Toxicity Trash Zinc	City of Camarillo City of Moorpark City of Oxnard City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

**ATTACHMENT A**  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Malibu Creek	401.00 403.11 404.21 404.22 404.23 404.24 404.25 404.26 404.47 404.45	Malibu Creek Malibu Creek Lagoon Lake Lindero Lake Sherwood Las Virgenes Creek Lindero Creek Malibu Lake Medea Creek Palo Comado Santa Monica Bay Westlake Lake Triunfo Creek	Algae Ammonia Coliform DDT (tissue, sediment) Enteric viruses Eutrophic Lead Low DO/Organic Enrichment Nutrients (algae) PAHs (sediment) PCBs (tissue, sediment) PH Mercury Scum/foam Sedimentation/Siltation Sediment Toxicity Selenium Specific Conductance Trash	City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

**ATTACHMENT A**  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Miscellaneous Ventura Coastal	401.00 403.11	Channel Islands Harbor Channel Islands Beach Hobie Beach Mandalay Beach McGrath Lake McGrath Beach Ormond Beach Port Hueneme Harbor Promenade Park Beach Rincon Beach San Buenaventura Beach Santa Clara River Estuary Beach/Surfers Knoll Ventura Harbor: Ventura Keys	Beach closures Coliform (fecal) Chlordane (sediment) DDT (tissue, sediment) Dieldrin (sediment) PCBs (tissue, sediment) Lead (sediment) Sediment Toxicity Zinc (sediment)	City of Oxnard City of Port Hueneme City of San Buenaventura Ventura County Watershed Protection District

**ATTACHMENT B**

Calleguas Creek Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-CC), Receiving Water (W-3 & W-4), and Land Use (A-1) Sites

<b>Wet Weather</b>	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Residual Chlorine	
TDS	
<b>Metal</b>	
Aluminum - Total	Chromium - Total
Barium -Total	Cooper - Dissolved
Beryllium - Total	Mercury - Total
Cadmium - Total	Nickel - Total
<b>Nutrient</b>	
Nitrate as Nitrogen	
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Hexachlorobenzene	
Indeno(1,2,3-cd)pyrene	
Pentachlorophenol	
<b>Pesticide</b>	
4,4'-DDD	
4,4'-DDE	

<sup>1</sup> Mass Emission, Receiving Water, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern

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**ATTACHMENT B**

Santa Clara River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-SCR) and Land Use (I-2 & R-1) Sites

<b>Wet Weather</b>	
<b>Anion</b>	
Chloride	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Ph	
TDS	
<b>Metal</b>	
Aluminum - Total	Cooper - Dissolved
Arsenic - Total	Mercury - Total
Barium - Total	Nickel - Total
Cadmium - Total	Selenium - Total
Chromium - Total	Zinc - Dissolved
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Indeno(1,2,3-cd)pyrene	
<b>Pesticide</b>	
4,4'-DDE	

<sup>1</sup> Mass Emission, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

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**ATTACHMENT B**

Ventura River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME- VR & ME- VR2) Sites

<b>Wet Weather</b>
<b>Anion</b>
Chloride
<b>Bacteriological</b>
E. Coli
Fecal Coliform
<b>Conventional</b>
TDS
<b>Metal</b>
Aluminum -Total
Cadmium - Total
Chromium - Total
Mercury - Total
Nickel - Total
Zinc - Dissolved
<b>Organic</b>
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Chrysene
Hexachlorobenzene
<b>Pesticide</b>
4,4'-DDD
4,4'-DDE

<sup>1</sup> Mass Emission wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07). Monitoring data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

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**ATTACHMENT C**  
Municipal Action Levels

**Table 1 - Conventional Pollutants**

Pollutants	TSS mg/L	Nitrate & Nitrite- total mg/L
Municipal Action Level	252	2

**Table 2 – Metals**

Pollutants	Cu- total µg/L	Pb- total µg/L	Zn- total µg/L
Municipal Action Level	87	122	660

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**ATTACHMENT C**  
Treatment BMP Performance Standards

**Table 3 - Effluent Concentrations as Median Values**

BMP Category	Total Suspended Solids mg/L	Total Nitrate-Nitrogen mg/L	Total Copper, ug/L	Total Lead, ug/L	Total Zinc, ug/L
Detention Pond	27	0.48	15.9	14.6	58.7
Wet Pond	10	0.2	5.8	3.4	21.6
Wetland Basin	13	0.13	3.3	2.5	29.2
Biofilter	18	0.36	9.6	5.4	27.9
Media Filter	11	0.66	7.6	2.6	32.2
Hydrodynamic Device	23	0.29	11.8	5	75.1

Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database, 2007.

See subpart 4.A.3 (Storm Water Quality Management Program Implementation- General Requirements).

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**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Municipal Landfills (SIC 4953)

Hazardous Waste Treatment, Disposal and Recovery Facilities<sup>1</sup>

Facilities Subject to SARA Title III (also known as EPCRA)<sup>2</sup>

Restaurants<sup>3</sup>

Wholesale trade (scrap, auto dismantling) (SIC 50)

Automotive service facilities<sup>2</sup>

Fabricated metal products (SIC 34)

Motor freight (SIC 42)

Chemical/allied products (SIC 28)

Automotive Dealers/Gas Stations (SIC 55)

Primary Metals Products (SIC 33)

Nursery<sup>3</sup> (NAICS 424930 and 444220)

Electric/Gas/Sanitary (SIC 49)

Air Transportation (SIC 45)

Water Transportation (SIC 44)

Rubbers/Miscellaneous Plastics (SIC 30)

Local/Suburban Transit (SIC 41)

Railroad Transportation (SIC 40)

Oil & Gas Extraction (SIC 13)

Lumber/Wood Products (SIC 24)

Machinery Manufacturing (SIC 35)

Transportation Equipment (SIC 37)

<sup>1</sup> Non-underlined categories belong to Industrial Facilities.

<sup>2</sup> Various categories subject to these requirements.

<sup>3</sup> See Definition in Part 7. of the Order.

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**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Stone, Clay, Glass, Concrete (SIC 32)

Leather/Leather Products (SIC 31)

Miscellaneous Manufacturing (SIC 39)

Food and kindred Products (SIC 20)

Mining of Nonmetallic Minerals (SIC 14)

Printing and Publishing (SIC 27)

Electric/Electronic (SIC 36)

Paper and Allied Products (SIC 26)

Furniture and Fixtures (SIC 25)

Laundries (SIC 72)

Instruments (SIC 38)

Textile Mills Products (SIC 22)

Apparel (SIC 23)

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<sup>1</sup>Non-underlined categories belong to Industrial Facilities.

**ATTACHMENT E**  
Determination of Erosion Potential

$E_p$  is determined as follows- The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The index under urbanized conditions is compared to the index under pre-urban conditions expressed as a ratio ( $E_p$ ). The effective work index ( $W$ ) is computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:

$$W = \sum_{i=1}^n (\tau_i - \tau_c)^{1.5} \cdot V \cdot \Delta t_i \quad (1)$$

Where  $\tau_c$  = critical shear stress that initiates bed mobility or erodes the weakest bank layer,  $\tau_i$  = applied hydraulic shear stress,  $\Delta t$  = duration of flows (in hours), and  $n$  = length of flow record. The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential ( $E_p$ )<sup>1</sup> (McRae (1992, 1996).

$$E_p = \frac{W_{post}}{W_{pre}} \quad (2)$$

where:

$W_{post}$  = work index estimated for the post-urban condition

$W_{pre}$  = work index estimated for the pre-urban condition

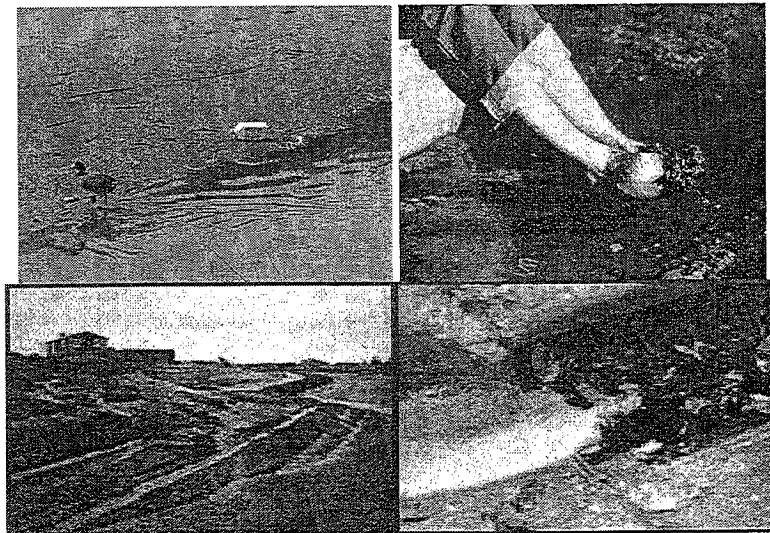
<sup>1</sup> MacRae, C.R. 1992. The Role of Moderate Flow Events and Bank Structure in the Determination of Channel Response to Urbanization. Resolving conflicts and uncertainty in water management: Proceedings of the 45th Annual Conference of the Canadian Water Resources Association. Shrubsole, D, ed. 1992, pg. 12.1-12.21; MacRae, C.R. 1996. Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection. Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE Engineering Foundation Conference, Snowbird, Utah, pg. 144-162

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

MONITORING PROGRAM - No. CI 7388  
FOR  
ORDER 09-xxxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS

MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009



May 7, 2009

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**MONITORING PROGRAM**

1. The primary objectives of the Monitoring Program include, but are not limited to:
  - (a) Assessing the chemical, physical, and biological impacts of municipal storm water sewer system discharges on receiving waters.
  - (b) Assessing the overall health and evaluating long-term trends in receiving water quality.
  - (c) Assessing compliance with TMDL targets and water quality objectives.
  - (d) Characterization of the quality of storm water discharges.
  - (e) Identifying sources of pollutants.
  - (f) Measuring and improving the effectiveness of measures implemented under this Order.
2. The results of the monitoring requirements outlined below shall be used to refine BMPs for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in Ventura County.
3. The Permittees shall implement the Monitoring Program as follows:

**CORE MONITORING****A. Mass Emissions**

- I. The Principal Permittee shall monitor mass emissions to accomplish the following objectives:
  - i. Estimate the mass emissions from the MS4 to the watershed.
  - ii. Assess trends in the mass emissions over time.
  - iii. Determine if the MS4 is contributing to exceedances of water quality objectives by comparing results to applicable water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan) and the California Toxics Rule (CTR).
1. The Principal Permittee shall monitor mass emissions from the following 3 mass emission stations:
  - (a) ME-VR2 for Ventura River
  - (b) ME-SCR for Santa Clara River
  - (c) ME-CC for Calleguas Creek

May 7, 2009

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2. The Principal Permittee shall monitor the 3 mass emission stations on an annual basis as per A.3. below.
3. The Principal Permittee shall monitor each mass emission station each year as follows:
  - (a) The first storm event of the wet season that produces a 20% or greater increase in base stream flow, and 2 additional storm events; all storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rainfall) from the previously measurable storm event (0.25 inches of rain).
  - (b) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) per mass emission station.
4. Samples for mass emission monitoring may be taken with the same type of automatic sampler used under Order 00-108. . Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
5. Samplers shall be set to monitor storms that produce a 20% or greater increase in base stream flow.
6. Samples shall be flow-weighted composites, collected during the first 24 hours or for the duration of the storm if it is less than 24 hours.
7. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 and 0.24 inches of rain.
8. The flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours, with each aliquot being separated by a minimum of 15 minutes within each hour of discharge, unless the Regional Water Board Executive Officer approves an alternate protocol.
9. Flow may be estimated using U.S. EPA methods at sites where flow measurement devices are not in place.
10. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>), pH, temperature, and DO.
11. Each mass emission shall analyze for all of the Pollutants of Concern (POC) in its specific watershed listed in Attachment "B" (Calleguas Creek Watershed,

May 7, 2009



Santa Clara River Watershed, and Ventura River Watershed Pollutants of Concern).

12. Each mass emission station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels), during the first storm event of the wet season for each year sampled. If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the California Toxics Rule (CTR) for chronic criteria. If a constituent is detected exceeding a Basin Plan objective, and/ or CTR criteria then the constituent shall be analyzed for the remainder of the Order, at the mass emission station where it was detected.
13. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests.
14. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within two working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation.
  - (b) Explanation of circumstance(s) with documentation.
  - (c) Statement of corrective action for the future.
15. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "K".
16. Results of monitoring from each mass emission station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date, highlighting exceedances (Pollutants of Concern, POC) to the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per mass emission station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).

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17. A summary of the annual mass emission monitoring results highlighting exceedances (POC) of the Basin Plan objectives and the CTR for acute criteria, with corresponding sampling dates per mass emission station, shall be included with the Annual Storm Water Report.

**B. Major Outfalls**

- I. The Principal Permittee shall monitor major storm drain outfalls to accomplish the following objectives:
  - i. Estimate the annual pollutant load of the cumulative discharges to waters of the State.
  - ii. Estimate the event mean concentration of the cumulative discharges to waters of the State.
  - iii. Assess trends in the major outfalls over time.
  - iv. Estimate the annual pollutant load of discharges to Waters of the U.S.
  - v. Estimate the event mean concentration of discharges to Waters of the U.S.
  - vi. Assess trends in the major outfalls over time.
  - vii. Determine if the MS4 is contributing to exceedences of MALs, and water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan), and the California Toxics Rule (CTR).
  
1. The Principal Permittee shall monitor:
  - (a) End-of-pipe of major outfalls, identified in Attachment I, transporting representative discharges from each Permittee's Municipal drainage area to:
    - (1) Major outfalls listed in Attachment "I" (Storm Water Monitoring Program's Major Outfall Stations).
    - (b) The first storm event of the wet season that produces at least 0.25 inches of rain, and 2 additional storm events per year, all storm events shall be separated by 7 days of dry weather (less than 0.1 inch) from the previously measurable storm event (0.25 inches).
    - (c) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) shall be sampled per identified major outfall.
    - (d) In the first year after permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment "I" are to be monitored annually according to the schedule above.
  
2. If an identified monitoring site is found to be unworkable due to immitigable factors the sampling location may be relocated upon Executive Officer's approval of another location. Best professional judgment shall be used to balance the site selection rationale and criteria to determine the most appropriate site. Due to limited potential locations of urban outfalls to be monitored, there may be no sites that satisfy all criteria and rationale. Sites will be selected to satisfy the following criteria:

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- (a) Maximize urban runoff contribution;
  - (b) Greater than 60% of catchment shall be Permittee's MS4;
  - (c) Attempt shall be made to avoid outfalls that contain discharge from extra-jurisdictional areas (e.g. agriculture land and other NPDES discharges).
  - (d) Drainage area should contain representative land uses in a ratio of use as similar as reasonably possible to that found in the Permittee's jurisdiction.
  - (e) Drainage areas with a higher percentage of the Permittee's MS4 are preferred;
  - (f) Ability to accurately measure flow
  - (g) Safety of monitoring personnel is the highest priority. Specific location of sampling collection may be upstream of the actual outfall if field safety or accurate flow measurement require it.
3. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 inches and 0.24 inches of rain.
  4. Samples shall be collected during the first 24 hours of storm water discharge or for the entire storm water discharge if it is less than 24 hours.
  5. Samples shall be flow-weighted composites and can be collected automatically or manually (see subparts A.7 and A.8) in accordance with U.S. EPA protocol or other procedure approved by the Executive Officer.
  6. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>) and pH, temperature, and DO.
  7. Major outfall samples taken within a subwatershed shall be analyzed for the biological and chemical parameters listed in the preceding subpart B.6, and for all of the constituents in Attachment "C" (Municipal Action Levels), Table 1 as listed below:
    - (a) TSS
    - (b) Nitrate & Nitrite- Total
    - (c) Cu- Total
    - (d) Pb- Total
    - (e) Zn- Total
  8. Each major outfall station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels) twice per wet season, per year, (1<sup>st</sup> storm event of the wet season and one other storm event of the wet season). If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the

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California Toxics Rule (CTR) acute criteria. If a constituent is detected exceeding a Basin Plan objective, and/or chronic CTR criteria then the constituent shall be sampled for the remainder of the Order, at the major outfall station where it was detected.

- 9. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests. Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
- 10. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within 2 working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
- 11. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "K".
- 12. Results of monitoring from each major outfall station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date, highlighting exceedances to the MALs, the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per major outfall station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
- 13. A summary of the annual major outfall monitoring results, highlighting exceedances (pollutants of concern POC) to the MALs, the Basin Plan objectives, and the CTR for acute criteria with corresponding sampling dates per major outfall station, shall be included with the Annual Storm Water Report.

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E**C. Dry Weather Analytical Monitoring**

- I. The Principal Permittee shall develop and implement a monitoring program to characterize pollutant discharges from representative MS4 outfalls in each municipality and in the unincorporated County area during dry weather. This monitoring program shall be implemented within each jurisdiction and shall begin within the 2010-2011 monitoring year.
  1. Dry weather analytical monitoring shall include:
    - (a) Analytical monitoring, field measurements and observations at selected stations.
    - (b) Reports of analytical data in a SWAMP comparable format.
  2. Selection of Dry Weather Analytical Monitoring stations: Based upon a review program data, the storm drain system and land uses, the Co-Permittees shall select dry weather analytical monitoring stations within their jurisdiction. At least 5 dry weather analytical monitoring stations need to be identified per Co-Permittee. The dry weather analytical monitoring stations shall be established using the following guidelines and criteria:
    - (a) Stations should be located downstream of municipal land uses where illegal or illicit activity may occur;
    - (b) Stations shall be located at accessible downstream locations within the storm drain system of each municipality or at major outfalls;
    - (c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
    - (d) Each Co-Permittee shall determine a primary station and at least 4 alternate stations to be sampled in case primary stations do not have flow in dry weather. The dry weather monitoring may utilize the same outfalls as those used for wet weather monitoring, if such outfalls are found to discharge during dry weather.
    - (e) Fact sheets of general information such as site descriptions (i.e., conveyance type, dominant watershed land uses) shall be created.
  3. The Principal and Co-Permittees shall develop and/or update written procedures for dry weather analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:
    - (a) Dry weather analytical monitoring shall be conducted at each identified station at least once between May 1st and September 30th of each year.

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- (b) If flow or ponded runoff is observed at a dry weather analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample.
  - (c) Record general information such as site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).
4. At a minimum, collect samples for analytical laboratory analysis of the following constituents:
    - (a) Total Hardness
    - (b) Total Organic Carbon or Oil and Grease
    - (c) Lead (Dissolved)
    - (d) Zinc (Dissolved)
    - (e) Copper (Dissolved)
    - (f) Total Coliform bacteria
    - (g) E. Coli bacteria
  5. Other required field observations include:
    - (a) Flow Estimation
    - (b) Temperature
    - (c) pH
    - (d) Odor
    - (e) Color
    - (f) Turbidity
    - (g) Floatables (foam, oil sheen)
    - (h) Staining
    - (i) Algal growth
  6. If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
  7. Visually assess the presence of trash in receiving waters and urban runoff. Assessments of trash shall provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.
  8. Develop and/or update procedures for source identification follow up investigations in the event elevated levels are found. These procedures shall be consistent with procedures required in IC/ID section.

**D. Aquatic Toxicity Monitoring**

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- I. The objective of aquatic toxicity monitoring is to evaluate if storm water (wet weather) discharges are causing or contributing to chronic toxic impacts on aquatic life by the following:
  - i. Toxicity testing at mass emission and major outfall stations to assess impacts on the marine and freshwater environments.
  
- 1. The Principal Permittee shall collect and analyze mass emission and major outfall samples for toxicity to evaluate the extent and causes of toxicity in receiving waters. Permittees shall utilize documents such as: Ventura County's Technical Guidance Manual for Storm Water Quality Control Measures and U.S. EPA's National Management Measures to Control Nonpoint Source Pollution from Urban Areas to implement measures to eliminate or reduce sources of toxicity in storm water.
- 2. Toxicity samples may be flow-weighted composite samples or grab samples for both wet and dry event sampling (see subparts A.7 and A.8).
- 3. Volume of sample shall be determined by specific test methods to be used. At a minimum it is suggested to collect 5 gallons for baseline testing, and an additional 5 gallons for TIE studies. Sufficient sample volume shall be collected to perform the required toxicity tests.
- 4. All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before initial use of a sample.
- 5. When toxicity tests can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then the following shall be submitted to the Regional Water Board Executive Officer within 2 working days:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
- 6. The Principal Permittee shall conduct critical life stage chronic toxicity tests on undiluted samples in accordance with:
  - (a) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to *West Coast* Marine and Estuarine Organisms, (EPA/600/R-95/136, 1995) for all mass emission stations, and for major outfalls discharging to marine and estuarine environments, or
  - (b) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, October 2002 (EPA/821/R-02/013, 2002) or current version for major outfalls discharging to freshwater environments.

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7. The Principal Permittee shall analyze samples for chronic toxicity according to the schedule below:
- (a) During the first year of the Order, 2 storm events shall be monitored at each mass emission and major outfall station. The first storm event of the wet season that produces at least 0.25 inches of rain, and 1 additional storm event. All storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rain) from the previously measurable storm event.
    - (1) During the first year of the Order, all 3 test species shall be used for their respective chronic toxicity test method for the 2 storm events monitored, to determine the most sensitive test species for each monitoring station (see subparts D.8 and D.9 below).
  - (b) During the next 4 years of the Order, the first storm event of the wet season that produces at least 0.25 inches of rain shall be monitored for each mass emission and major outfall station.
    - (1) During the next 4 years of the Order, the most sensitive test species determined from the first year of testing at each mass emission and major outfall station shall be used for its respective chronic toxicity test method (see subpart D.6).
8. Marine and Estuarine Species and Test Methods.
- (a) Marine and estuarine species and short-term test methods for estimating the chronic toxicity of NPDES effluents shall be used and are found in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) and applicable water quality standards; also see 40 CFR Parts 122.41(j)(4) and 122.44(d)(1)(iv).
    - (1) The Permittee shall conduct:
      - (A) A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01)
      - (B) A static non-renewal toxicity test with the giant kelp *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and
      - (C) A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, (Fertilization Test Method 1008.0)
    - (b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.
9. Freshwater Species and Test Methods.
- (a) Species and short-term test methods for estimating the chronic toxicity of NPDES effluent shall be used and are found in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and*

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*Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136).

- (1) The Permittee shall conduct
    - (A) A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0<sup>1</sup>)
    - (B) A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0<sup>1</sup>); and
    - (C) A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0)
  - (b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.
10. The test endpoint data is analyzed using a standard t-test approach. Statistical analysis methods shall be consistent with U.S. EPA test method manuals.
  11. If significant toxicity is found then according to paragraph 10.2.6.2 of the U.S. EPA freshwater test methods manual, all chronic toxicity test results from the multi-concentration tests required by this Order must be reviewed and reported according to U.S. EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA/821/B-00-004, 2000).
  12. Toxic samples shall be immediately subjected to Toxicity Identification Evaluation (TIE) procedures to identify the toxic chemical(s) if toxicity is demonstrated by the standard t-test.
  13. A TIE is to be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA test method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

<sup>1</sup> Daily observations for mortality make it possible to calculate acute toxicity for desired exposure periods (i.e., 7-day LC50, 96-hour LC50, etc.).

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14. The Principal Permittee shall complete chronic Phase I (Toxicity Characterization Procedures) TIEs for all sites showing significant toxicity. For the purpose of triggering TIE (Toxicity Characterization Procedures), significant toxicity is defined as at least 50% mortality. The 50% mortality threshold is consistent with the approach recommended in guidance published by USEPA for conducting TIEs (USEPA, 1996), which recommends a minimum threshold of 50% mortality because the probability of completing a successful TIE decreases rapidly for samples with less than this level of toxicity.
- (a) The TIE shall be conducted on test species, demonstrating the most sensitive toxicity response at a sampling station. However, a TIE(s) may be conducted on an additional test species with the caveat that once the toxicant(s) has been identified then the most sensitive test species triggering the TIE event needs to be tested additionally to verify that the toxicant has been identified and addressed.
15. A TIE Prioritization Metric may be utilized to rank sites for TIEs.<sup>2</sup>
16. Toxicity Reduction Evaluation (TRE) when toxicity is identified
- (a) When the same pollutant or class of pollutants is identified through 2 consecutive TIE evaluations, a TRE shall be performed for that identified toxic pollutant.
- (b) The TRE development shall be performed by a neutral third party (retained by the Permittees), in consultation with the Regional Water Board staff.
- (c) The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs are identified, the Permittees shall submit the TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At a minimum, the Plan shall include a discussion of the following items:
- (1) The potential sources of pollutant(s) causing toxicity.
  - (2) A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
  - (3) Recommended BMPs to reduce the pollutant(s) causing toxicity.
  - (4) Proposed post construction control measures to reduce the pollutant(s) causing toxicity.
  - (5) Follow-up monitoring to demonstrate that toxicity has been removed.
- (d) The TRE process shall be coordinated with TMDL development and implementation (i.e., If a TMDL for 4,4'-DDD is being implemented when a TRE for 4,4'-DDD is required, the efforts shall be coordinated to avoid overlap).

<sup>2</sup> Appendix 5. SMC Model Monitoring Program.

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- 17. Results of Toxicity monitoring conducted in accordance with the Standard Operating Procedure under Standard Provision 14 of this Attachment shall be sent to the Regional Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date for the initial toxicity test and no more than 30 days from completion of each aspect of the analysis for TIEs/TREs. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
- 18. The Annual Storm Water Report shall include:
  - (a) A full laboratory report for all toxicity testing.
  - (b) A summary of the years' mass emission and major outfall monitoring station's toxicity test results reported according to the test methods manual chapter on report preparation and test review.
  - (c) The dates of sample collection and initiation of each toxicity test.
  - (d) All results for effluent parameters monitored concurrently with the toxicity test(s).
  - (e) TIE Phase testing (Phase I, Phase II, and Phase III) that has been or is in the process of being conducted per monitoring station.
  - (f) The development, implementation, and results for each TRE Corrective Action Plan in the Annual Storm Water Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
- 19. When the SMC Standardized Toxicity Testing Guidance is completed, the Regional Water Board Executive Officer may direct Permittees to replace the current toxicity program with the standardized guidance procedure.

**SPECIAL STUDIES**

**E. Pyrethroid Insecticides Study**

- I. The Principal Permittee shall perform a Pyrethroid Insecticides study to accomplish the following objectives:
  - i. Establish baseline data for major watersheds
  - ii. Evaluate whether Pyrethroid Insecticide concentrations are at or approaching levels known to be toxic to sediment-dwelling aquatic organisms.
  - iii. Determine if Pyrethroids discovered are from urban sources.
  - iv. Assess any trends over the permit term.

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1. The Permittees shall incorporate monitoring for Pyrethroid Insecticides within the Calleguas Creek, Santa Clara River and Ventura River Watersheds according to the following:
  - (a) No later than the second year of this Order, monitoring shall begin.
  - (b) Quality Assurance Project Plan (QAPP) to be submitted to the Regional Board for approval 12 months prior to beginning monitoring.
  - (c) In selecting sites to conduct monitoring for Pyrethroid Insecticides, Permittees shall review existing monitoring programs in the watersheds by other public and private entities, watershed coalitions, and citizen volunteers, so as to complement and not duplicate efforts.
  - (d) Establish at least 2 stations along the mainstems of each major watershed river that are influenced by urban discharges.
  - (e) The study shall be repeated every third year following the year monitoring begins.
  
2. The Principal Permittee shall monitor Pyrethroid Insecticides stations according to the following:
  - (a) The Principal Permittee shall monitor 1 sampling event per station per monitoring year.
    - (1) Monitoring shall occur after sediment has settled within the waterbody, and safe access can be assured.
  - (b) Sufficient sediment is to be collected at each station in a pre-cleaned glass jar by skimming the upper 1 cm of the sediment column with a steel scoop, and held on ice until returned to the laboratory.
  - (c) Sediment shall be homogenized in the laboratory by hand mixing, then held at 4 °C (toxicity samples) or -20 °C (chemistry samples).
  - (d) All samples taken shall be analyzed for the following Pyrethroids:
    - (1) bifenthrin
    - (2) cyfluthrin
    - (3) cypermethrin
    - (4) deltamethrin
    - (5) esfenvalerate
    - (6) lambda-cyhalothrin
    - (7) permethrin
    - (8) tralomethrin (if laboratory is capable of analyzing for it)
  - (e) Detection limits for all Pyrethroids shall be as close to 1ng/g (dry weight) as reasonably achievable.
  - (f) Each sediment sample is to measure the following:
    - (1) total organic carbon (TOC).

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3. All samples shall be tested for toxicity to 7 to 10 day old *Hyaella azteca* according to standard U.S. EPA testing methods.<sup>3</sup>
  - (a) Use of the approach described in *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*<sup>4</sup> for toxicity testing shall be used.
4. Analysis by a laboratory that has performed sediment toxicity testing for Pyrethroid Insecticides is preferred.
5. Monitoring results from each station shall be sent electronically to the Regional Board's Storm Water Site at MS4stormwaterRB4@waterboards.ca.gov, no later than 90 days from sample collection date. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
6. If toxicity is attributed to Pyrethroids then consultation with staff at U.S. EPA, the California Department of Pesticide Regulations and the California Stormwater Quality Association's (CASQA) pesticides committee (UP3 Project web site), shall be required to obtain relevant information to use in developing the recommendations to mitigate Pyrethroids in the Final Report.
7. Final Report for the Pyrethroid Insecticides study shall contain the following:
  - (a) Executive summary
  - (b) Methods
  - (c) Results (including map depicting monitoring stations)
  - (d) Discussion
  - (e) Recommendations to mitigate Pyrethroids
8. The Final Report shall be completed and submitted to the Executive Officer of the Regional Water Board no later than 8 months after completion of the study.

The Pyrethroid Insecticides Study requirement may be satisfied by another tributary monitoring program within the Watershed performing a sediment Pyrethroid Insecticides Study that is monitoring to assess pyrethroid concentrations and sediment toxicity, so as to complement other ongoing programs.

#### F. Hydromodification Control Study

<sup>3</sup> U.S. EPA. *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates*; EPA Publication 600/R-99/064; U.S. Environmental Protection Agency: Washington, DC, 2000; 192 pp.

<sup>4</sup> *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*; Weston, D.P.; Holmes, R.W.; You, J.; Lydy, M.J. *Environ. Sci. Technol.*; (Article); 2005; 39(24); 9780 pp.

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1. The Principal Permittee shall conduct or participate in special studies to develop tools to predict and mitigate the adverse impacts of Hydromodification, and to comply with hydromodification control criteria. This can be achieved by the following:
  - (a) Develop a mapping and classification system for streams based on their susceptibility to the effects of hydromodification.
  - (b) Establish protocols for ongoing monitoring to assess the effects of hydromodification.
  - (c) Develop dynamic models to assess the effects of hydromodification on stream condition.
  - (d) Develop a series of tools that managers can easily apply to make recommendations or set requirements relative to hydromodification for new development and redevelopment.
2. The Principal Permittee may satisfy this requirement by participating in the 'Development of Tools for Hydromodification Assessment and Management' Project undertaken by the SMC and coordinated by the SCCWRP.
3. The Principal Permittee shall continue to partner with the SMC and collect data or sponsor its collection for the Ventura County sites to reduce statistical uncertainty and/ or improve model predictability.
4. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they will satisfy this requirement, no later than (2 months after Order adoption date).

**G. Low Impact Development**

1. The Principal Permittee shall conduct or participate in a special study to assess the effectiveness of low impact development techniques in semi-arid climate regimes such as in Southern California.
2. The Principal Permittee may satisfy this requirement by participating in the SMC project titled "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practice in Southern California".
3. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they are satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special study.

**H. Southern California Bight Project**

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1. The Principal Permittee and Permittees shall participate with other government organizations regulating discharges in southern California in the collaboration to conduct a regional monitoring survey (Southern California Bight Project (SCBP)), which was started in 2008 and to be continued in successive years. The survey's primary objective is to assess the spatial extent and magnitude of ecological disturbances on the mainland continental shelf of the SCB and to describe relative conditions among different regions of the SCBP.
2. The Principal Permittee shall participate on the Steering Committee for the bight-wide monitoring project, and assist with the estuary and nearshore sampling effort requirement of the proposed monitoring project for Ventura County as defined in the SCBP plan.

#### I. Bioassessment

1. The Principal Permittee consents to participate in the following regional water quality program for watershed management and planning:
  - (a) SMC Regional Monitoring Program
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed per year
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six
        - (ii) Integrator sites per watershed
          - (A) Ventura River - One
          - (B) Santa Clara River - One
          - (C) Calleguas Creek - One
    - (b) Ventura County Bioassessment: Permittees shall conduct bioassessment at one fixed site in each of the watersheds above on an annual basis. Southern California Regional Bioassessment protocols shall be used to conduct the Ventura County Bioassessment program.

#### J. Volunteer Monitoring Programs

1. The Permittees shall provide limited assistance if requested in the development and implementation of volunteer monitoring programs in the Ventura watersheds. These include, but are not limited to the following:
  - (a) Ventura River - (Ventura Stream Team).
  - (b) Santa Clara River - (Santa Clara River Stream Team).
  - (c) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program).
  - (d) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program).

#### K. Standard Monitoring Provisions

May 7, 2009

- I. All monitoring activities shall meet the following requirements.
  - 1. Monitoring and Records [40 CFR 122.41(j)(1)]
    - (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - 2. Monitoring and Records [40 CFR 122.41(j)(2)] [CWC §13383(a)]
    - (a) The Principal Permittee and Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge (ROWD) and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.
  - 3. Monitoring and Records [40 CFR 122.21(j)(3)]
    - (a) Records of monitoring information shall include:
      - (1) The date, time of sampling or measurements; exact place, weather conditions, and rain fall amount.
      - (2) The individual(s) who performed the sampling or measurements.
      - (3) The date(s) analyses were performed.
      - (4) The individual(s) who performed the analyses.
      - (5) The analytical techniques or methods used.
      - (6) The results of such analyses.
      - (7) The data sheets showing toxicity test results.
  - 4. Monitoring and Records [40 CFR 122.21(j)(4)]
    - (a) All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order. If a particular Minimum Level (ML) is not attainable in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure may be used instead.
  - 5. Monitoring and Records [40 CFR 122.21(j)(5)]
    - (a) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

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6. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory:
    - (a) Certified for such analyses by an appropriate governmental regulatory agency.
    - (b) Participated in 'Intercalibration Studies' for storm water pollutant analysis conducted by the SMC.<sup>5</sup>
    - (c) Which performs laboratory analyses consistent with the storm water monitoring guidelines as specified in, the *Stormwater Monitoring Coalition Laboratory Guidance Document*, 2nd Edition R. Gossett and K. Schiff (2007), and its revisions.
  
  7. For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (SIP) shall be used for all analyses, unless otherwise specified. The MLs from the SIP are incorporated into Attachment "G".
  
  8. The Monitoring Report shall specify the analytical method used, the Method Detection Level (MDL) and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with 1 of the following methods, as appropriate:
    - (a) An actual numerical value for sample results greater than or equal to the ML.
    - (b) "Not-detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.
    - (c) "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
  
  9. For priority toxic pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must

<sup>5</sup> The 'Intercalibration Studies' are conducted periodically by the SMC to establish a consensus based approach for achieving minimal levels of comparability among different testing laboratories for storm water samples to minimize analytical procedure bias. Stormwater Monitoring Coalition Laboratory Document, Technical Report 420 (2004) and subsequent revisions and augmentations.

May 7, 2009

submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to raising the ML for any constituent.

- 10. Monitoring Reports [40 CFR 122.41(I)(4)(ii)]
  - (a) If the Principal Permittee monitors any pollutant more frequently than required by the Order using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Monitoring Reports.
- 11. Monitoring Reports [40 CFR 122.41(I)(4)(iii)]
  - (a) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
- 12. If no flow occurred during the reporting period, then the Monitoring Report shall, so state.
- 13. The Regional Water Board Executive Officer or the Regional Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:
  - (a) By petition of the Principal Permittee or by petition of interested parties after submittal of the Monitoring Report. Such petition shall be filed not later than 60 days after the Monitoring Report submittal date, or
  - (b) As deemed necessary by the Regional Water Board Executive Officer following notice to the Principal Permittee.
- 14. The Principal Permittee must provide a copy of the Standard Operation Procedures (SOPs) for the Monitoring Program No. CI 7388 to the Regional Water Board upon request. The SOP will consist of five elements: Title page, Table of Contents, Procedures, Quality Assurance/ Quality Control (QA/ QC), and References. Briefly describe the purpose of the work or process, including any regulatory information or standards that are appropriate to the SOP process, and the scope to indicate what is covered. Denote what sequential procedures should be followed, divided into significant sections; e.g., possible interferences, equipment needed personnel qualifications, and safety considerations. Describe QA/ QC activities, and list any cited or significant references.

**L. Total Maximum Daily Load (TMDL) Monitoring**

- 1. TMDL monitoring is to determine compliance with the TMDL Waste Load Allocations (WLAs) and numeric targets for the MS4 Permittees that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA.

May 7, 2009

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- 2. TMDL monitoring is in accordance with approved TMDLs as discussed in part 6 of the permit. TMDL monitoring for specific watersheds is in accordance with the agreed upon monitoring plans submitted by stakeholders, including MS4 Permittees.

**M. Beach Water Quality Monitoring**

If funding from state and federal sources is not available for beach water quality monitoring during the winter season (October 15 – April 15) the Principal Permittee within thirty days of notice shall conduct beach water quality sampling and analysis at a maximum of ten sites in accordance with the procedures and locations used in AB 411 monitoring and listed below:

- 1. Rincon Beach – 25 yards south of the creek mouth\*
- 2. Oil Piers Beach – south of the drain, bottom of the wood staircase
- 3. Faria County Park – south of the drain at the north end of the park\*
- 4. Solimar Beach – south (end of east gate access road)\*
- 5. Emma Wood State Beach – 50 yards south of first drain
- 6. Oxnard Beach – at J Street drain
- 7. Surfer’s Point at Seaside – end of the access path via wooden gate
- 8. Promenade Park – Figueroa Street
- 9. Surfer’s Knoll – beach adjacent to the parking lot\*
- 10. San Buenaventura Beach – south of drain at San Jon Road

\* Not associated with MS4 discharges.

Ordered by:

Tracy J. Egoscue  
Executive Officer

Date: May 7, 2009

May 7, 2009

**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

CONSTITUENTS	MLs
<b>CONVENTIONAL POLLUTANTS</b>	<b>mg/L</b>
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 - 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
<b>BACTERIA (single sample limits)</b>	<b>MPN/100ml</b>
Total coliform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
<b>GENERAL</b>	<b>mg/L</b>
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L

<sup>1</sup> For priority pollutants, MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified. Method Detection Levels (MDLs) must be lower than or equal to the ML value, unless otherwise approved by the Regional Board.

## ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>METALS (Dissolved &amp; Total)</b>	<b>µg/L</b>
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Copper	0.5
Hex. Chromium	5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1
<b>SEMIVOLATILE ORGANIC COMPOUNDS</b>	<b>µg/L</b>
<b>ACIDS</b>	<b>µg/L</b>
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
<b>BASE/NEUTRAL</b>	<b>µg/L</b>
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10

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## ATTACHMENT G

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

BASE/NEUTRAL	µg/L
Benzo(k)fluoranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexyl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	10
2,4-Dinitrotoluene	5
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1
Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1

**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>CHLORINATED PESTICIDES</b>	<b>µg/L</b>
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
<b>POLYCHLORINATED BIPHENYLS</b>	<b>µg/L</b>
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1254	0.5
Aroclor-1260	0.5
<b>ORGANOPHOSPHATE PESTICIDES</b>	<b>µg/L</b>
Atrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
<b>HERBICIDES</b>	<b>µg/L</b>
2,4-D	0.02
Glyphosate	5
2,4,5-TP-SILVEX	0.2

**ATTACHMENT I**  
Storm Water Monitoring Program's Major Outfall Stations

PERMITTEE	STATION ID	LATITUDE	LONGITUDE
City of Camarillo	Camarillo-1	34°13'10.00"N	119° 3'58.06"W
City of Fillmore	Fillmore-1	34°24'16.51"N	118°55'50.47"W
Unincorporated Ventura County	VCMeiners Oaks-1	34°26'43.98"N	119°17'25.18"W
City of Moorpark	Moorpark-1	34°16'44.29"N	118°54'19.40"W
City of Ojai	Ojai-1	34°26'41.25"N	119°14'28.43"W
City of Oxnard	Oxnard-1	34°14'17.38"N	119°11'23.08"W
City of Port Hueneme	Hueneme-1	34° 8'29.30"N	119°11'21.09"W
City of Santa Paula	Santa Paula-1	34°20'54.99"N	119° 3'19.82"W
City of Simi Valley	Simi Valley-1	34°16'18.59"N	118°47'1.51"W
City of Thousand Oaks	Thousand Oaks-1	34°12'49.16"N	118°55'16.24"W
City of Ventura	Ventura-1	34°14'35.86"N	119°11'40.86"W

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STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
REPORTING PROGRAM - No. CI 7388  
FOR  
ORDER 09-xxxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.

May 7, 2009



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### Reporting Program Requirements

The Principal Permittee shall submit by December 15<sup>th</sup> of each year, beginning the year of 2007, an Annual Report to the Regional Water Board Executive Officer in the form of one hard copy and three compact disks (CD) (or equivalent electronic format).

1. The Annual Report shall document the status of the General Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1-Monitoring Report; and
  - (b) The requirements described under Part 2- Program Report.
2. Plans shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a compact disk (CD), submit 1 hard copy and 3 CD copies.
3. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.
4. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.

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### PART 1 - MONITORING REPORT

#### A. The following shall be included in the Annual Report:

1. Mass Emissions
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the mass emission station annual monitoring results highlighting exceedences (POC) with corresponding sampling.
2. Major Outfalls
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the major outfalls station annual monitoring results highlighting exceedences (POC) with corresponding sampling dates.
  - (d) Outfall(s) name and ID number (if applicable).

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- 3. Aquatic Toxicity Monitoring
  - (a) An analysis of the mass emission station and major outfall station samples for aquatic toxicity.
  - (b) A report on the development, implementation, and results for each TRE Corrective Action Plan in the Annual Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  - (c) Report on the development, implementation, and results for each TRE Corrective Action Plan, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  - (d) All constituents (POCs) that caused toxicity or exceeded any applicable water quality objectives at the associated mass emission and/ or major outfall station the previous year shall be listed.
  - (e) A summary of the mass emission station and major outfall station annual monitoring results with corresponding sampling dates and Tox output.
- 4. TMDL Compliance Monitoring
  - (a) A summary of the annual monitoring results for each TMDL.
    - (1) Corresponding sampling dates and Tox output (if applicable).
- 5. Bioassessment
  - (a) Assess the effects of MS4 discharges on the biological integrity of the waterbody.
  - (b) Permittees shall conduct bioassessment, [using Southern California Regional Bioassessment protocol], at one fixed site in each of the watersheds below on an annual basis:
    - (1) Ventura River
    - (2) Santa Clara River
    - (3) Calleguas Creek

**B. The following shall be submitted to the Regional Water Board Executive Officer:**

- 1. Aquatic Toxicity Monitoring
  - (a) A TRE Corrective Action Plan within 30 days after the source of toxicity and appropriate BMPs are identified.
- 2. Pyrethroid Insecticides Study
  - (a) Pyrethroid insecticides study final report, no later than 8 months after completion of the study.
- 3. Hydromodification Control Study
  - (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
- 4. Non-Compliance

- (a) When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted:
  - (1) Statement of situation.
  - (2) Explanation of circumstance(s) with documentation.
  - (3) Statement of corrective action for the future.
- 5. Low Impact Development
  - (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
- 6. Volunteer Monitoring Program
  - (a) Results as obtained by volunteer monitoring programs in the Ventura watersheds including, but not limited to, the following:
    - (1) Ventura River - (Ventura Stream Team)
    - (2) Santa Clara River - (Santa Clara River Stream Team)
    - (3) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program)
    - (4) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program)

**C. Submitted electronically to the Regional Water Board, the following shall be:**

- 1. Mass Emissions
  - (a) Monitoring results no later than 45 days from sample collection date.
- 2. Major Outfalls
  - (a) Monitoring results no later than 45 days from sample collection date.
- 3. Aquatic Toxicity Monitoring
  - (a) Monitoring results no later than 45 days from sample collection date.
- 3. TMDL Compliance Monitoring
  - (a) Monitoring results no later than 45 days from sample collection date.
- 4. Non-Compliance
  - (a) When the Order 's monitoring requirements can not be performed due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted to the Regional Water Board Executive Officer:
    - (1) Statement of situation.
    - (2) Explanation of circumstance(s) with documentation.
    - (3) Statement of corrective action for the future.

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5. Data transmitted shall be in the SMCs Standardized Data Transfer Formats (SDTFs) and all updates are to be adhered to.<sup>1</sup>
- (a) Regional Water Board's Storm Water E-mail Address:  
[MS4stormwaterrb4@waterboards.ca.gov](mailto:MS4stormwaterrb4@waterboards.ca.gov)
6. Beach Water Monitoring
- (a) Assess bacteriological levels at various beaches in Ventura County, ensuring compliance with beach water quality standards.
- (b) Reports of beach monitoring shall be submitted to the Regional Board electronically within one business day of completion of analysis..

## PART 2 - PROGRAM REPORT

On an annual basis the Permittees shall complete an Annual Monitoring Program Report that responds adequately to the evaluative questions below which correspond to the Order.

### DISCHARGE PROHIBITIONS

- (a) Have you effectively prohibited all non-storm discharges into the MS4 and watercourses?
- (b) If there are any exceptions in the municipal code, list the exceptions to the municipal code. In other words, which non-storm water discharges does your municipality allow? Under what conditions are they allowed (with BMPs)? List which BMPs are required prior to discharge.
- (c) Do you have a procedure to assure that any project within your jurisdiction which may undertake ground water dewatering obtain a permit from the Regional Water Board?
- (d) How many projects are permitted to dewater in your jurisdiction?
- (e) How many are permanent dewatering to continue after construction is completed?
- (f) Do you have a permitting/ permission system for the discharge of dechlorinated/ debrominated swimming pool discharges? Explain it.
- (g) If yes, how many swimming pools are drained with the agency's permit/ permission?
- (h) How do you ensure that discharge limits for chlorine, bromine, etc are not exceeded?
- (i) Do you allow the discharge of "salt water" swimming pool discharges? If yes
- (j) Do you have a permitting/ permission system for the discharge of "salt water" swimming pool discharges? Explain it.

<sup>1</sup> The SMC developed a SDTFs for use by member agencies for electronic recording and transfer of storm water monitoring data. Southern California Coastal Water Research Project, Technical Report 421 (August, 2004).

**RECEIVING WATER LIMITATIONS**

1. At any time, has the discharge from the MS4 caused or contributed to the violation of water quality objectives or water quality standards?
2. At any time, has the discharge from the MS4 for which a Permittee is at least partially responsible, caused or contributed to a condition of nuisance?
3. At any time, has the discharge of pollutant(s) from the MS4 exceeded the MS4 Waste Load Allocation(s) for Wet Weather Discharges?
4. For pollutant(s) which continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, what has the Permittee implemented to eliminate future water quality impairments?

**PART 3 - STORM WATER QUALITY MANAGEMENT PROGRAM  
IMPLEMENTATION**

**A. General Requirements**

**B. Legal Authority**

1. Does your municipal agency possess all the necessary legal authority to implement and enforce each requirement of this Order?
2. If the answer is no, explain why not.
3. By what date certain will the municipal agency have all the necessary legal authority?
4. Attach a copy of the new or updated statement by its legal counsel that the Permittee has obtained all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.
5. After submitting the Statement from your legal counsel, was your city's municipal code (or other legal authority) changed (Any section that applies to or affects storm water permitting or requirements)? On what date(s) was it changed? Provide the changes.

**C. Fiscal Resources**

1. Provide a detailed Annual Budget Summary of the Permittee's allocation of funds expended to implement the activities required to comply with the conditions of this Order.
2. Indicate the source(s) of funding (whether general funds; and/ or Benefit Assessment Program funds; plan review fees; permit fees; industrial/ commercial user fee; revenue bonds; grants; or other funding mechanism. Each Permittee's Annual Budget Summary shall separately include:
3. Annual Budget Summary of expenditures applied to the storm water management program and also identify the storm water budget for the following year, using

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estimated percentages and written explanations where necessary, for the specific categories noted below:

(a) Program Overall Management Activities;

(1) Administrative costs

(b) Program Required Activities Implementation;

Provide an estimated percent breakdown of expenditures for the categories below:

(1) Illicit connection/ illicit discharge

(2) Development planning

(3) Development construction

(4) Construction inspection activities

(5) Industrial/ Commercial inspection activities

(6) Public Agency Activities

(7) Maintenance of Structural BMPs and Treatment Control BMPs

(A) Municipal Street Sweeping for Commercial/ Industrial landuse only;

(B) Catch basin clean-outs (including dumping fees);

(C) Storm drain clean-outs (including dumping fees); and

(D) Other costs (describe).

(8) Public Information and Participation;

(9) Monitoring Program; and

(10) Miscellaneous Expenditures (describe).

**D. Designation and Responsibilities of the Principal Permittee**

The Principal Permittee shall submit within the Annual Program Report information on the implementation of the following:

1. Coordination and facilitation of activities to comply with the requirements of this Order;
2. Evaluation, assessment, and summary of the results of the monitoring program and the effectiveness of the implementation of BMPs and any recommended change.

**E. Responsibilities of the Permittees**

Each Permittee shall include within the Annual Program Report information on the implementation of the following:

1. A statement under penalty of perjury that the Permittee is or is not in compliance with the requirements of this Order and any subsequent modifications thereto.
2. A summary of how coordination occurs among its internal departments and agencies to ensure the implementation of the requirements of this Order.
3. Description of the intra-agency coordination by Agency departments (e.g. Community Development (Planning), Public Works, Sanitation, Engineering, Fire Department, Building and Safety, Code Enforcement, Public Health, Water and/ or Power Department, etc.) to ensure the successful implementation of the provisions of this Order.

- 4. In addition to the Budget Summary, identify any supplemental dedicated budgets for the storm water categories listed.
- 5. Identify the staff which participated at all committee or subcommittee meetings and when.

**PART 4 - SPECIAL PROVISIONS**

**A. General Requirements**

- 1. Best Management Practice Substitution
  - (a) Did the Regional Water Board Executive Officer approve any site-specific BMP substitution for your agency?
  - (b) If so, describe implementation of that/ those BMP(s).

**B. Watershed Initiative Participation**

- 1. Describe your participation (Principal Permittee) and present data results in the following:
  - (a) Southern California Stormwater Monitoring Coalitions' (SMC) Regional Monitoring program for the Southern California Regional Bioassessment.

**C. Public Information and Participation Program (PIPP)**

- 1. Describe the Permittee successes in:
  - Measurably increasing the knowledge of the target audiences regarding the MS4, the impacts of storm water pollution on receiving waters and potential solutions to mitigate the problems caused;
  - Measurably changing the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions;
  - Involving and engaging communities in Ventura County to participate in mitigating the impacts of storm water pollution.
- 2. Residential Program
  - (a) Did the Permittee label each storm drain inlet that they own with a legible "no dumping" message.
  - (b) How many inlets were labeled this year?
  - (c) How many inlets were labeled cumulatively?
  - (d) Did the Permittee install signs with prohibitive language discouraging illegal dumping at designated public access points to creeks, other relevant water bodies, and channels?
  - (e) How many?

Public Reporting

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- (a) Identify the staff person(s) who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/ dumping, faded or lack of catch basin stencils, and general storm water management information.
- (b) Did the Permittee update this information by July 1 of this year?
- (c) The Principal Permittee shall compile a list of the general public reporting contacts from all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request.

#### Outreach and Education

- (1) Provide documentation to show that the Permittees implemented the following activities:
- Storm Water pollution prevention advertising campaign.
  - Storm Water pollution prevention public service announcements.
  - Distribution of storm water pollution prevention public education materials to auto parts stores, home improvement centers and pet shops/ feed stores in regards to information on the proper storage and disposal of household waste materials, construction waste materials and vehicle waste fluids, the proper use of fertilizers and pesticides and the proper disposal of animal wastes.
  - Organization of watershed Citizen Advisory Groups/ Committees to develop/ implement effective methods to educate the public about storm water pollution.
  - Organization of events for residents and population subgroups.
  - Maintenance of the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), including educational materials.
- (2) Provide documentation to show that the Principal Permittee implemented the strategy to educate ethnic communities through culturally acceptable and effective methods.
- (3) Did each Permittee implement outreach efforts to residents and school children related to the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices?
- (4) Did the Permittees make demonstrable positive effects on the general public related to storm water quality?
- (5) On 4 above, explain how so.
- (6) Did the Principal Permittee, in cooperation with the Permittees, provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution?
- (8) Provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee and changes to contact information no later than 30 days after a change occurs.

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- (9) Provide the assessment of the strategy to measure the effectiveness of in-school educational programs.

Businesses Program

- (a) Corporate Outreach
- (b) Provide a progress update on the Corporate Outreach program.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in storm water runoff. Except as specified in other sections of this Order, pollutant reduction and control measures may be used alone or in combination, and may include Structural Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollution generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program Report shall include requirements to: (1) track, (2) inspect, and (3) ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water runoff.

1. Inventory of Critical Sources

- (a) Describe how the critical sources are inventoried. (whether via a watershed-based inventory or database or GIS. Provide a sample.
- (b) Each Permittee shall include the following minimum fields of information for each critical sources industrial and commercial facility.
  - (1) Name of facility and owner/ operator.
  - (2) Address of facility.
  - (3) Coverage under the ISWGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
  - (4) A narrative description including SIC (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
- (c) Did each Permittee update its inventory of critical sources annually?
- (d) Critical Source Inventory Database

Did you (individually or jointly) update the Database for Critical Sources Inventory?	Yes <input type="checkbox"/>
	No <input type="checkbox"/>

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<p>Comments/ Explanation/ Conclusion:</p>
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2. Inspection Program

(a) The Permittee shall verify the following for each inspection:

- (1) The facility has a current Waste Discharge Identification (WDID) number or a current No Exposure Certification for discharging storm water associated with industrial activity?
- (2) A Storm Water Pollution Prevention Plan available on-site?
- (3) The facility is effectively implementing BMPs in compliance with County and municipal ordinances including the source control BMPs outlined in Part 4.D. of this Order
- (4) The facility needs to implement additional treatment control BMPs where the storm water from the MS4 discharges to a CWA §303(d) listed water body?

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R E V I S E D T E N T A T I V E

Provide the reporting data as suggested in the following table.

Category	Initial Number of Facilities at the start of cycle proposed for inspection by categories (after the initial year, the updated number based on the new data)	Number of facilities inspected in the current reporting year	% Completed at the time of this report for present cycle (from the initial value, and from the updated value after first cycle)	Total number since permit adoption
Landfills				
TSDF				
Comments/ Explanation/ Conclusion:				

- Did each Permittee perform an initial inspection at all facilities in the categories listed no later than (two years after the adoption of the Order)?
- All facilities determined as having exposure of industrial activities to storm water are subject to a second compliance inspection. Were all inspections completed?
- Was there a minimum interval of six months between the first and the second compliance inspection per site as required?

R E V I S E D T E N T A T I V E

BMPs Implementation

Provide the reporting data as suggested in the following table.

Category	Number of facilities inspected by category this reporting year	Number of facilities identified as adequately implementing BMPs as specified in this reporting year	Percent adequately implementing out of total in this reporting year	Number of facilities required to implement or upgrade in this reporting year	Number of facilities inspected by category in this reporting cycle	Number of facilities identified as adequately implementing BMPs as specified in this reporting cycle	Percent adequately implementing in this reporting cycle	Number of facilities required to implement or upgrade in this reporting cycle	Total Number during this permit adequately implementing	Total Number during this permit required to implement or upgrade
Landfills										
etc...										

Comments/ Explanation/ Conclusion:

R E V I S E D T E N T A T I V E

Enforcement Activities

Provide the reporting data as suggested in the following tables.

Enforcement Actions by categories (e.g. Warning letter, NOV, referral to D.A., etc.)	Number of facilities issued enforcement actions in the current reporting year	Number of facilities (re)inspected due to enforcement actions in current reporting year	Number of facilities (re)inspected to enforcement actions in current reporting cycle	Number of facilities brought into compliance in the current reporting year	Number of facilities brought into compliance in current reporting cycle	Total number of enforcement actions since permit adoption (by category)
NOVs						
Etc...						

Facilities by category	Number of Warning letters	Number of NOV's	Number of Referrals	Number of Other(Explain)
Landfill				
Etc...				
Comments/ Explanation/ Conclusion:				



Nurseries and nursery centers

- (a) At nurseries subject to the agricultural waiver issued by the Regional Water Board, provide a spreadsheet with the following information:
  - How many operators have enrolled under the waiver?
  - What is their identification number?
  - How many nonfilers did you notify to apply under the agricultural waiver?
- (b) Did you submit electronically semiannually to the Regional Water Board a list with the names of facilities notified to apply for the waiver?

Ensuring Compliance of Critical Sources

- (a) On how many sites did you determine that a BMP is infeasible, and require implementation of other BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges?
- (b) For critical sources that discharge to ESAs or that are tributary to CWA § 303(d) impaired water bodies, does the Permittee require operators to implement additional controls to reduce pollutants in storm water runoff that are causing or contributing to exceedences of Water Quality Standards?

Investigation of Complaints Regarding Facilities – Transmitted by the RB Staff

- (a) How many investigations were conducted as a result of USEPA or Regional Water Board staff referrals of violators to the Permittee?
- (b) Was the investigation initiated within one business day of being contacted?
- (c) What were the results of each investigation?

**E. Planning and Land Development Program**

1. Low Impact Development

- (a) Did all new development and redevelopment projects integrate Low Impact Development (LID) principles into project design?
- (b) How many did?
- (c) How many did not?
- (d) If not, Why not?

Numeric Hydromodification Mitigation Criteria

1. Hydrologic (Flow/ Volume/ Duration) Control

- (a) Did the Permittees require all new developments and redevelopment projects to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems?
- (b) How many did?
- (c) How many did not?
- (d) Why not?

2. Post Construction Storm Water BMP Program

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- (a) For each project, did each Permittee require that during the construction of a single-family hillside home, actions be taken to:
  - (1) Conserve natural areas?
  - (2) Protect slopes and channels?
  - (3) Provide storm drain system stenciling and signage?
  - (4) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability? and
  - (5) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability?
- (b) Did each Permittee require that all development projects equal to 1 acre or greater be subject to conditioning and approval of post-construction BMPs as approved by the Regional Water Board in Board Resolution No. R 00-02?
- (c) Did each Permittee require that the following development projects be subject to conditioning and approval of post-construction BMPs?
  - (1) Retail gasoline outlets 5,000 square feet or more of surface area; How many sites?
  - (2) Restaurants (SIC 5812) 5,000 square feet or more of surface area; How many sites?
  - (3) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces; How many sites?
  - (4) Automotive service facilities (SIC 5013,5014,5541,7532-7534 and 7536-7539) [5,000 square feet or more of surface area]; How many sites? and
  - (5) Redevelopment projects in subject categories that meet Redevelopment thresholds. How many sites?
- (d) Did each Permittee require that post construction BMPs be subject to conditioning and approval for development projects located in or directly adjacent to or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
  - (1) Discharge storm water and urban runoff that is likely to impact a sensitive biological species or habitat.
  - (2) Create 2,500 square feet or more of impervious surface area.

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3. Numeric Water Quality Design Criteria

**Projects disturbing land areas less than 50 acres**

- (a) Ho many did the Permittee require that post-construction Treatment Control BMPs incorporate, at a minimum, a volumetric and/ or hydrologic (flow based) treatment control design standard, as identified below to mitigate (infiltrate, filter or treat) storm water runoff as specified below?
- (b) How many sites were exempted from the requirement?
- (c) Why were they exempted?

**Projects disturbing land area of 50 acres or greater**

For sites 50 acres or greater how many did the Permittee require that post-construction Treatment Control BMPs be,

- (a) Designed using an appropriate public domain hydrodynamic model (such as Storm Water Management Model (SWMM) 5 or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF); and incorporate
- (b) Rainfall intensity based on hourly rainfall records;
- (c) An adjustment factor for within hour rainfall variability; and
- (d) Hydraulics of BMP Performance.
- (e) How many projects did this apply to?
- (f) Were there any sites that were exempted from the requirement?
- (g) How many sites were exempted?
- (h) Why were they exempted?

## 4. Applicability of Numerical Criteria

Did the Permittee require all projects equal to 1 acre or greater and the following additional projects to design and implement post-construction treatment controls to mitigate storm water pollution for the following?:

- (a) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area].
- (b) Retail gasoline outlets [5,000 square feet or more of impervious surface area and with projected Average Daily Traffic (ADT) of 100 or more vehicles].  
Subsurface Treatment Control BMPs which may endanger public safety (i.e., create an explosive environment) are considered not appropriate.
- (c) Restaurants (SIC 5812) [5,000 square feet or more of surface area].
- (d) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces.
- (e) Projects located in, adjacent to or discharging directly to an ESA that meet threshold conditions identified above in 2(d).
- (f) Redevelopment projects in subject categories that meet Redevelopment thresholds.
- (g) How many projects did this apply to?
- (h) Were there any sites that were exempted from the requirement?
- (i) How many sites were exempted?
- (j) Why were they exempted?

## 5. Site Specific Mitigation

- (a) List how many sites did each Permittee require the implementation of a site-specific plan to mitigate post-development storm water for new development and redevelopment not identified in Section XX but which may potentially have

adverse impacts on post-development storm water quality, with one or more of the following project characteristics:

- (1) Vehicle or equipment fueling areas. How many?
- (2) Vehicle or equipment maintenance areas, including washing
- (3) and repair. How many?
- (4) Commercial or industrial waste handling or storage. How many?
- (5) Outdoor handling or storage of hazardous materials. How many?
- (6) Outdoor manufacturing areas. How many?
- (7) Outdoor food handling or processing. How many?
- (8) Outdoor animal care, confinement, or slaughter. How many?
- (9) Outdoor horticulture activities. How many?

- (b) Were there any sites that were exempted from the requirement?
- (c) How many sites were exempted?
- (d) Why were they exempted?

6. Redevelopment Projects

- (a) Did the Permittees apply the post construction BMP requirements, or site specific requirements including post-construction storm water mitigation to all projects that undergo significant Redevelopment in their respective categories?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?

7. Maintenance Agreement and Transfer

- (a) How many developments subject to post construction BMP requirements and site specific plan requirements actually provided verification of maintenance provisions for Structural and Treatment Control BMPs, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits?
- (b) How many of each verification were received?
- (c) The developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred?
- (d) A signed statement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance and that it meets all local agency design standards?
- (e) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (f) Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning maintenance responsibilities to the Home Owners Association for maintenance of the Structural and Treatment Control BMPs?

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- (g) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (h) Another type of legally enforceable agreement that assigns responsibility for the maintenance of post-construction Structural or Treatment Control BMPs?
8. Development Planning Coordination and Enforcement
- (a) Did you inspect each new development and redevelopment project for post construction controls prior to approving and signing off for occupancy?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
9. Regional Storm Water Mitigation Program
- (a) Have you applied to the Regional Water Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements?
10. Inspection and Tracking System for Post Construction Treatment BMPs
- (a) Did you implement the required Geographic Information System (GIS) or other electronic system for tracking projects conditioned for post construction treatment control BMPs?
- (b) Does include the following information? (Answer each separately)
- (1) Municipal Project ID?
- (2) State WDID No.?
- (3) Project Acreage?
- (4) BMP Type and Description?
- (5) BMP Location (GPS coordinates)?
- (6) Date of Acceptance?
- (7) Date of O&M Certification?
- (8) Maintenance Records
- (9) Inspection Date and Summary?
- (10) Corrective Action?
- (11) Replacement or Repair Dates?
- (c) Did you inspect all facilities to verify proper maintenance and operation of Treatment BMPs previously approved?
- (d) Did you accomplish the following?
- (e) BMP acceptance inspection to ensure proper installation?
- (1) Inspection once every two years of high priority post-construction BMPs to ensure treatment effectiveness, hydraulic function, and vector risk minimization?

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11. Developer Technical Guidance and Information

- (a) List dates as to when the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures was last updated to include the following:
- (1) Hydrologic (Peak Flow) Control criteria for volume control described herein and the interim criteria based on hydrograph matching?
  - (2) Expected BMP pollutant removal performance including consistent effluent quality and removal efficiency ranges (International BMP Database, technical reports and the scientific literature?
  - (3) Improved Correlation of BMPs with storm water POC?
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs?
  - (5) BMP Maintenance and Cost considerations?
  - (6) Criteria to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits?

12. Project Review and Inter Department Coordination

- (a) Did you ensure that a detailed BMP review was performed including BMP sizing calculations, BMP pollutant removal appropriateness, for each plan submitted with a signed certification?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
- (f) Did you ensure that a clear structure for communication and delineated authority are established between and among municipal departments which have jurisdiction over project review, plan approval, project construction, and site maintenance?
- (g) Explain how?

13. California Environmental Quality Act (CEQA) Document Update

Did you incorporate into the CEQA process procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents? (Answer each below separately.)

- (a) Potential impact of project construction on storm water runoff?
- (b) Potential impact of project post-construction activity on Storm Water runoff?
- (c) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?
- (d) Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit?

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- (e) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies?
- (f) Potential for significant changes in the flow velocity or volume of Storm Water runoff that can cause environmental harm?
- (g) Potential for significant increases in erosion of the project site or surrounding areas?

15. General Plan Update

- (a) Was your General Plan amended, revised or updated to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended?  
(Answer each separately)
  - (1) Land Use?
  - (2) Housing?
  - (3) Conservation?
  - (4) Open Space?
- (b) Did you provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or the General Plan was noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq*?
- (c) When?

**F. Development Construction Program**

- 1. Did you implement a program to control runoff from construction activity at all construction sites within your jurisdiction to ensure that the following requirements are effectively implemented? (Answer each separately)
  - (a) For construction projects within or adjacent to an environmentally sensitive area (ESAs), did you prohibit grading between October 1 and April 15?
  - (b) For construction projects, which include grading on slopes greater than 5:1, that no grading shall occur between October 1 and April 15?
  - (c) All construction projects, which directly discharge into a sedimentation/ siltation impaired water body and is listed on the CWA §303 (d) list. No grading shall be occurring between October 1 and April 15?
  - (d) If grading operations were not completed before the rainy season began, was grading halted and erosion control measures put in place to minimize erosion until grading resumes after April 15?
- 2. Did you require construction site operators to seek separate coverage from the Regional Water Board wherever ground water dewatering may be necessary, is anticipated, or likely?
  - (a) Small Construction Sites

- (1) For each construction site did you require and inspect to ensure that at each construction site, the minimum set of BMPs were implemented to minimize erosion and sediment loss, and prevent pollution from construction waste?
3. For each construction site 1 acre and greater:
- Did you review and approve a Local Storm Water Pollution Prevention Plan (Local SWPPP), for approval prior to issuance of a grading permit for construction projects?
  - Did you inspect all construction sites for storm water quality requirements during routine inspections a minimum of once during the wet season?
  - Was the Local SWPPP reviewed for compliance with local codes, ordinances, and permits?
  - For inspected sites that have not adequately implemented their Local SWPPP, a follow-up inspection to ensure compliance shall take place within 2 weeks?
  - If compliance had not been attained, did the Permittee take additional actions to achieve compliance (as specified in municipal codes)?
  - How many?
  - For small construction sites one acre and greater (or part of a larger plan of development or sale), did you require, prior to issuing any grading permit, demolition permit, building permit, or construction permit [or any other municipal authorization to move soil and/ or construct or destruct that involves soil disturbance], for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for coverage under the CASGP and a certification that a SWPPP has been prepared by the project developer?
  - Does your agency accept a Local SWPPP as a substitute for the State SWPPP?
  - Is the Local SWPPP at least as inclusive in controls and BMPs as the State SWPPP?
  - Do you require proof of an NOI and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going?
  - What system do you use to track grading permits issued by your agency?
4. Linear Construction
- Do require for any linear construction project or projects (cumulatively) that will cause one acre or more of soil disturbance but not more than 5 acres that coverage be obtained under the Small Linear Underground/ Overhead Construction Projects General Permit?
  - Do you require proof of a Waste Discharger Identification Number (WDID) for filing a Notice of Intent (NOI) for coverage under the and a certification that a SWPPP has been prepared by the project developer, prior to issuing a grading permit, demolition permit building permit, or construction permit (or other authorization to move soil and/ or construct or destruct that involves soil disturbance)?

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5. CASGP Violation Referrals
  - (a) Did you make any referral of violations of the new development and redevelopment post construction requirements and municipal storm water ordinances to the Regional Water Board?
  - (b) Did you make any referral for suspected violations of the CASGP or Linear Permit coverage requirements

#### G. Public Agency Activities Program

1. Sewage System Maintenance, Overflow, and Spill Prevention
  - (a) Did you implement a response plan for overflows of the sanitary sewer system within their respective jurisdiction that clearly identifies agencies responsible and telephone numbers and email for any contact?
  - (b) How many overflows did you have?
  - (c) How many did you respond to?
  - (d) Do you own and/ or operate a sanitary sewer system?
  - (e) If so, did you also Identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4?
  - (f) Did you implement procedures and maintenance schedules to prevent sewage spills or leaks from sewage facilities from entering the MS4?
  - (g) If you are a Permittee with septic systems in your jurisdiction, how many do you have?
  - (h) Did you implement the following for flows of septic leachate to surface waters within their respective jurisdiction, which shall consist at a minimum of the following:
    - (1) Investigation of any complaints received?
    - (2) Immediately respond to overflows for containment, upon notification?
    - (3) Notification to appropriate agencies and public health agencies when a septic system fails and flows to the MS4?
2. Public Construction Activities Management
  - (a) Did you comply with all the Development Planning Program requirements in at public construction projects?
  - (b) Did you comply with all the Development Construction Program requirements at Permittee owned or operated construction sites?
  - (c) Did you obtain coverage under the CSWGP for all construction activities for (non linear) capital improvement project(s), or contracts, that individually or cumulatively equals or surpass the 1 acre land disturbance threshold?
  - (d) Did you obtain coverage under the Statewide General Permit for Storm water Discharges Associated with Construction Activity from Small Linear Underground/ Overhead Projects (Small LUP General Permit) for Small Linear

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Underground/ Overhead Projects disturbing at least 1 acre, but less than 5 acres (including trenching and staging areas)?

3. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management.

(a) Did you implement the required BMPs for each maintenance yard and activity specified in the tables Permittee shall implement the following BMPs at all Permittee owned, leased facilities including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the tables below. Answer each separately.

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(b) Are all of your existing facilities that are not plumbed to the sanitary sewer with vehicle and equipment washing areas:

- (1) Self-contained? How many?
- (2) Equipped with a clarifier? How many?
- (3) Equipped with an alternative pre-treatment device? How many?
- (4) To be plumbed to the sanitary sewer? How many? When?
  - (A) Are all new facilities, or during redevelopment of existing facilities (including fire stations), all vehicle and equipment wash areas to be plumbed to the sanitary sewer and be equipped with a pre-treatment device in accordance with requirements of the sewer agency? If not state why.

4. Landscape and Recreational Facilities Management

Control Program for Registered Pesticides

- (a) Did you adopt and implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and the use of integrated pest management (IPM) techniques in your operations and on municipal property?
- (b) What was your previous year's pesticide use? Answer in gallons or pounds for each type used.
- (c) Using estimated projections, what is your expected use this coming fiscal year? Answer in gallons or pounds for each type used.
- (d) Do you have commitments to reduce or phase-out, and ultimately eliminate use of pesticides that cause impairment of surface waters? State for each, by when.
- (e) Describe your Integrated Pesticide Management (IPM) program.
- (f) Attach the program elements.
- (g) Did you comply with the following requirements?:
  - (1) Use a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers?
  - (2) Ensure no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?
  - (3) Ensure that no banned or unregistered pesticides are stored or applied?
  - (4) Ensure that all staff applying pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator?
  - (5) Implement procedures to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs?
  - (6) Store fertilizers and pesticides indoors or under cover on paved surfaces or use secondary containment?
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills?
    - (B) Regularly inspect storage areas to ensure no environmental harm?

5. Storm Drain Operation and Management

Catch Basin Cleaning

- (a) How many catch basins did you designate as one of the following:
  - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash and/ or debris?
  - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash and/ or debris?
  - Priority C: Catch basins that are designated as generating low volumes of trash and/ or debris?
- (b) Did you clean all catch basins according to the following schedule?:
  - Priority A: A minimum of three times during the wet season and once during the dry season every year? How many?
  - Priority B: A minimum of once during the wet season and once during the dry season every year? How many?
  - Priority C: A minimum of once per year? How many?
- (c) Did you ensure that any catch basin that is at least 25% full of trash and/ or debris was cleaned out? How many?

For each type of catch basin (A, B, or C) state how much trash and debris was collected and state the units (wet tons, dry pounds, etc...)

- (1) Did you require for any special event that they arrange for temporary screens to be placed on catch basins or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain event? How many events did this apply to?
- (2) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Trash Controls

- (a) Did you install trash receptacles at transit stops as required?
- (b) How many?
- (c) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (d) Did you install trash excluders, or similar devices upon catch basins to prevent the discharge of trash to the storm drain system?
- (e) How many?
- (f) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Catch Basin Labels

- (a) Did you inspect the legibility of the catch basin label by all inlets?
- (b) How many?
- (c) Were catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within 180 days of inspection?
- (d) How many were recorded?
- (e) How many were relabeled?

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Storm Drain Maintenance

- (a) Did you inspect all Permittee-owned open channels and other drainage structures for debris and identify and prioritize problem areas of illicit discharge for regular inspection?
  - (b) Do your maintenance activities assure that appropriate storm water BMPs are being utilized to protect water quality?
  - (c) Did you remove trash and debris from open channel storm drains before the storm season?
  - (d) Did you minimize the discharge of contaminants during MS4 maintenance and clean outs?
  - (e) How?
  - (f) Did you properly dispose of material removed?
  - (g) How much trash and debris was collected? (wet tons, dry pounds, etc...)
  - (h) Have you obtained coverage under the CASGP for Long-term maintenance programs for flood control channels (such as vegetation removal) if one or more acres of soil are disturbed by grading, clearing or excavation activities for an individual project or as part of several projects part of the Permittee's long-term maintenance plan?
    - (i) How many projects?
    - (j) Which projects?
  - (k) Were all municipally owned treatment control BMPs as maintained as necessary to ensure optimal pollutant reduction?
  - (l) Was any pooled water shall be discharged to the sanitary sewer system?
  - (m) Was any of the pooled water treated to remove pollutants and discharged to the storm drain?
  - (n) Was every discharge monitored to ensure compliance?
6. Streets and Roads Maintenance
- (a) Did you conduct street sweeping of curbed streets in commercial areas to control trash and debris at least 2 times per month?
  - (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)
  - (c) Did you obtain coverage under the CASGP for long-term maintenance programs for roadside maintenance (such as: vegetation removal ) if 1 or more acres of soil are disturbed including: grading, clearing or excavation activities that disturb 1 or more acres of land either for an individual project or as part of a long-term maintenance plan?
7. Parking Facilities Management
- (a) Were all Permittee-owned parking lots exposed to storm water cleaned to be kept clear of debris and excessive oil buildup and cleaned no less that 2 times per month?
  - (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)

8. Public Industrial Activities Management
- Did you obtain separate coverage under the IASGP for any municipal activity subject to it for the discharge of storm water associated with industrial activity?
  - For how many facilities?
  - Which facilities?
9. Municipal Drinking Water System Discharges
- From your municipal drinking system did you maintain the system by flushing hydrants or other fixtures?
  - How many gallons total were discharged in the year?
  - If the discharges in an annual period were less than 100,000 gallons for the entire city did you implement a BMP or suite of BMPs to ensure that the chlorine level of the discharge is 0.1mg/L or less?
  - Did you sample or take a test every time to ensure dechlorination of the water to 0.1mg/L or less?
  - Did you ensure that the BMP or suite of BMPs were implemented so that no erosion is caused by the discharge of the potable water?
  - What BMPs were implemented?
10. Emergency Procedures
- Were there any emergencies that caused the Permittee to invoke this section? Explain the situation.
11. Municipal Employee (and municipal contractor) Training
- Did you train all of your employees in targeted positions regarding the requirements of the overall storm water management program?
  - Did you promote a clear understanding of the potential for activities to pollute storm water?
  - Did they learn to identify opportunities to require, implement, and maintain appropriate BMPs in their work?
  - Did they learn the appropriate ways of identification, investigation, termination, cleanup, and reporting of illicit connections and discharges?
  - Will they ensure that the requirements of this Order are met?
  - For those employees or contractors who use or have the potential to use pesticides (whether or not they normally apply pesticides as part of their work), which includes pesticides available over the counter, did you address the potential for pesticide-related surface water toxicity?
  - Proper use, handling, and disposal of pesticides?
  - Least toxic methods of pest prevention and control?
  - Encourage the use of IPM?
  - Require the quantifiable reduction of pesticide use?
  - Training - All Permittees shall train all targeted employees who are responsible for on an annual basis. In public agency?

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**H. Illicit Connections/ Illegal Discharge Program**

1. IC/ ID Program
  - (a) Did you implement an IC/ ID Program?
  - (b) The IC/ ID Program must be documented and available for review.
  - (c) Did you map all permitted connections to the storm drain system?
  - (d) Did you map all illicit connections and discharges on baseline maps?
  - (e) Did you transmit this information to the Principal Permittee?
  - (f) Did you use this mapping information to identify priority areas for further investigation?
  - (g) Did you eliminate all known illicit connections and illicit discharges?
  
2. Public Reporting
  - (a) Did you establish and maintain a phone hotline to receive illicit discharge/ connection complaints?
  - (b) Did you establish and maintain an internet homepage to receive illicit discharge/connection complaints?
  - (c) For all complaints received, did you document the location of the illicit discharge/ connection?
  - (d) Have you documented the actions undertaken in response to all illicit discharge/ connection complaints?
  
3. Illicit Connections
 

Screening for Illicit Connections

  - (a) Did you conduct field screening of your storm drain system for illicit connections?
  - (b) For those portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, how many miles did you field screen this year?
  - (c) Out of how many miles total?
  - (d) Did you conduct field screening for high priority areas identified during the mapping of illicit connections and discharges?
  - (e) How many miles were completed this year?
  - (f) Out of how many miles total?
  - (g) How much of the storm drain system that is 50 years or older in age did you field screen?
  - (h) Out of how many miles total?
  - (i) Did you submit to the Principal Permittee a GIS layer showing the location and length of underground pipes greater than 18" in diameter and channels within their jurisdiction?
  - (j) Did you also include the status of suspected, confirmed, and terminated illicit connections?
  - (k) Did you maintain a list containing all connections under investigation for possible illicit connection and their status?

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- (l) Did you attach that list to this Annual Report?

Response to Illicit Connections

- (a) Did you complete an investigation within 21 days of notice of a suspected illicit connection?
- (b) Did you determine the Source of each connection?
- (c) Did you determine the nature and volume of discharge through the connection?
- (d) Did you identify the responsible party of the connection?
- (e) How many suspected illicit connections were there this year?
- (f) Upon confirmation of the illicit nature of a storm drain connection did you terminate the connection within 180 days of completion of the investigation?
- (g) Did you document all illicit connection discoveries and your response to each?

4. Illicit Discharges

(a) Abatement and Cleanup

- (1) Did you respond and cleanup within 1 business day of discovery or of receiving a report of a suspected illicit discharge?
- (2) Did you keep records of all illicit discharge discoveries, reports of suspected illicit discharges and their response to the illicit discharges and suspected illicit discharges?
- (3) How many did you receive?
- (4) How many did you respond to?

(b) Investigation

- (1) Did you investigate illicit discharges during or immediately following containment and cleanup activities, and take enforcement action as appropriate?

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Proposed Additions and/or Edits are Highlighted in yellow. Deletions are in Strikethrough.

**1 Proposed Change**

Part 1, B.3 p.2

Stated: ~~natural watercourses~~

Correction: receiving waters

**2 Proposed Change:**

Part 1, D.3 p. 9

Stated: ~~watercourses~~

Correction: receiving waters

**3 Proposed Change**

Part 1- New LID Finding, B. 19

Stated: New insert

Correction: Staff finds there is a growing acceptance by stormwater professionals to integrate LID principles into stormwater management programs and MS4 permits. However, there remains significant controversy regarding the appropriate requirements and metrics for LID. At the heart of this controversy is a dispute regarding the feasibility and effectiveness of requiring a fixed volume of stormwater to be captured and retained onsite for infiltration, reuse, and evapotranspiration, as opposed to permitting a portion of the stormwater to be released off site after it is treated, when it is infeasible to retain the required stormwater on site due to site specific conditions.

Staff has reviewed extensive technical literature regarding this issue (e.g. R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County* (February 2007); E. Strecker, A. Poresky, D. Christsen, *Memorandum: Rainwater Harvesting and Reuse Scenarios and Cost Consideration*, (April, 2009). Staff finds that there is consensus in the technical community that site conditions and the type of development can limit the feasibility of retaining, infiltrating, and reusing stormwater at sites due to a variety of site specific conditions. Factors that affect the feasibility of a fixed volume capture standard include, but are not limited to: soils infiltration capacity, subsurface pollution, and locations in urban core centers.

Regarding the effects of capturing a fixed stormwater volume on site, Staff finds the fixed volume approach may be ignoring basic hydrological principles that relate the feasible infiltration volume to the infiltration capacity of local soils. Requirements to capture a fixed volume on site could disturb the natural water balance and lead to unintended engineering and hydrologic consequences. For example, a typical hydrological condition in Ventura County is one of successive storms during the winter which may exceed the stormwater capacity that can be retained on site. This may result in ponded water on site with attendant health and safety risks, saturation of the near surface soils, and reduction of water resources in Regional waterbodies. These effects could damage site structures, increase groundwater pollution by forcing enhanced pollution spreading, or destroy aquatic habitat. Staff finds these reasonably potential effects are not well evaluated scientifically. Finally, staff cannot find that a fixed retention volume versus a

standard that attempts to release surface flows at a predevelopment level would result in a greater reduction of stormwater pollution.

#### **4 Proposed Change**

Part 1- Discharge Prohibitions A.1(c)

Stated:

Correction: A.1.(c)(2) was moved to A.1(c), the word "emergency" was eliminated

#### **5 Proposed Change**

Part 1- Table 1

Correction: Requirements from firefighting activity flows have been eliminated.

#### **6 Proposed Change**

Part 1- A.1.

Stated: watereourses

Correction: receiving waters

#### **7 Proposed Change**

Part 1 – Discharge Prohibitions, A.1.c.(3)(I), Pg.30 -

Stated: Pooled storm water from treatment BMPs<sup>1</sup>.

Correction: Pooled non-storm water from treatment BMPs

\*Footnote 1 is not associated with this item. Footnote 2 has been reworded and combined with the previous draft permit's footnote 3, which was associated with the item. Footnote appears to be in need of a change.

#### **8 Proposed Change**

Part 1 – Discharge Prohibitions, Table 1, Pg.30 -

Stated: Discharges from potable water sources<sup>1</sup>. See Footnote 1

Correction: Delete footnote at the end of sources.

\*Footnote 1 is not associated with this item. Footnote 2 has been reworded and combined with the previous draft permit's footnote 3, which was associated with the item. Footnote appears to be in need of a change or deletion.

#### **9 Proposed Change**

Part 1 – Discharge Prohibitions, Footnote 2, Pg.30 -

Stated: All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

Correction: All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within XX hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

### 10 Proposed Change

Part 1 – Discharge Prohibitions, Footnote 1, Pg.31 -

Stated: The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro-testing or flushing of water supply and distribution mains and incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

Correction: Delete Footnote 1. There appears to be no Footnote in Table on Page 31.

### 11 Proposed Change

Part 1 – Discharge Prohibitions, Footnote 2, Pg.33 -

Stated: All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

Correction: All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within ~~XX~~ hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

### 12 Proposed Change

Part 2 Municipal Action Levels, Page 34,

The following language will be inserted as the new paragraph 6:

Upon Executive Officer approval, Permittees may coordinate MAL Action Plans and TMDL Implementation Plans, subject to the compliance timeline of the earliest date.

### 13 Proposed Change

Part 4.A.3, Page 36

Current Language: Each Permittee shall require that treatment control BMPs being implemented under the provisions of this Order shall be designed, at a minimum, to achieve the BMP performance criteria for storm water pollutants likely to be discharged as identified in Attachment “C”, Table 3.

Revised Language: Each Permittee shall require that treatment control BMPs being implemented under the provisions of this Order shall be designed, at a minimum, to achieve the BMP performance criteria for storm water pollutants likely to be discharged as identified in Attachment “C”, Table 3 for an 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998). Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database.

**14 Proposed Change**

Part , 1.(a)(2),1.(a)(4), 1(a)(5), 1(a)(8)

Stated:

Correction: the word “impervious” was stricken from these sections

**15 Proposed Change**

Part 5 – Special Provisions (Baseline), E. Planning and Land Development Program,  
III. New Development/Redevelopment Performance Criteria, 1(b)., Pg.55 -

Stated: ... For redevelopment projects, or development projects that can be demonstrated that the 5% EIA goal is infeasible, the project shall comply with the surface discharge requirements of 5.E.III.4

Correction: For redevelopment projects, or development projects that can be demonstrated that the 5% EIA goal is infeasible, the project shall comply with the surface discharge requirements of 5.E.III.4~~3~~.

**16 Proposed Change**

Part 5 – Special Provisions (Baseline), E. Planning and Land Development Program,  
III. New Development/Redevelopment Performance Criteria, 1(b)., Pg.56 -

Stated: All features structured constructed to render impervious surfaces “ineffective” as described in provision (b), above, shall be properly sized to infiltrate or store for beneficial reuse at least the volume of water that meets the criteria in subpart 5.E.III.3.

Correction: All features ~~structured~~-constructed to render impervious surfaces “ineffective” as described in provision (b), above, shall be properly sized to infiltrate or store for beneficial reuse at least the volume of water that meets the criteria in subpart 5.E.III.3.

**17 Proposed Change**

5.E.III.2.(a)(1)(F)

Correction: described in subpart 5.E.III.3(a)(3)(A)

**18 Proposed Change**

Part 5E.III.2.(3)

Stated:

Correction: “described in subpart 5.E.III.3(a)(4) below...”

**19 Proposed Change**

Part 5, E.III.2.(a)(5) p.58

Correction: Alternatively, the Co-Permittees may revise the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures to address projects that disturb more than 50 acres.

**20 Proposed Change**

p. 59

Stated: added language

Correction: The HCP shall be deemed in effect upon Executive Officer approval.

**21 Proposed Change**

Part 5. E.IV.4.(a) p.63

Stated: The Principal Permittee or a coalition of Permittees shall create a ~~management~~ framework to fund regional or subregional solutions to storm water pollution, where any of the following situations occur:

Correction: The Principal Permittee or a coalition of Permittees shall create a ~~Mitigation Funding Plan~~ to fund regional or subregional solutions to storm water pollution, where any of the following situations occur:

**22 Proposed Change**

Part 5.E.IV.4.(a)(5) p.63

Stated: new section

Correction: When a Permittee determines that a project is infeasible in accordance with 5.(E).III.(1)(c), the project application shall provide sufficient funds to the Permittee for a public project that will retain or mitigate a volume of stormwater equivalent to the onsite retention volume that was not retained on site.

**23 Proposed Change**

p.63

Stated: new language

Correction: The Permittees shall submit the Mitigation Funding Plan to the Executive Officer for approval 445 days after Permit adoption. The Mitigation Funding Plan shall be deemed in effect upon Executive Officer approval.

**24 Proposed Change**

p.64

Stated: new language

Correction: The Permittees shall submit revisions to the Ventura County Technical Guidance Manual to the Regional Board for Executive Officer approval.

**25 Proposed Change**

Part 5- E.V.6.(3) p.70, E.V.6.(11) p.71

Stated: watercourses

Correction: receiving waters

**26 Proposed Change**

Part 5 – Special Provisions (Baseline), G. Public Agency Activities Program, I., Pg.74 -

Stated: viii. Public Industrial Activities Management

x. Infrastructure Maintenance

Correction: Either delete items viii. and x. in the list, or include section viii. Public Industrial Activities Management and section x. Infrastructure Maintenance within the program.

**25 Proposed Change**

Part 5- 6.(b)(1)(C), 6.(b)(1)(K) p. 81

Stated: watercourses  
Correction: receiving waters

## 27 Proposed Change

Part 6- TMDL

Corrections:

Add the following language to Section III of Part 6 of the Order and renumber the section accordingly. Additions are underlined.

1. TMDL for Nutrients for Malibu Creek Watershed (Effective date: March 21, 2003)
2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek (Effective date: July 16, 2003)
3. TMDL for Nitrogen Compounds for the Santa Clara River (Effective date: March 23, 2004).
4. TMDL for Chloride in Santa Clara River, Reach 3 (Effective date: June 18, 2003)
5. TMDL for Chloride in Upper Santa Clara River (Effective date: May 4, 2005)
6. TMDL for Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon - (Effective date: March 24, 2006).
7. TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 24, 2006).
8. TMDL for Bacteria in Malibu Creek and Lagoon (Effective date: January 24, 2006).
9. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 26, 2007)
10. TMDL for Trash in Revolon Slough and Beardsley Wash (Effective date: March 6, 2008).
11. TMDL for Boron, Chloride, Sulfate, and TDS in Calleguas Creek Watershed (Effective date: December 2, 2008)
12. TMDL for Trash in the Ventura River Estuary (Effective date: March 6, 2008).
13. TMDL for Bacteria in Harbor Beaches of Ventura County (Effective date: September 23, 2008).

## 28 Proposed Change

Part 6- TMDL

Correction: Add the following language to Section IV of Part 6 of the Order and renumber the section accordingly. Additions are underlined.

- “
1. Final Wet Weather Bacteria WLAs for Malibu Creek and Lagoon – (Compliance date: January 24, 2016).
  2. Final Chloride WLAs for Upper Santa Clara River – (Compliance date: May 4, 2016)
  3. Final Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon – (Compliance date: March 24, 2026).
  4. Final Metals and Selenium WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 26, 2022).
  5. Final Boron, Chloride, Sulfate, and TDS WLAs for Calleguas Creek watershed (Compliance date: December 2, 2023).”



**29 Proposed Change**

Part 6- TMDL

Correction: Add the following language to Section V of Part 6 of the Order and renumber the section accordingly. Additions are underlined.

“1. TMDL for Nutrients for Malibu Creek Watershed

(a) Summer Load Allocations

	Nitrogen (lbs/day)	Phosphorus (lbs/day)
- Runoff from developed areas	26	2.6
- Golf Course Fertilization	37	6.6
- Dry Weather Urban Runoff	52	4.6
- Other	56	4.1

(b) Winter concentration-based Load Allocations

	Nitrogen (Nitrate-N + Nitrite-N) (mg/L)
- Runoff from Developed Areas	8
- Golf Course Fertilization	8
- Dry Weather Urban Runoff	8
- Other	8

(a) Compliance Monitoring:

This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(b) Actions and Special Studies required for Malibu Creek MS4 permittees

(1) Extent of algal impairment. EPA recommends studies to investigate the current extent of impairment due to excessive algal growth in the creek by surveying algal biomass and species composition at multiple sites within the creek.

(2) Limiting factor analysis. EPA recommends further study to assess whether total nitrogen or total phosphorus or other parameters such as flow and light limit algal growth in the Malibu Creek watershed.

(3) Fate of nutrients in Malibu Lagoon. EPA recommends this special study to determine if the expected upstream reductions in nutrient loadings would result in desired improvements in water quality in the lagoon.

2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek Watershed

The stormwater permitted discharges were considered minor sources of nitrogen to the Calleguas Creek. Therefore, WLAs are not assigned to storm water permitted discharges. The monitoring program of this TMDL includes data collection to quantify loadings and associated WLAs from these sources.”

### 30 Proposed Change

#### Part 6- TMDL

Correction: Add the following language to Section V of Part 6 of the Order and renumber the section accordingly. Additions are underlined.

#### "4. TMDL for Chloride in Santa Clara River, Reach 3

(a) Waste Load Allocation:

MS4 permittees discharging to Santa Clara River, Reach 3 shall implement BMPs to achieve the following MS4 WLAs:

Chloride (mg/L) 80

(b) Compliance Monitoring: This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

(1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

#### 5. TMDL for Chloride in Upper Santa Clara River

(a) Waste Load Allocation:

MS4 permittees discharging to Upper Santa Clara River shall implement BMPs to achieve the following WLAs

Chloride (mg/L) 100

(b) Compliance monitoring:

(1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.

(2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports and Implementation Plans. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

(1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs."

### 31 Proposed Change

#### Part 6- TMDL

Correction: Add the following language to Section V of Part 6 of the Order and renumber the section accordingly. Additions are underlined.

#### "12. TMDL for Boron, Chloride, Sulfate and TDS in Caleguas Creek Watersheed

(a) Waste Load Allocation

**(1) Interim Dry Weather WLAs for Permitted Stormwater Dischargers**

<u>Constituent</u>	<u>Interim Limit</u> <u>30-day average (mg/L)</u>
<u>Boron Total</u>	<u>1.3</u>
<u>Chloride Total</u>	<u>230</u>
<u>Sulfate Total</u>	<u>1289</u>
<u>TDS Total</u>	<u>1720</u>

**(2) Final Dry Weather WLAs for Permitted Stormwater Dischargers**

<u>Subwatershed</u>	<u>Critical Condition Flow Rate (mgd)</u>	<u>Chloride Allocation (lb/day)</u>	<u>TDS Allocation (lb/day)</u>	<u>Sulfate Allocation (lb/day)</u>	<u>Boron Allocation (lb/day)</u>
<u>Simi</u>	<u>1.39</u>	<u>1,738</u>	<u>9,849</u>	<u>2,897</u>	<u>12</u>
<u>Las Posas</u>	<u>0.13</u>	<u>157</u>	<u>887</u>	<u>261</u>	<u>N/A</u>
<u>Conejo</u>	<u>1.26</u>	<u>1,576</u>	<u>8,931</u>	<u>2,627</u>	<u>N/A</u>
<u>Camarillo</u>	<u>0.06</u>	<u>72</u>	<u>406</u>	<u>119</u>	<u>N/A</u>
<u>Pleasant Valley (Calleguas)</u>	<u>0.12</u>	<u>150</u>	<u>850</u>	<u>250</u>	<u>N/A</u>
<u>Pleasant Valley (Revolon)</u>	<u>0.25</u>	<u>314</u>	<u>1,778</u>	<u>523</u>	<u>2</u>

**(b) Compliance Monitoring**

(1) A monitoring plan will be submitted to the RWQCB for Executive Officer approval on June 2, 2009. Monitoring will begin one year after Executive Officer approval of the monitoring plan to allow time for the installation of automated monitoring equipment.

(2) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.

(3) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.

**(c) Actions and Special Studies required of Calleguas Creek Watershed MS4 permittees**

Responsible jurisdictions including MS4 permittees shall submit compliance monitoring plan to the Los Angeles Regional Board for Executive Officer approval on June 2, 2009. Monitoring shall begin monitoring as outlined in the approved monitoring plan six months after approval of the work plan.

Responsible jurisdictions including MS4 permittees shall demonstrate that implementation actions have reduced the boron, sulfate, TDS, and chloride imbalance by 20%, 40%, 70% by December 2 of 2011, 2015, and 2018 respectively. Stormwater dischargers shall achieve WLAs, which shall be expressed as NPDES mass-based limits specified in accordance with federal regulations and state policy on water quality control by December 2, 2023.”

### **26 Proposed Change**

Part 6- III, p.86

Stated: New section

Correction: The Permittee shall comply with the following Wasteload Allocations, consistent with the assumptions and requirements of the Wasteload Allocations documented in the Implementation Plans, including compliance schedules, associated with the State adoption and approval of the TMDL at compliance monitoring points established in each TMDL (40CFR122.44(d)(1)(vii)(B).

### **27 Proposed Change**

Part 6 V.3.(b)(2)

V.5.(b)(2)

V.6.(b)(2)

V.7.(b)(2)

V.8.(b)(2)

V.9.(b)(2)

V.10.(b)(2)

V.11.(b)(2)

Stated: further enforcement

Correction: ~~further~~ enforcement

### **28 Proposed Change**

Stated: For public projects including those under a Capital Improvement Project Plan that disturb less than one acre of soil the Permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Tables 5, 9 and 10.

Correction: For public projects including those under a Capital Improvement Project Plan that disturb less than one acre of soil the Permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Tables ~~5~~6, 9 and 10.

### **29 Proposed Change**

Attachment F, Monitoring Program, Core Monitoring, A. Mass Emissions, 3., 5., & 7., Pg. 2

Stated: 3. The Principal Permittee shall monitor each mass emission station each year as follows:  
(a) The first storm event of the wet season that produces a 20% or greater increase in base stream flow,...

Stated: 5. Samplers shall be set to monitor storms that produce a 20% or greater increase in base stream flow.

Stated: 7. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 and 0.24 inches of rain.

Correction: \*There is a conflict with sampling 20% or greater increase in base stream flow; and also sampling discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 and 0.24 inches of rain. It is recommended that either the sampling option stated in #3 or #7 be required.

### 30 Proposed Change

Attachment F, Monitoring Program, Core Monitoring, A. Mass Emissions, 10., Pg. 2

Stated: Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>) and pH, temperature, and DO.

Correction: Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>), and pH, temperature, and DO.

### 31 Proposed Change

Attachment F, Monitoring Program, Core Monitoring, B. Major Outfalls, 1(d), Pg. 4

Stated: In the first year after permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment H...

Correction: In the first year after permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment H...

### 32 Proposed Change

Attachment F, Monitoring Program, Core Monitoring, B. Major Outfalls, 7., Pg. 5

Stated: In Major outfall samples taken within a subwatershed shall be analyzed for the biological and chemical parameters listed in the preceding subpart B.6, and for all of the constituents in Attachment "C" (Municipal Action Levels), Tables 1 & 2, as listed below:

- (a) pH
- (b) TSS
- (c) COD
- (d) Kjeldahl Nitrogen (TKN)
- (e) Nitrate & Nitrite- Total
- (f) P- Total
- (g) Cd- Total
- (h) Cr- Total
- (i) Cu- Total
- (j) Pb- Total
- (k) Ni- Total
- (l) Zn- Total
- (m) Hg- Total

Correction: In Major outfall samples taken within a subwatershed shall be analyzed for the biological and chemical parameters listed in the preceding subpart B.6, and for all of the constituents in Attachment "C" (Municipal Action Levels), Tables 1-&2, as listed below:

~~(a) pH~~

(a) TSS

~~(c) COD~~

~~(d) Kjeldahl Nitrogen (TKN)~~

(b) Nitrate & Nitrite- Total

~~(f) P- Total~~

~~(g) Cd- Total~~

~~(h) Cr- Total~~

(c) Cu- Total

(d) Pb- Total

~~(k) Ni- Total~~

(e) Zn- Total

~~(m) Hg- Total~~

### 33 Proposed Change

Attachment F, Monitoring Program, Core Monitoring, D. Aquatic Toxicity Monitoring, 12., Pg. 11

Stated: Toxic samples shall be immediately subjected to Toxicity Identification Evaluation (TIE) procedures to identify the toxic chemical(s) if toxicity is determined by the standard t-test.

Correction: Toxic samples shall be immediately subjected to Toxicity Identification Evaluation (TIE) procedures to identify the toxic chemical(s) if toxicity is ~~determined~~ demonstrated by the standard t-test.

- It was recommended that the word "demonstrated" be used by USEPA.

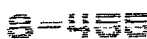
- 15 Delete the word "or more of impervious surface area" from Section 5.E.II.1.(a) (2);  
Delete the word "or more of impervious surface area" from Section 5.E.II.1.(a) (4);  
Delete the word "or more of impervious surface area" from Section 5.E.II.1.(a) (5);  
Delete the word "or more of impervious surface area" from Section 5.E.II.1.(a)(8);  
Delete the word "impervious" from Section 5.E.II.1.(a) (10B);

### 34 Proposed Change

\*Tables that are bolded and underlined are hard to read. It looks as though the title- Table 9 located on top of the table has a strikethrough.

ATTACHMENT A  
 SPECIFIC TECHNICAL COMMENTS  
 FEBRUARY 24, 2009 VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
 SYSTEM PERMIT (NPDES NO. CAS004002)  
 FOR THE  
 VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA,  
 AND THE INCORPORATED CITIES

No.	Page	Citation	Comment	Changed?
1	2	Finding B.2	Suggest the term "trash" be added as common pollutant found in urban runoff, thereby providing the basis for including requirements for trash management.	yes
2	3	Findings B.5	A references for studies is needed: "local and national epidemiological studies indicate there is a causal relationship between adverse health effects and recreational water quality . . ." A 2003 SCCWRP Mission Bay Epidemiological Study found "The risk of illness was uncorrelated with levels of traditional water quality indicators and state water quality thresholds were not predictive of swimming-related illnesses".	pending
3	4	Findings B.12	References for the studies are needed: "Studies have demonstrated a direct correlation between degree of imperviousness and receiving water degradation." Also suggest editing the first line to read "... runoff from developed areas has the potential to greatly accelerate downstream erosion . . .", and the last sentence to read " pervious cover is a reliable <u>one</u> indicator . . ." There is some debate as to whether it's a reliable indicator, and the primary cause of water quality degradation from new development is the unabated discharge of stormwater. With proper BMPs these discharges can be mitigated. Please include reference and amend finding accordingly.	pending
4	4	Findings B.12	Add clarity: "Significant declines . . . with as little as 3-10 percent conversion from natural to impervious surfaces in a watershed". As currently worded, the finding implies a 3-10 percent conversion at a lot level is also significant. To avoid confusion and provide clarity, the language should be revised to indicate that significant declines may occur if there are conversions for the entire subwatershed.	yes
5	5	Findings B.13,14,	Please provide references for studies.	pending
6	5	Findings B.16	Environmentally Sensitive Areas (ESA) as described here does not match definition, missing all unimproved 303(d) reaches.	yes
7	6	Findings B.17,19	Please provide references for studies.	pending
8	8	Findings C.6	No trash and debris study is included in the Monitoring and Reporting Program, please delete this reference.	yes
9	8	Finding C.6	Recommend modifying finding to read "This Order requires a monitoring program consisting of mass emission, <u>outfall and special studies</u> , <u>toxicity</u> , to support program evaluation and TMDLs <u>storm-water (wet-weather) MS4 water quality-based effluent</u>	yes



**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

10	8	Finding D.1	<p>limits, TMDL non-storm water (dry-weather) MS4 water quality-based effluent limits, ... The current language is confusing and inconsistent with the intent of the finding.</p> <p>Recommend modifying the finding to read "The area covered by this Order includes all <u>urbanized areas within Ventura County boundaries...</u> This permit is for discharges from urbanized areas of the County and does not apply countywide for un-urbanized areas. (See also Letter to Mr. Jonathan A. Bishop, Executive Officer, Los Angeles Regional Water Quality Control Board from Gerhardt Hubner, Chair, Ventura Countywide Stormwater Quality Management Program (March 6, 2007) (March 2007 Letter) at pp. 13-14.)</p>	rejected
11	9	Finding D.6	<p>Recommend modifying the finding to read "The CWA and the California Water Code contain specific provisions on how <u>wastewater discharges of waste</u> from point sources are to be permitted, <u>including urban stormwater and non-storm water</u>. We believe the intent of this finding is to establish the fact that stormwater discharges are regulated under the CWA and CWC.</p>	rejected
12	10	Finding E.4	<p>When referring to the Porter-Cologne Water Quality Control Act (California Water Code), it should be clear that the State and Regional Water Board's have the authority to regulate the discharge of "wastes that could affect the quality of waters of the state." Thus, we recommend that the second sentence of the finding be revised as follows: The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of <u>pollutants wastes that could affect the quality of waters into all waters</u> of the State, including waters of the United States, and tributaries thereto.</p>	yes
13	13	Finding E.7	<p>The Permittees disagree with the conclusive statements made in Finding E.7. In general, we do not agree that all requirements contained in the Tentative Order are required by federal law. Many of the provisions may in fact be more stringent than required by federal law and may therefore potentially be considered an unfunded local mandate subject to subvention under Article XIII B, Section (6) of the California Constitution. Additional legal and policy comments on this finding are provided on Attachment C.</p>	See legal response to comments
14	21	Findings E.26 & E.27	<p>The Permittees disagree with the conclusive statements made in findings as some of the requirements contained in the Tentative Order may well exceed the maximum extent practicable (MEP) standard. Additional legal and policy comments on this finding are provided on Attachment X. Furthermore, this finding as drafted is confusing because it blurs the distinction between the effective elimination of non-storm water discharges and</p>	See legal response to comments



**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

15	23	1.F. 6.	the reduction of stormwater pollutants to the maximum extent practicable. Please clarify not all impervious area is intended to be minimized but rather effective impervious area by adding the word "effective": "Smart growth techniques include the minimization of <u>effective</u> impervious area"	Yes
16	24	Finding F.9	This finding implies that under the CWA the Permittees are required to "attain water quality objectives from new development and redevelopment activities." Such a statement is incorrect. We recommend revising the finding accordingly by deleting this part of the sentence.	No, comment noted
17	25	Finding F.12	This finding needs a lead in statement to support the position that the permit has established BMP performance, which are based on the ASCE and USEPA database.	No, paragraph contains requested information
18	27	Finding F.19	This finding claims that the Fact Sheet includes an analyses of the factors required by California Water Code section 13241. We disagree. The Fact Sheet does not include any analysis that is consistent with the statutory factors identified in Water Code section 13241. Thus, we recommend either deleting the finding, or revising the Fact Sheet to appropriately include the analysis identified.	Yes, comment noted, statement removed
19	29 - 32	Footnotes	The footnotes are redundant and should only be stated once. Further, footnotes are not formatted properly.	Comment noted
20	30	Part 1.A.1.(c)	The Tentative Order does not properly explain or describe the purpose of the information contained in Table 1. If the purpose of Table 1 is to identify conditions that apply to the categories of allowed non-storm water discharges identified in Part 1.A.1.(c), it should be explained accordingly. Otherwise, as currently incorporated there is no correlation between the Discharge Prohibition language and the information contained in Table 1.	Yes (Carlos)
21	30	Table	It is unclear of the distinction between the columns labeled: "Conditions under which allowed" and "Required conditions for discharge to occur". Recommend deleting one and if necessary expanding the explanation in the remaining column. Also it is unclear what is meant by "Permittees shall comply with all conditions in the authorization", specifically what authorization?	Yes (Carlos)
22	32 & 108	Table 1	Required conditions for discharge from sidewalk rinsing refers to the glossary description of "Sidewalk Rinsing" where it says "any waste generated from the activity must be collected". Please describe under what circumstance a discharge for sidewalk rinsing be allowed.	Rejected, staff disagrees

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

23	32	Part 1.A.2	<p>This provision would require the Permittees to take certain actions if the Regional Water Board's executive officer determined that any of the preceding categories of non-storm water discharges are a source of pollutant that may exceed water quality standards. However, the provision does not specify that the Permittee's obligations occur only after receiving notice of the Executive Officer's determination. To ensure that the Permittee's obligations occur only after proper notice, we recommend that the first sentence be revised as follows: "If the Regional Water Board Executive Officer determines that any of the preceding categories of non-storm water discharges are a source of pollutants that exceed water quality standards, the Permittee(s) <u>upon receiving written notice of the Executive Officer's determination, shall either....</u>"</p>	rejected
24	33	Part 1.A.3	<p>This provision should be deleted as it is redundant with requirements noted in Table 1.</p>	yes
26	34	Part 2.4	<p>There is a conflict with the timelines given for two of the requirements. More specifically, the statements "Beginning year 3 after adoption" and "first MAL Action Plan due Dec. 15, 2011" conflict because year 1=2009-2010, year 2= 2010-2011, and year 3=2011-2012. By December of 2011, only the first wet season's data (four sites) will be available. To avoid the conflict, we recommend that the first sentence be modified as follows: <u>At the end of Beginning Year 3 after Order adoption date, each Permittee shall submit a MAL Action Plan with the Annual Report (e.g. the first MAL Action Plan would be due with Dec-15, 2011 the 2011/2012 Annual Report if the Order is adopted in 2009) to the Executive Officer ...</u></p>	yes
27	37	4.B.3	<p>There are conflicting timelines for several of the provisions related to adoption and/or revision of municipal codes (i.e. one year to adopt ordinance to enforce all requirements of this order conflicts with 4.B.4, which allows two years for legal counsel statement, and 4.D.1, which allows two years for municipal codes to be consistent with requirements). To avoid the conflict, we recommend revising Part 4.B.3 to allow two years after Order adoption for each permittee to ensure that its Storm Water Quality Ordinance authorizes the Permittee to enforce all requirements of this Order.</p>	yes
28	38	4.C.1.(a).1.(B)	<p>The budget provisions imply that the Program Implementation Activities apply only to storm water related activities. As stated throughout the Tentative Order, it contains requirements with respect to storm related activities as well as non-storm water discharges. Because this may imply that the costs of implementing the program are less than actually required, we recommend revising the phrase "storm water related activities only" permit related activities as it would be more inclusive.</p>	yes
29	39	4.E.1.(e) & (g)	<p>Subsections (e) and (g) appear to be duplicative.</p>	rejected

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

30	39	Part 4.E.1.(i)	The District (i.e. Principal Permittee) does not have the same pollutant generating activities, legal authority and land use decision capability as the municipalities (i.e. Permittees) therefore (i) should be deleted.	Yes
31	40	Part 5.B.2	Redundant – this section is repeated in Monitoring Program Attachment H	Delete section? yes
32	42	Part 5.C.2.(c)(1)(C)	Request 365 days to develop and distribute materials to retail stores. No time frame is currently provided.	
33	44	Part 5.D.1.	Laundries are not listed as a Critical Sources under commercial facilities but are listed in attachment "D". Please clarify if the intent is to include laundries as a Critical Source, and if so a clear definition of size and function of the included business. - - - - - <b>wait for Paul's review of SIC 7200</b>	Comment noted, doesn't belong to industrial facilities
34	45	Part 5.D.1.(a)(2)	Please provide a definition for Phase II facilities. Phase I facilities are included in the definitions, but Phase II facilities are not.	Comment noted, PII definition in USEPA regulations
35	45	Part 5.D.2.(a)	The sentence that refers to subpart 5.D.2 should be modified to refer to subpart 5.D.1.	Yes
36	46	Part 5.D.2.(a)(2)	The phrase "in cooperation with its appropriate department . . ." is unnecessary as all departments of a permittee are responsible for permit compliance and I internal cooperation and communication would be expected.	Yes
37	49	Part 5.D.2.(b)(1)(A) &(B)	Part (A) refers to an "initial inspection" and "second mandatory compliance inspection," while part (B) refers to both "first mandatory compliance inspection" and "second mandatory compliance inspection." Please clarify the difference between the initial inspection and the first mandatory compliance inspection. Further, the Permittees continue to be concerned that the inspection requirements for industrial facilities is in fact an unfunded local mandate because determination of compliance with the State's General Permit is a state function, not a local function. Additional comments on this issue are provided in Attachment C.	Rejected, they are the same
38	50	Part 5.D.2.(b)(2)(B)	The last sentence in this provision, "[t]he Permittees shall require implementation of additional BMPs where the storm water from the MS4 discharges to a CWA 303(d) listed waterbody" is redundant with provisions contained in sub-section D.3.(b).. Thus, this	Yes

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

39	50		Part 5.D.3.(a)	Part 5.D.3.(a)	sentence should be deleted.		yes
40	51		Part 5.D.4(c)	Part 5.D.4(c)	This provision seems to be inconsistent with a similar provision in the Construction section (see page 73) regarding investigating complaints received from the Regional Board. The provision should read as follows: Each Permittee shall initiate, within one business day, <sup>1</sup> investigation of complaints of (other than non-storm water discharges) to the MS4 from facilities within its jurisdiction (other than non-storm water discharges).		yes
41	52		Part 5.E.(1)	Part 5.E.(1)	Smart Growth should be included as one of the purposes for this section. We recommend that a new purpose be added as follows: (a) <u>Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.</u>		yes
42	52		Part 5.E.(1).(b)	Part 5.E.(1).(b)	"Minimize the percentage of impervious area" should be revised as follows: minimize the percentage of effective impervious area.		Yes
43	52		footnote	footnote	48 hour drain time is in conflict with table on page 32 calling for 72 hour drain time which is the time most BMPs use in design.		Yes
44	52		Part 5.D.4.(e)	Part 5.D.4.(e)	Please clarify, is the Stormwater Task Force the same as the California Association of Stormwater Quality Agencies (CASQA)?		Yes, same
45	53		Part 5.E.II.1.(a)(6)	Part 5.E.II.1.(a)(6)	Please clarify by stating "25 or more <u>exposed</u> parking spacing"		rejected
46	54		Part 5.E.II.2.(a)(3)	Part 5.E.II.2.(a)(3)	The effective date for public projects is more strict than private projects and can create a hardship in costly redesigns of a project. A project is completely designed at the point a governing body approves authorization to bid the project. Requiring compliance with this section of the permit would mean a costly re-design of the project. Language more comparable to the trigger for private projects would be preferable. We suggest: "For Permittee's projects the effective date shall be the date the governing body or their designee approves initiation of the project design."		yes
47	55		Part 5.E.III.1 (b)	Part 5.E.III.1 (b)	The reference in the last sentence should be changed from 5.E.III.4 to 5.E.III.3		Yes
48	55		Part 5.E.III.1 (c) - (e)	Part 5.E.III.1 (c) - (e)	We would recommend that these three provisions be combined to read as follows: (c) All features structured constructed to render impervious surfaces "ineffective" as		Yes?

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**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
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49	57	Part 5.E.III.2.(a)(1)(F)	described in provision (b), above, shall be properly sized to infiltrate or store for beneficial reuse at least capture the volume of water that meets the criteria in subpart 5.E.III.3 (water quality volume). The hierarchy of BMPs for capturing the water quality volume are: (1) infiltration, harvesting, or evapotranspiration BMPs; and, (2) vegetated BMPs such as bioretention. The water quality volume not captured by BMPs shall be treated consistent with Part 4.A.3 and Attachment C, Table 3.	Yes
50	58	Part 5.E.III.3.(a)	Numbering format needs correction	yes
51	62	Part 5.E.IV.3(b)(3)	To be consistent with the rest of the Effective Impervious Area language please change "less than 5 percent" to "5 percent or less"	yes
52	68	Footnotes	Footnotes 17 and 18 are redundant.	yes
53	69	F.1.4. (c)	Delete obligation of Permittees to require project proponents to collect samples in accordance with general construction permit. As indicated previously, any requirement placed upon the Permittees that requires them to implement or enforce the State's General Permit is an unfunded mandate for which subvention funds must be provided.	yes
54	69	Part 5.F.5	The reference to subpart F.5 should be subpart F.4	yes
55	66-69	Tables in Part 5.F	Tables 6 -9 are intended to build on each other. There is no need to repeat the BMPs in every table as the text requires the Discharge to implement appropriate BMPs in addition to the ones already identified in the previous tables. See provision F.2, F.3, or F.4. In general these provision state "Each Permittee shall require the implementation of an effective combination of appropriate erosion and sediment control BMPs from Table 7 in addition to the ones identified in Table 6 to prevent erosion and sediment loss..." (emphasis added).	Rejected, staff disagrees
56	70	Part 5.F.6.	Section is missing punctuation. Please include a footnote defining chance of rain (POP >50%).	yes
57	74	Part 5.G.2.(a)	Table 9 should read Table 10.	yes
58	74	Part 5.G.2.(a)	Please revised the provision as follows: "(a) Each Permittee shall implement the activity specific BMPs listed in Table 10 or related BMPs as listed in the 2003 California Stormwater Municipal BMP Handbook when such activities."	rejected
59	77	Part	No time frame given for implementing an Integrated Pest Management Program --	yes

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

60	5.G.(4)(a) Part 5.G.1.4(a)(7) (C)	request 365 days Several agencies have been implementing Integrated Pest Management programs for several years and have therefore already made significant reductions in pesticides used by the agencies. By requiring these same proactive agencies to now "demonstrate reductions in pesticide use" will be very difficult because reductions have already occurred. Further, the primary goal and purpose of Integrated Pest Management programs is to address pest issues in a holistic manner using a number of different types of control methods. The implementation of such programs may or may not result in the reduction of the use of pesticides. The need for pesticides even when implementing an Integrated Pest Management program may also vary based on the type of weather year and other circumstances beyond the control of local agencies. As such, we are concerned that a requirement "to demonstrate reductions in pesticide use" may not be feasible in all circumstances. Thus, we recommend revising the language as follows: "Demonstrate implementation of IPM alternatives where feasible to reduce pesticide use."	rejected
61	Part 5.G.(d)(1)	"rainy season" should be replaced with the defined term "wet season"	yes
62	Part 5.G.(f)(1)(b)	"storm season" should be replaced with the defined term "wet season"	yes
63	Part 5.G.(g)(1)	Section should specify that it pertains to spills by permittee facilities or activities.	yes
64	Part 5.G.6.(b)	Redundant because G.1(b) requires compliance with 5.F.6 which is the exact same language.	?
65	Part 5.H.1.3(a)(2)	Please include the language that is in the fact sheet noting "this provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual."	yes
66	Part 5.H.(1).(b)	Confusing request and time frame. Requirement is to map all known connections to storm drain system in 3 years, but 5.H.(3) give 5 years for pipes 18 – 35 inches in diameter. Could be very problematic if requirement is for all private connections.	Rejected, staff disagrees
67	Part 5.I.1	Electronic reporting program submitted 12 months after permit adoption conflicts with Dec. 15 reporting deadline given at Part 2.4. (page 34) and in Attachment H.	Rejected, staff disagrees- ERP can be comported to comply

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
**SYSTEM PERMIT (NPDES NO. CAS004002)**

				with reporting deadlines given in Part 2.4 and Attachment H
68	85	Part 6.11	Although the regional board corrected the individual TMDLs throughout this section to remove the requirement for a "MS4 effluent quality workplan...", they did not change Part 6.11 to add the new language, which should read as follows: "11. Each permittee shall attain the storm water VLAs incorporated into this Order by implementing BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL specialist studies identified in the Basin Plan Amendment." This is the language used for each identified TMDL under (b) Compliance Monitoring (2).	yes
69	86	Part 6 III.8	The "effective date" of the Harbor Beaches TMDL is December 18, 2008 – not September 23.	yes
70		Definitions	Please add a definition for "Smart Growth" as follows: Development in or near cities intended to lessen or reverse suburban sprawl, decrease the use of automobiles, and shorten daily travel. It uses compact building design to cluster together residential, shopping, and work areas and encourages walking and public transportation. Smart Growth is considered a stormwater BMP in the 2005 EPA publication <i>Using Smart Growth Techniques as Stormwater Best Management Practices</i> , EPA 231-B-05-002	yes
71	F-2	A.1.1.10	Other constituents are properly sampled as grabs (ammonia, conductivity, perchlorate, O&G, TRPH, phenols, cyanide). Suggest stating samples are to be taken according to Standard Methods, or citing EPA methods.	rejected
72	F-3	A.1.15.c	Reference to "J" should be to "K".	yes
73	F-3	A.12	If a constituent is not detected at the MDL then it will not be an "observed occurrence" and so cannot show a concentration greater than the State WQOs or CTR acute criteria. Suggest "if a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed. unless the observed occurrence shows concentrations greater than the state-water quality objective, and/or the California Toxics Rule (CTR) for acute criteria."	rejected
74	F-4	B.1.d	Reference to attachment "H" should be attachment "I"	yes
75	F-5	B.7	Attachment "C" constituents (Tables 1 and 2) don't match constituents listed in B7. Suggest deleting the list of constituents included in B.7.	yes

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
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76	F-6	B.8	Request to the same language used as A.12 for screening of all constituents (first storm event of the wet season) with same modification to language to eliminate contradictory statement, i.e. "If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed. unless the observed occurrence shows concentrations greater than the state water quality objective, and/or the California Toxics Rule (CTR) for acute criteria." because if a constituent is not detected at the MDL then it cannot be an "observed occurrence" and so cannot show a concentration greater than the State WQOs or CTR acute criteria.	rejected
77	F-6	B.11.c	Standard Monitoring Provisions are part "K" (not "J")	yes
78	F-7	B.13	A reference should be added to attachment "A" for "Pollutants of Concern"	rejected
79	F-12	D.14	Add "significant" to first sentence, i.e. "... TIEs for all sites showing <u>significant</u> toxicity." To match language in the trigger for TIE in the same section.	yes
80	F-14	E.1.a,d/e & E.2.a	Inconsistent frequency of pyrethroid monitoring: E.2 "shall monitor 1 sampling event per station per monitoring year" should be deleted or changed to match E.1.a,d/e it is to begin "no later than the second year of this Order" at "at least 2 stations [per watershed]" and is to be "repeated in the fifth year of the permit term" and in	Yes, "shall be repeated every 3 <sup>rd</sup> year".
81	F-16	G.4.	Please delete there is no text associated with section.	yes
82	F-17	I.1.a.1.A	Suggest clarifying frequency i.e. "Level of effort per watershed per year"	yes
83	F-19	K.6.b	The intercalibration study consists of a small number of constituents (TSS, nutrients, metals, chlorinated hydrocarbons, and pyrethroid pesticides). Request change of language at end of K.6.a and K.6.b to add "where applicable" to allow use of laboratories to test for constituents not included in the intercalibration study (i.e. bacteriological, toxicity, and other chemical analyses).	rejected
84	F-7	B.12	This section requires results from Major outfall stations to be compared to Basin Plan water quality objectives. Comparisons with WQO can be done for informative purposes, however these objectives are set for receiving waters and are not appropriate to determine compliance with the NPDES permit through the quality of discharges from MS4s	No change, comment noted



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**FACT SHEET/STAFF REPORT**

**FOR THE**

**MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES  
WITHIN VENTURA COUNTY FLOOD CONTROL DISTRICT,  
COUNTY OF VENTURA, AND THE CITIES OF VENTURA COUNTY  
NPDES PERMIT (CAS004002)**

ORDER No. 09-xxxx

May 7, 2009

Los Angeles Regional Water Quality Control Board

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## I. PURPOSE

The purpose of this Fact Sheet/Staff Report is to provide permittees (Ventura County Watershed Protection District, the County of Ventura and the incorporated cities therein and interested parties) an overview of the Ventura County NPDES Permit for storm water discharges from municipal separate storm sewer systems (MS4s), adopted on May 5, 2009. This Fact Sheet/Staff Report also provides the technical basis for the permit requirements. Sections 1 through xx describe water quality problems for storm water and urban runoff, and permit conditions to address these problems. Sections xx and xx discuss each major element of the Permittees' Storm Water Quality Management Plan (SQMP), and are meant to be used as a companion reference document to the permit. Section xx addresses changes that were made at the Xxx xx, 200x Regional Board Meeting.

## II. INTRODUCTION - THE NEED TO REGULATE STORM WATER DISCHARGES

### A. Impacts

The quality of storm water and urban runoff is fundamentally important to the environmental and economic health of the Los Angeles Region (Region), and to the quality of life in southern California. Polluted municipal storm water runoff is one of the leading causes of water quality impairment in the Region. Storm water and urban runoff (during wet and dry weather) are often contaminated with bacteria from animal droppings; Polycyclic Aromatic Hydrocarbons (PAHs), from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications; herbicides from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead

from fuels, paints, automotive parts; copper from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; and dioxins as products of combustion. Water flowing over the Permittee's residential, industrial, and commercial areas carries these untreated pollutants through the storm drain systems directly into the receiving waters of the Region. Water quality impacts and public health risks from Municipal Separate Storm Sewer System (MS4) discharges that affect receiving waters nationwide and within the Region are well documented.

Water quality assessments conducted by the Regional Board have identified impairments and threatened impairments of beneficial uses of water bodies in the Ventura Watersheds. These impairments include many of the Pollutants of Concern (POC) identified by the Ventura Countywide Storm Water Monitoring Program. These impairments are identified on the State of California § 303(d) list of impaired water bodies.

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Studies and research conducted by other Regional agencies, and academic institutions have also identified storm water urban runoff as significant sources of pollutants to surface waters in Southern California. A regional survey of the microbiological water quality along the shoreline of the Southern California Bight (SCB), from Point Conception south to Ensenada, Mexico, was conducted during August, 1998, by 36 agencies under the coordination of the Southern California Coastal Water Research Project (SCCWRP). It was found that freshwater outlets, comprised mainly of storm drains, had the poorest water quality with 60% and 40% of the shoreline miles exceeding monthly and daily thresholds, respectively. Freshwater outlets were also more likely to demonstrate exceedances by multiple indicators at a single site, and repeat exceedances at sites over the five-week period.<sup>1</sup>

Urban runoff has been found to cause significant receiving water impacts on aquatic life. In order to best identify and understand these impacts, it is necessary to include biological monitoring, using a variety of techniques, and sediment quality analyses, in a monitoring

<sup>1</sup> xxx

program, Water column testing alone has been shown to be very misleading. Most aquatic life impacts associated with urbanization are probably related to long-term problems caused by polluted sediments and food web disruption. An adequate analysis of receiving water biological impacts must include investigations of a number of biological organism groups in addition to studies of water and sediment quality<sup>1</sup>.

### III. INTRODUCTION

#### History of Ventura MS4 NPDES Permit

In 1987, the U.S. Congress amended the Clean Water Act to specifically require storm water discharges including those from municipalities with populations 100,000 or greater, conveyed by

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<sup>1</sup> Burton, G.A. Jr., and R. Pitt, Stormwater Effects Handbook: A ToolBox for Watershed Managers, Scientists, and Engineers. CRC Press, Inc., Boca Raton, FL. August 2001. 1085 pgs.

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a separate storm sewer system to be addressed as point sources of pollution under the NPDES. These municipalities were required to reduce the discharge of storm water pollutants to the maximum extent practicable (commonly referred to as the MEP standard). The U.S. and California Courts have since interpreted federal statutes to give the permitting authority the discretion to also require compliance with water quality standards. In addition, conditions in NPDES permits must be consistent with the assumptions of TMDL WLA's that have been adopted.

The USEPA issued the Final Storm Water Regulations in Nov 1990, which required medium and large municipalities to submit a two part application. The first part required basic system description and ownership identity information. Part 2 required storm water pollutant discharge characterization data from one wet season, and a proposed storm water quality management plan.

In 1990, populations in Oxnard, Thousand Oaks, and Unincorporated Ventura County met the Census definition of medium size municipalities.

The City of Oxnard submitted a Part 1 application in 1991. After discussions with the Ventura County Flood Control District, and the City of Thousand Oaks, the Water Board decided that the VCFD as Principal Permittee would submit a system wide Part 2 application on behalf of all the municipalities in Ventura County, because of the interconnected nature of the flood control system.

A consolidated Part 2 application was submitted in 1993, and the Water Board issued the first term system-wide municipal storm water permit for Ventura County in 1994.

The first term MS4 permit was adopted in 1994, and the focus of the permit was to require Ventura County municipalities to develop storm water pollution control programs in the areas of public involvement/ education; business/ industry outreach; development planning; development construction; public agency activities; and illicit connection/ discharge elimination, in addition to

implementing a basic monitoring program to characterize the quality of municipal storm water discharges.

The second term MS4 permit was adopted in 2000, and the focus of the permit was the implementation of a comprehensive storm water quality management program, to reduce the discharge of storm water pollutants to the MEP, and to meet water quality standards. The monitoring program was expanded to assess mass emissions of pollutants from Ventura County Rivers to coastal waters, and to better understand the quality of wet weather discharges and their adverse impacts.

No doubt the Ventura County MS4 Program, under the leadership of the Ventura County Watershed Protection District has made significant strides in implementing programs to reduce storm water pollution. Yet, more than a decade after the first permit was issued, we continue to see exceedances of water quality standards for storm water pollutants such as bacteria, and heavy metals. In addition, the Ventura County MS4 program having run its second term is a step behind that of Los Angeles County, which closed out its third term last December.

The third term MS4 permit for the first time includes Municipal Action Levels, derived using the USEPA's monitoring dataset for large and medium MS4s. The permit identifies a default set of specific storm water BMPs that industry, construction, and public agencies must implement based on activity to reduce the discharge of storm water pollutants. The permit promotes the implementation of LID strategies for new development and redevelopment, which have the objective of maintaining pre-development hydrology and utilizing natural controls to reduce storm water pollution. The permit incorporates for the first time TMDL WLAs adopted by the Board for impaired water bodies which is consistent with USEPA's TMDL Policy.

Report of Waste Discharge

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The permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The permittees applied for renewal of their waste discharge requirements for a 5-year period, which serves as an NPDES permit to discharge wastes to surface waters.

The Regional Water Board reviewed the ROWD and determined it to be partially complete under the reapplication policy for MS4s issued by the United States Environmental Protection Agency (U.S. EPA) (61 Fed. Reg. 41697). The Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by permittees will meet the requirements of the federal NPDES regulations at 40 CFR122.26.

The permittees Report of Waste Discharge contained a proposed Storm Water Management Program and a Monitoring Program to be considered by the Regional Water Board for incorporation into an MS4 NPDES Permit as permit conditions and to demonstrate compliance with federal law. The permittees are entitled, but did not elect to pursue a permit with numeric end-of-pipe limits for storm water discharges, which would have required them to satisfy specific effluent limitations rather than implement storm water management programs. Where a MS4 permittee voluntarily chooses a Best Management Practice (BMP) based storm water management program as permit effluent limitations rather than end-of-pipe numeric effluent limits, there exists no compulsion of a specific regulatory scheme that would violate the 10th Amendment to the United States Constitution. (City of Abilene V. EPA, 325 F.3d 657 (5th Cir. 2003)).

Meetings

The Regional Water Board staff has conducted meetings from October 2005 through January 2009, with permittees their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIAGLA/ VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Coalition for Practical Regulation (CPR),

Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government Commission, Los Angeles City; Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper, and Charles Abbott Associate. On April 5, 2007, September 20, 2007, and July 10, 2008 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the permittees and the public regarding proposed changes.

#### **IV. STATUTORY AND REGULATORY HISTORY OF THE STORMWATER PROGRAM**

The federal Clean Water Act (CWA) generally prohibits the “discharge of any pollutant,” 33 U.S.C. § 1311(a), from a “point source” into the navigable waters of the United States. 33 U.S.C. § 1362(12)(A). An entity can, however, obtain a National Pollutant Discharge Elimination System (NPDES) permit that allows conditionally for the discharge of some pollutants. 33 U.S.C. § 1342(a)(1). The CWA defines point sources as “discernible, confined and discrete conveyances, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure” such as a pipe, ditch, container, rolling stock, concentrated animal feeding operation, landfill leachate collections system, vessel or other floating craft from which pollutants are or may be discharged. 33 U.S.C. § 1362; 40 CFR 122.2.

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In 1987, the U.S. Congress enacted the Water Quality Act recognizing both the environmental threats posed by storm water runoff and the U.S. EPA's problems in implementing regulations for storm water discharges (NRDC II, 966 F.2d at 1296). These Amendments to the CWA established new statutory requirements to control industrial and municipal storm water discharges to waters of the United States (CWA § 402(p).)

The amendments require NPDES permits for storm water discharges from Municipal Separate Storm Sewer Systems (MS4s) to waters of the United States, and the MS4 was designated a "point source". The storm water discharge permits for MS4s (i) may be issued on a system- or jurisdiction-wide basis; (ii) shall include a requirement to effectively prohibit [unauthorized] non-storm water discharges into the storm sewers; and (iii) shall require controls to reduce the discharge of pollutants from storm water to the maximum extent practicable, including management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. (See CWA §402(p) (3) (B)).

Ordinarily, an NPDES permit imposes [numerical] effluent limitations on such discharges. See 33 U.S.C. § 1342(a)(1) (incorporating effluent limitations found in 33 U.S.C. § 1311). First, a permit-holder "shall . . . achiev[e] . . . effluent limitations . . . which shall require the application of the best practicable control technology [BPT] currently available." 33 U.S.C. § 1311(b)(1)(A). Second, a permit-holder "shall . . . achiev[e] . . . any more stringent limitation, including those

necessary to meet water quality standards, treatment standards or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title)." 33 U.S.C. § 1311(b)(1)(C). In the case of MS4 NPDES discharge permits, federal courts have ruled that the U.S. EPA has the discretionary authority under "33 U.S.C. § 1342(p)(2)(E) to determine that ensuring strict compliance with state water-quality standards is necessary to control pollutants, or to require less than strict compliance with state water-quality standards, such as a BMP approach" (*Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9<sup>th</sup> Cir., 1999)). Under 33 U.S.C. § 1342(p)(3)(B)(iii), the U.S. EPA has the choice to include either best management practices or numeric limitations in the permits. NRDC II, 966 F.2d at 1308 ("Congress did not mandate a minimum standards approach or specify that [the] EPA develop minimal performance requirements.").

Regulatory Scheme

On November 16, 1990, pursuant to CWA § 402(p), the U.S. EPA promulgated regulations at 40 CFR 122.26 which established requirements for storm water discharges under the NPDES program. The U.S. EPA defines storm water at 40 CFR 122.26 (b)(13) as 'storm water runoff, snow melt runoff, and surface runoff and drainage' [related to storm events or snow melt] (55 Fed. Reg. 47990, 47995). Non storm water discharges to the MS4 are to be "effectively prohibited" by the MS4 operator. "Effective prohibition" meant that the MS4 Permittee was to implement programs to eliminate "illicit discharges" to the storm drain system unless authorized

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under NPDES permits issued independent of the MS4 permit (55 Fed. Reg. 47995). The storm water regulations also intended to not hold MS4 Permittees responsible for certain categories of non storm water discharges, such as uncontaminated ground water infiltration, natural springs, rising groundwater, stream and diversions, from the MS4. Such discharges might need to be addressed under independent NPDES permits when specifically identified on a case-by case basis by the MS4 Permittee or the permitting authority.

The U.S. EPA intended that storm water discharges from the MS4 be primarily addressed through the implementation of BMPs on an iterative approach because of the intermittent and variable nature of storm flows and pollutant concentrations as well as insufficient data rather than numerical effluent limitations (61 FR 43761). However, the U.S. EPA's scheme for non-storm water discharges from the MS4 is to bring them under the existing framework of the NPDES program at 40 CFR 122.44(d). (55 Fed. Reg. 47995). Non-numerical limitations such as BMPs for non-storm water discharges may be authorized only where numerical limits are not feasible (40 CFR 122.44(k)). In any case, if the Permittee fails to implement adequate BMPs to prevent exceedance of the receiving water objectives, the permitting authority "may have to consider other approaches to water quality protection" (61 Fed. Reg. 43761; *Interim Permitting Approach*, Response #6, EPA 833-D-96-00, 1996).

The CWA §303(d)(1)(A) requires each State to conduct a biennial assessment of its waters, and identify those waters that are not achieving water quality standards. The resulting list is referred

to as the 303(d) list. The CWA also requires States to establish a priority ranking for waters on the 303(d) list of impaired waters and to develop and implement TMDLs for these waters. A TMDL specifies the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and allocates the acceptable pollutant load to point and nonpoint sources. The elements of a TMDL are described in 40 CFR 130.2 and 130.7. A TMDL is defined as “the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background” (40 CFR 130.2). Regulations further require that TMDLs must be set at “levels necessary to attain and maintain the applicable narrative and numeric water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality” (40 CFR 130.7 (c) (1)). The regulations at 40 CFR 130.7 also state that TMDLs shall take into account critical conditions for stream flow, loading and water quality parameters. The U.S. EPA has issued guidance for establishing WLAs for storm water discharges in TMDLs and their incorporation as numerical limitations in MS4 Storm Water Permits (U.S. EPA Office of Water Memo, *Establishing Total Maximum Daily Load Wasteload Allocations for Storm Water Sources and NPDES Permit Requirements Based on those WLAs*, Nov 22, 2002 Memo). Since provisions in NPDES permits must reflect the assumptions and requirements of available TMDLs (40 CFR 122.44 (d)(1)(vii)(B)), the NPDES permit must incorporate the WLAs as either BMPs (reasonably expected to achieve the WLAs when implemented and properly maintained), under specified circumstances (40 CFR 122.44(k)(2) & (3)), or as a Water Quality Based

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Limitation (WQBEL) expressed numerically. Where a non-numeric effluent limitation is selected, the permits administrative record must support the expectation that the BMPs are sufficient to achieve the WLAs. (40 CFR 124.8, 124.9, and 124.18.)

State Regulatory Authority and Permit History

The State of California is one of forty-five States with duly delegated authority under the CWA to implement the NPDES permitting program. The Porter-Cologne Act (California Water Code) authorizes the State Board, through the nine regional boards, to issue NPDES permits, and regulate and control the discharge of pollutants into waters of the State. To comply with the CWA, the Los Angeles Regional Water Board (LA Water Board) issued the first storm water permit (“predecessor permit”) for the County of Ventura on August 22, 1994, to the municipalities (Permittees) in Ventura County (Order No. 94-082; NPDES Permit No. CAxxxxx). The Ventura County MS4 Permit was reissued on July 27, 2000 (Order No. 00-108; NPDES Permit No. CAS004002).

Because of the complexity and networking of the storm drain system and drainage facilities within and tributary to the County of Ventura, the LA Water Board adopted a countywide approach in permitting storm water and urban runoff discharges. The permit requires Permittees to conduct monitoring and to implement programs in the areas of public involvement and participation, industrial/commercial inspection, development planning, development construction, public agency activities, and to reduce the discharge of pollutants in storm water to

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the Maximum Extent Practicable (MEP) from the permitted areas in the County of Ventura to the waters of the U.S. In addition, Permittees are required to effectively prohibit the discharge of unauthorized non storm water into the MS4 (except where they are authorized under a NPDES permit), by implementing a program to detect and eliminate illicit discharges/connections to the MS4.

The Ventura County MS4 Permit requires Permittees to develop, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) to the waters of the U.S. In addition, it states that discharges from the MS4 to waters of the U.S. including Calleguas Creek, Santa Clara River, Ventura River, Malibu Creek, and Ventura County Coastal areas are required to meet water quality standards. Upon establishment of TMDLs by the State or the U.S. EPA, the State is required to incorporate the TMDLs into the State Water Quality Management Plan (40 CFR 130.6 (c) (1), 130.7). The Water Quality Control Plan for the Los Angeles Region (Basin Plan), and applicable statewide plans, serves as the State Water Quality Management Plan governing the watersheds under the jurisdiction of the LA Water Board. LA Water Board-issued NPDES permits must contain provisions consistent with the State Water Quality Management Plan.

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## V. DISCUSSION OF SPECIAL PROVISIONS

### A. General Requirements

#### **Non Storm Water Discharges** Discharges from Potable Water Sources

Federal Regulations promulgated on November 16, 1990 at 40 CFR 122.26 required Permittees to effectively prohibit all non-storm water discharges. However, the federal regulations also included a list of specific non-storm water discharges that "need not be prohibited." These discharges include among others, discharges from potable water sources.

This Regional Board, on April XX 2009, issued an NPDES permit for releases of potable water from distribution systems. Releases may occur only with the implementation of appropriate BMPs and dechlorination prior to discharge

#### **Municipal Action Levels** Introduction

The draft Tentative Ventura County MS4 Order establishes Municipal Action Levels (MALs) for selected pollutants based on a regional subset of nationwide Phase I MS4 monitoring data for pollutants in storm water. (<http://unix.eng.ua.edu/~rpitt/Research/Research.shtml>, last visited on August 14, 2007). The MALs were computed using the statistical based population approach, one of three approaches recommended by the California Water Board's Storm Water Panel in its report, 'The Feasibility of Numerical Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities (June 2006). The MALs were obtained by calculating the 80<sup>th</sup> percentile value of selected pollutants. The end-of-pipe

assessment points for the determination of MAL exceedances are the major outfalls, as defined in 40 CFR122.26(b)(5) and (b)(6). Staff chose to incorporate MALs derived from a USEPA Climate Zone 6 subset of nationwide MS4 data, included in the National Stormwater Quality Database, because of the large number of events sampled for each pollutant. A Climate Zone 6 subset of the nationwide MS4 dataset was used to assure that the calculated values were relevant to Ventura County monitoring data (Ventura County is in USEPA Climate Zone 6). The California Water Board's Storm Water Panel Final Report states, "the statistically based population approach would once again rely on the average distribution of measured water quality values developed from many water quality samples taken for many events at many locations." Over 100 events were sampled for all MAL pollutant included in the Order. Approximately 350 events were sampled for most MAL pollutants. In addition, the use of the nationwide dataset provided for the sampling of a wide variety of storm events. The Climate Zone 6 subset of the nationwide data includes events sampled for storms ranging from 0.02" to 9.85" rainfall depth. The nationwide data incorporates monitoring events from various areas/climate zones in the nation, notably USEPA Climate Zone 6, which includes Ventura County. The nationwide MS4 data is derived from the sampling of runoff from multiple land uses and drainage areas of varying sizes, from 0.4 acres to over 10,000 acres. The California Water Board's Storm Water Panel Final Report states, "In built-out urbanized environments, there are greater opportunities to examine various data sets for setting Action Levels." The report acknowledges the importance of monitoring various land uses, which are included in the National Stormwater Quality Database, and setting Action Levels based on a large number of sampling events, which are included in the National Stormwater Quality Database. Staff selected common storm water pollutants as MALs with the presumption that appropriate control of the selected pollutants would lead to appropriate control of the majority of storm water pollutants and serve as a quantifiable measure of storm water management program effectiveness.

Discussion of New Requirement

- 1) Beginning Year 3 after Order adoption date, a running average of twenty percent or greater of exceedances of any discharge of storm water from the MS4 to waters of the U.S. that exceed the Municipal Action Levels (MALs) for the pollutants listed in Attachment "C"

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(Municipal Action Levels) will require each permittee to affirmatively augment and implement all necessary storm water controls and measures to reduce the discharge of the associated class of pollutant(s) in accordance with the Maximum Extent Practicable (MEP) provision. Staff chose to incorporate a running average of 20% or greater exceedances of a MAL over a three year period to require Permittees to address pollutants that consistently demonstrated a potential threat to storm water quality. The purpose of this requirement is to help ensure that Permittee's do not act on sampling anomalies, but focus on identifying and eliminating sources of pollutants that consistently exceed MALs. The MAL requirement in the Ventura MS4 Order does not require that all outfalls be retrofitted with treatment Best Management Practices (BMPs). Staff's intent in incorporating the MAL requirement is to require Permittees to assess and implement effective program components such as industrial/construction inspections, public education and public agency activities to control pollutants in MS4 storm water discharges to the MEP

- 2) Permittees who have storm water discharges that continue to exceed a MAL pollutant(s) after Year 3 of the operative MAL(s) are required to demonstrate they have implemented adequate storm water control measures and BMPs to comply with the MEP criteria. To demonstrate compliance with the MEP standard, Permittees must submit to the Executive Officer (within three years of Permit Adoption), an MAL Action Plan for those subwatersheds with discharges in excess of the MALs. The plan should include an assessment of their storm water program, the sources responsible for the abnormal pollutant levels and the methodology used in identifying those sources (e.g. storm water computer modeling), the existing BMPs that address those sources, the additional practicable BMPs and/or actions the Permittee proposes to ensure compliance with the MEP standard, and a BMP implementation schedule for all structural and non-structural BMPs.
- 3) Within 90 days of the plan approval, the Permittee shall initiate the BMPs and actions proposed in the MAL Action Plan, together with any other practicable BMPs or actions that the Executive Officer determines to be necessary to comply with the MEP standard. The Permittee shall complete the proposed actions in accordance with the approved

implementation schedule. Upon completion of the actions specified in the approved MAL Action Plan, the Permittee shall re-monitor the subject subwatershed in accordance with the MRP, and submit a Post-Project MAL Assessment Report to the Executive Officer. The Executive Officer will either accept the report as evidence that the Permittee has complied with the MEP standard or, alternatively, identify additional actions which the Executive Officer determines necessary to comply with the standard.

## B. Watershed Initiative Participation

### Introduction

The Principal Permittee consents to participate in water quality meetings for watershed management and planning, including but not limited to the Southern California Stormwater Monitoring Coalition (SMC) and other Watershed planning groups, as appropriate.

### Participation

The Principal Permittee consents to participate in the following regional water quality programs, and projects for watershed management and planning:

- (a) SMC Regional Monitoring Programs
  - (1) Southern California Regional Bioassessment
    - (A) Level of effort per watershed
      - (i) Probabilistic sites per watershed
        - (I) Ventura River - Six
        - (II) Santa Clara River - Three
        - (III) Calleguas Creek - Six
      - (ii) Integrator sites per watershed
        - (I) Ventura River - One
        - (II) Santa Clara River - One

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- (III) Calleguas Creek – One
- (IV) Six
- (iii) Fixed sites per watershed
  - (I) Ventura River - One
  - (II) Santa Clara River - One
  - (III) Calleguas Creek - One
- (b) Southern California Bight Projects
  - (1) Regional Monitoring Survey – 2008, and successive years.

### C. Public Information and Participation Program

#### Introduction

Implementation of a PIPP is a critical BMP and a necessary component of a storm water management program. The State Board Technical Advisory Committee "recognizes that education with an emphasis on pollution prevention is the fundamental basis for solving nonpoint source pollution problems." The USEPA Phase II Fact Sheet 2.3 (Fact Sheet 2.3) finds that "An informed and knowledgeable community is critical to the success of a storm water management program since it helps insure the following: (i) greater support for the program as the public gains a greater understanding of the reasons why it is necessary and important, and (ii) greater compliance with the program as the public becomes aware of the personal responsibilities expected of them and others in the community, including the individual actions they can take to protect or improve the quality of area waters."

The USEPA's, Public Participation/Involvement Minimum Control Measure- fact Sheet, finds that Public education and outreach involves using effective mechanisms and programs, guided by a detailed outreach strategy, to engage the public's interest in preventing stormwater pollution. A key factor to consider when developing a strategy is that the public has varying levels of background knowledge of both storm water management and their role in reducing storm water

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pollution. Furthermore, the public can provide valuable input and assistance to a municipal storm water management program and, therefore, should play an active role in the development and implementation of the program. An active and involved community is essential to the success of a storm water management program because it allows for:

- Broader public support since residents who participate in the development and decision making process are partially responsible for the program and, therefore, are more likely to take an active role in its implementation.
- Shorter implementation schedules due to fewer obstacles in the form of public and legal challenges and increased sources in the form of residents volunteers.
- A broader base of expertise and economic benefits since the community can be a valuable, and free, intellectual resource; and A conduit to other programs as residents involved in the storm water program development process make important cross-connections and relationships with other community and government programs.

This benefit is particularly valuable when trying to implement a storm water program on a watershed basis.

#### Discussion of New Requirements

- 1) The Draft Ventura MS4 Permit requires Permittees to work with existing local watershed groups or organize establish watershed Citizen Advisory Groups/ Committees. The intent of this requirement is to solicit public input for messages/activities that will persuade the public to modify their common activities to reduce/prevent pollutants from being discharged in storm water. A paper presented by David Galvin during the 4th National Conference Nonpoint Source and Stormwater Pollution Education Programs October 17-20, 2005 \*Measuring Results from Outreach and Education Programs: Can We See Improvements Downstream? states, "Experiential programs appear to be more powerful than information

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campaigns, more likely to connect people with their watershed. Activities such as citizen volunteer monitoring, hands-on restoration, storm-drain-stenciling projects, and other ways to get an experiential element incorporated into the program have a greater likelihood of success. Get peoples' feet wet and their hands dirty. Once they have invested in the watershed, even in a tiny part of it, they will have more ownership." Direct feedback from the public on storm water pollution prevention messages can be an inexpensive alternative to traditional surveys and studies as well as promoting increased public support for storm water pollution prevention campaigns. The Draft Ventura MS4 Permit requires Permittees to establish watershed Citizen Advisory Groups/ Committees, which can be a subset of existing committees/groups. The intent of this requirement is to solicit public input for messages/activities that will persuade the public to modify their common activities to reduce/prevent pollutants from being discharged in storm water. A paper presented by David Galvin during the 4th National Conference Nonpoint Source and Stormwater Pollution Education Programs October 17-20, 2005 \*Measuring Results from Outreach and Education Programs: Can We See Improvements Downstream? states, "Experiential programs appear to be more powerful than information campaigns, more likely to connect people with their watershed. Activities such as citizen volunteer monitoring, hands-on restoration, storm-drain-stenciling projects, and other ways to get an experiential element incorporated into the program have a greater likelihood of success. Get peoples' feet wet and their hands dirty. Once they have invested in the watershed, even in a tiny part of it, they will have more ownership." Direct feedback from the public on storm water pollution prevention messages can be an inexpensive alternative to traditional surveys and studies as well as promoting increased public support for storm water pollution prevention campaigns.

- 2) The Draft Ventura MS4 Permit requires an increase in media impressions and identifies the media venues. The intent of these changes is to provide an increase in public knowledge of storm water pollution prevention practices in an effective and cost efficient manner. Several studies have found that an increase in the frequency of storm water pollution prevention messages contributes to the likelihood that these messages will be remembered.

- 3) The Draft Ventura MS4 Permit requires outreach to ethnically diverse communities. The USEPA, Tailoring Outreach Programs to Minority and Disadvantaged Communities and Children Fact Sheet finds that, "many residents of ethnically and culturally diverse communities don't speak English. English messages contained in public education outreach materials may not be effectively reaching a significant portion of some communities. The intent of this provision is to encourage behavior changes that reduce pollutants in storm water to a portion of the population who might otherwise be overlooked.
- 4) The Draft Ventura MS4 Permit requires Permittees to work with other regional and/or statewide agencies and associations such as the California Storm Water Quality Association (CASQA), to develop a corporate outreach program to educate and inform corporate and local managers about storm water regulations and Best Management Practices (BMPs). The intent of this provision is to ensure that management is aware of the potential impacts their business can have on storm water quality, facilitate compliance with storm water requirements, and give management sufficient guidance to train staff throughout their business on appropriate business practices to mitigate the potential water quality impacts of their operations.
- 5) The Draft Ventura MS4 Permit requires Permittees to implement a Business Assistance Program to provide technical information to small businesses to facilitate their efforts to reduce the discharge of pollutants in storm water. The provision requires the distribution of storm water pollution prevention education materials to operators of auto repair shops, car wash facilities (including mobile car detailing), mobile carpet cleaning services, commercial pesticide applicator services and restaurants providing guidance on appropriate business practices to mitigate the potential impacts their business practices can have on storm water quality.

**D. Industrial/Commercial Businesses Program**

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Purpose

The purpose of the **Industrial/Commercial Businesses Program** is to assure that the implementation of adequate controls and inspection and monitoring activities at industrial/commercial sites will assist municipalities comply with the Maximum Extent Practicable and water quality standards for discharges from their MS4s. The goal of the program is also to assure that the need not be permitted non-stormwater discharges, such as air conditioning condensate, drains for foundations, footings, and crawl spaces, etc., are not a significant source of pollution and the Permittees are actively enforcing the prohibition against non-stormwater discharges. The Permittees have the legal authority to actively control pollutants in storm water discharges, to prohibit illegal discharges/illicit connections, to control spills, and to require compliance with the local ordinances, including the implementation of source control BMPs and other necessary control measures and carry out inspections within their respective jurisdictions.

Legal Framework

In this third iteration of the MS4 stormwater discharges permit to be issued to Ventura County MS4 Permittees, there are a number of upgrades for the industrial/commercial business program in comparison with the previous 2000 permit. The upgrades are in line with the current requirements in the Los Angeles MS4 permit issued in 2001 and other MS4 permits recently issued in California, e.g. Sacramento, San Bernardino MS4 permits and nationwide, e.g. Seattle, Washington. This iterative approach for MS4 stormwater discharge permits, to contain better tailored BMPs, it is described by the USEPA in its *Interpretative Policy Memorandum on Reapplication Requirements* of MS4s issued by USEPA (61 Fed. Reg. 41697). In the Memorandum, USEPA specifies that "...[it] is seeking to improve existing MS4 storm water management programs by using information and experience municipalities have gained during the previous permit term." In its *Interpretative Memorandum Q&As* part (EPA 833-D-96-001), USEPA further clarified that based on the Section 301 of the Clean Water Act (CWA), it is required that discharger permits include effluent limitations necessary to meet State Water

Quality Standards (WQS). However, under the CWA and NPDES regulations, permitting authorities may employ a variety of conditions and limitations in storm water permits, including BMPs, performance objectives, narrative conditions, monitoring triggers, action levels (e.g., monitoring benchmarks, toxicity reduction action levels, etc.), as the necessary water quality-based effluent limitations.

The types of activities proposed in the new Ventura MS4 permit are similar with the conditions currently found in the Los Angeles MS4 permit. It is important to note that similar controls for industrial/commercial sites required by the Los Angeles MS4 permit, including inspection activities, are also required in the San Bernardino MS4 permit that was challenged in Court. In the decision for that case, the Appellate Court found that “[...] permittees are responsible for inspecting construction and industrial sites and commercial facilities within their jurisdiction for compliance with and enforcement of local municipal ordinances and permits” (*City of Rancho Cucamonga v. Regional Water Quality Control Bd.- Santa Ana Region (2006) Feb 27 Cal/4 E037079*).

On a separate action that challenged the Los Angeles MS4 permit, the Superior Court determined “that the Permit contains reasonable inspection requirements for these types of facilities... Addressing pollution after it has entered the storm sewer system is not working to meet legislative goals. More work is required at the source of pollution... Federal law requires [municipal] permittees to inspect dischargers... Nothing in the regulations precludes the inspections of facilities with state-issued permits...” (*In Re L.A. County Municipal Storm Water Permit Litigation (2004) BS080548*) In a subsequent decision, the Appellate Court upheld the Superior Court decision and the inclusion in the permit of the requirement to inspect industrial/commercial and construction sites (*County of Los Angeles et al. v. California State Water Resources Control Board et al. (2006) Nov 6 Cal/5 B184034*): “The legal authority extended to: requiring persons to comply with permittees’ ordinances; holding dischargers to storm drain systems accountable; controlling pollutants and their potential contributors; inspecting, watching, and monitoring procedures to insure compliance with the permit including prohibition of illicit discharges into storm drain systems; and requiring the use of best

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management practices to reduce pollutant discharge into the storm drain systems to the maximum extent possible”(underlined added). In addition, the Court recognized the Regional Board’s authority to require in NPDES permits the implementation of specific better-tailored BMPs that achieve compliance with the MEP and WQS: “the regional board has the authority to impose additional restrictions... the federal Clean Water Act authorizes National Pollutant Discharge Elimination Systems permits to set forth specific practices which will restrict polluted storm water runoff... Thus, nothing in state law is violated by the specific pollution control requirements imposed on the permittees.”

Regional Board is authorized under 40 CFR 122.44(k)(2) to require BMPs in lieu of numeric effluent limitations in NPDES permits when the Regional Board finds numeric effluent limitations to be infeasible. The Regional Board may also impose BMPs which are “reasonably necessary... to carry out the purposes of the Clean Water Act” under 40 CFR 122.44(k)(3). Both of these standards for imposing BMPs were recognized in *NRDC v. Costle, 568 F.2d 1369, 1380 (D.C. Cir. 1977)*. Furthermore as mentioned before, the same authority was recognized in the

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state Appellate Circuit in *County of Los Angeles et al. v. California State Water Resources Control Board et al.* (2006) Nov 6 Cal/5 B184034.

State of the pollution at sites of industrial/commercial activity

Since the NURP study<sup>1</sup> in early 1980s, sites of industrial activity demonstrated the potential of contributing higher quantities of pollutants into the stormwater runoff when compared with other land uses. Data from the NURP study were analyzed further in the *U.S. Geological Survey (USGS) Urban Storm Water Data Base for 22 Metropolitan Areas Throughout the United States* study<sup>2</sup>. The USGS report summarized additional monitoring data compiled during the mid-

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<sup>1</sup> Results of the Nationwide Urban Runoff Program, Volume 1—Final Report. U.S. EPA. 1983. Office of Water. Washington, D.C.

<sup>2</sup> U.S. Geological Survey Urban Storm Water Data Base for 22 Metropolitan Areas Throughout the United States. Driver, N.E., M.H. Mustard, R.B. Rhinesmith, and R.F. Middleburg. 1985. Report No. 85-337 USGS. Lakewood, CO.

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1980s, covering 717 storm events at 99 sites in 22 metropolitan areas, and documented problems associated with metals and sediment concentrations in urban stormwater runoff.

The *California Stormwater BMP Handbook - Industrial and Commercial* published in January 2003 by California Stormwater Quality Association (CASQA) lists as potential pollutants from sites of industrial activities: sediments, nutrients, metals, organics and toxicants, oil and grease, bacteria, pesticides. The type of activity or facility that potentially discharge those pollutants in stormwater runoff include vehicle & equipment fueling, vehicle & equipment maintenance and repair, outdoor loading & unloading of materials, outdoor storage of raw materials, products, and byproducts, building and grounds maintenance, parking/storage area maintenance.

USEPA's *Considerations in the Design of Treatment BMPs to improve Water Quality* (EPA 600/R-03/103, September 2002) also shows that lands of industrial/commercial use contribute significant loads of pollutant in urban areas. As examples, the industrial land uses may typically contribute 0.2 lb/ac/yr of lead, 0.4 lbs/ac/yr of zinc, 0.6 lb/ac/yr of chromium, 500 lb/ac/yr of

suspended solids, while commercial land uses typically contribute 2.7 lb/ac/yr of lead, 2.1 lb/ac/yr of zinc, 0.15 lb/ac/yr of chromium, 1,000 lb/ac/yr of suspended solids. In the same document urban stormwater pollutants event mean concentrations for different U.S. regions show concentrations for copper, lead, zinc consistently above water quality standards.

The water quality monitoring data submitted by the Ventura MS4 Permittees (Annual Monitoring Report 04-05) reveal that a number of constituents, such as metals, PAHs, pesticides exceeded the receiving water quality standards during wet events. Because studies and research demonstrated that the same types of pollutants are typically released in higher quantities into stormwater runoff from sites of industrial and commercial activities, there is a strong presumption that pollutants in stormwater runoff discharges from those sites cause or contribute to the exceedances.

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Studies that are more recent confirm that tendency. The *Critical Source Selection and Monitoring Report*<sup>1</sup> performed on behalf of Los Angeles MS4 Permittees, identified seven highest ranked pollution potential activities to be, in order of ranking: (i) wholesale trade (scrap, auto dismantling), (ii) *automotive repair/parking*, (iii) fabricated metal products, (iv) motor freight (including trucking), (v) chemical and allied products, (vi) automotive dealers/gas stations, (vii) primary metals products. It is significant to note that five out of seven categories of activities are subject to Phase I industrial storm water regulations. Although *automotive repair/parking* and *automotive dealers/gas stations* categories were not the focus of the Phase I storm water regulations, the study identified these commercial categories as significant potential pollutant contributors based on the principles developed in the critical source criteria study.

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<sup>1</sup> Critical Source Selection and Monitoring Report, Woodward-Clyde, 1997

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Rank (pollution potential) <sup>1</sup>	Industrial Category	SIC Code
1	Wholesale trade (scrap, auto dismantling)	50
2	Automotive repair/parking	75
3	Fabricated metal products	34
4	Motor freight (including trucking)	42
5	Chemical and allied products	28
6	Automotive Dealers/Gas Stations	55
7	Primary Metals Products	33

<sup>1</sup> Critical Source Selection and Monitoring Report (Table 1-3) - Woodward-Clyde, 1996

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More recent research reviewing stormwater monitoring data reveals that the stormwater runoff from industrial sites contains significant loads of pollutants. In *Utility of Stormwater Monitoring- H. Lee, M.K. Stenstrom- Water Environ. Res., 77, 219 (2005)*, the authors reviewed three years of stormwater monitoring data from industrial sites in Los Angeles County covered by the statewide Industrial Activities Stormwater General Permit (IASGP). The authors concluded that the data clearly show that certain industrial sectors contribute higher quantities of pollutants in the stormwater runoff. In addition, concentrations of metals exceeded the stormwater benchmark values suggested by the US EPA more frequently than the basic water-quality parameters. In *Industrial Storm Water Monitoring Program Existing Statewide Permit Utility and Proposed Modifications (H. Lee, M.K. Stenstrom -US EPA cooperative agreement CP-82969201 from the California State Water Resources Control Board, contract number 02-172-140-0, 2005)* the authors examined data collected over the nine-year period from 1992 to 2001 from industrial sites in Los Angeles and Ventura County covered by the statewide IASGP. The analysis of the expanded data set confirmed the conclusions of the prior research that industrial/commercial sites contribute higher quantities of pollutants in the stormwater runoff.

Nationwide and statewide research and monitoring data has shown that nurseries are also a category of facilities that tend to release a higher quantity of pollutants in stormwater runoff. Recognizing this class of facilities and activities as a potential source of pollutants, the Regional Board adopted a *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region (Waiver)*, Order No. R4-2005-0080. The Waiver covers discharges from “irrigated lands where water is applied for producing crops and, ... includes, but is not limited to, land planted for row, vineyard, field and tree crops as well as nurseries, nursery stock production, and greenhouse operations... which are not subject to waste discharge requirements, including Municipal Separate Storm Sewer System (MS4) or other National Pollutant Discharge Elimination System (NPDES) permits.” However, because the non-agricultural nurseries present in the urban environment can manifest the same characteristics as their agricultural counterparts, the nurseries under specified NAICS codes are covered under the current Ventura MS4 permit.

Proposed Enhancements

The new permit requirements build on the activities and experience gained in the previous ones and moves from a more educational effort to the next iteration of better source control BMPs implementation, inspection and enforcement. A special emphasis is put on mandatory implementation of a baseline minimum set of common sense source control BMPs recommended by the California Stormwater Quality Association (CASQA) BMP Handbook similar to the approach suggested by the Permittees in their ROWD for controlling pollution in stormwater discharges from construction sites.

In their ROWD, the Ventura County Permittees did not propose an enhancement of their program to control pollutants in stormwater runoff from industrial/commercial sites into the MS4 further than the provisions contained in the 2000 permit. The Permittees also did not propose any improvements in the monitoring program to better characterize the discharge of pollutants from sites of industrial or commercial use and prioritize the activities to control them. In addition, the Permittees did not propose any improvements in the type and extent of BMPs that must be implemented at industrial/commercial sites in order to control the quantity of pollutants into the stormwater runoff discharged into their MS4s. The Permittees must require the implementation of such controls at industrial/commercial sites to the extent that municipalities can comply with the MEP and water quality standards for discharges of stormwater from their MS4s.

Based on the dual coverage and partnership approach between the permitting authority and municipalities that the USEPA called for in the storm water regulations and in order to best use limited resources at the State and local level, the permit includes the following improvements.

Recognizing that this permit represents a *third iteration* permit, and building upon the experience and tools developed under the previous permits, the Industrial/Commercial program has been elevated to an inspection, baseline mandatory source control BMPs implementation and enforcement program. Based also on the extensive educational effort performed by the Permittees since mid 1990s to familiarize industrial and commercial site operators with the

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requirements of the stormwater pollution prevention techniques and municipal regulations the new permit includes a number of enhancements. Municipalities are required to control the storm water discharges associated with industrial activities and other commercial facilities identified as significant contributors of pollutants through the implementation of a mandatory baseline minimum set of source control BMPs;

performance of an inspection program to verify the adequacy of BMPs implementation in the field and compliance with the municipal ordinances; and assist the Regional Board in ensuring that industrial activities subject to regulations are covered by the general industrial stormwater permit. Regional Board will also assist the municipalities in case of instances of egregious non-compliance with the municipal ordinances and state and federal laws and regulations.

Many owner/operators of industrial/commercial sites should be familiar by now with the legal requirements outlined in the municipal ordinances and the type of BMPs necessary to minimize the contribution of pollutants into stormwater runoff from their sites. The enhancements are also based on the results of the monitoring data showing that pollutants of concern that are typically discharged from sites of industrial and commercial activities cause or contribute to the exceedances of the water quality standards. The permit includes conditions that the Permittees:

- Continue to update the inventory of industrial/commercial sites under their jurisdiction;
- Perform routine inspections;
- Require minimum set of source control BMPs implementation as a baseline;
- Enforce against violators of the municipal ordinances requirements.

The permit also provides for an enhanced coordination between Municipal and RB stormwater industrial programs.

Costs Evaluation

These permit enhancements have a limited financial impact and represent only an incremental increase in costs. A number of municipalities are already performing inspections, many of them in a very efficient way by combining various regulatory aspects, e.g. industrial waste, stormwater, etc., into one consolidated inspection program. Therefore, for those municipalities the increase in costs may be fiscally minimal to neutral. For those municipalities that performed site visits only, the increase may be incrementally elevated but by sharing in the experience of the municipalities that use a consolidated inspection program where the stormwater inspections are an addition to an already existing inspection program, those costs can be minimized. The *Pollution Source Control Practices Manual 8* (Center for Watershed Protection, July 2004) estimates that non-regulatory site inspections (site visits) range in cost between \$30 to \$80 per facility. The regular site inspections range in cost between \$75 to \$175 per facility. For on site illicit discharge investigations where the threat to water quality is higher or the damage already occurred the costs range from \$200 to \$900 per facility, but the municipalities in many cases can recuperate those costs through an enforcement action allowed under municipal ordinances. In order to alleviate some of the added costs, a number of municipalities use a permitting approach for sites of industrial/commercial activity discharging stormwater runoff into the MS4. The cities collect a fee as a consolidated charge for permitting a facility for various municipal services such as pretreatment, stormwater, potable water, solid waste, etc., programs.

The *California Stormwater BMP Handbook - Industrial and Commercial* states that source control BMPs are preferred over treatment control BMPs because they are generally effective if implemented properly and are usually, but not always, less costly than treatment control BMPs. Typical source control nonstructural (operational) and structural BMPs include using alternative less toxic chemicals and covering an activity area that is a pollutant source. The BMP Handbook continues to state: "the axiom of "80% of the problem can be solved with 20% of the effort" probably is true for most industries. Low or modest cost BMPs, many of which may already be in place, will usually provide satisfactory protection." The BMP Handbook provides a list of the categories of structural and operational source control BMPs that should be considered:

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- Installing berms or simple curbing to divert runoff water from around the activity area to reduce the amount of polluted stormwater leaving the area;
- Implementing overhead coverage: this includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with stormwater and authorized non-stormwater discharges;
- Using secondary containment structures: this generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills;
- Moving an outdoor operation indoors;
- Designating equipment wash areas;
- Good housekeeping;
- Preventive maintenance;
- Spill prevention and response;
- Material handling and storage;
- Material and practices substitution;
- Waste handling and recycling;
- Employee training;
- Routine inspections;
- Record keeping and internal reporting;
- Quality assurance

As early as the early 1990's, USEPA recognized that: "EPA believes the pollution prevention approach is the most environmentally sound and cost-effective way to control the discharge of pollutants in stormwater runoff from industrial facilities... The first class of management practices includes those that are low in cost, applicable to a broad class of industries and substances, and widely considered essential to a good pollution control program. Some examples of practices in this class are good housekeeping, employee training, and spill response and prevention procedures. The second class includes management practices that provide a second line of defense against the release of pollutants. This class addresses containment, mitigation, and cleanup... Experience with these practices and controls has shown that they can be used in

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permits to reduce pollutants in storm water discharges in a cost-effective manner.” (58 Fed. Reg. 61162) A number of municipalities in the nation, such as Pierce County, Washington, under Ordinance No. 96-47 are already requiring the implementation of mandatory source control BMPs since the late 1990’s.

Although the operational source control measures are considered inexpensive, typically involving the costs of staff performing good housekeeping activities with the use of low cost materials and tools, for some of the structural source control BMPs some costs data is available. For example, in the *Pollution Source Control Practices Manual* the costs for storage protection devices range from \$3.50 to \$5.00 per square foot of concrete slab (6”), containment pallets from \$50 to \$350 based on the size and number of barrels to be stored, for storage buildings from \$6 to \$11 per square foot, and between \$25 to \$500 for tarps and canopies depending on the size of area to cover. Also, discounted spill containment kits, storm drain plugs, drip pans, tarps, range in cost from \$60 to \$250 per facility.

For the educational aspect of their program, it is estimated that a presentation to a business group ranges in cost between \$40 to \$60 per hour, while a business recognition program, such as Sacramento’s *Clean Water Business Partner Program* range in cost between \$40 to \$75 per facility. Municipalities can also employ a Stormwater School concept that requires owners/operators found in minor violation of the stormwater ordinances to participate in a mandatory stormwater quality protection seminar. Similar techniques used for the Pretreatment Program showed that participation by high-level management from non-compliant permittees in such courses demonstrated a higher rate of compliance after the participation. This technique can be used in lieu of a fine or issuance of a Notice of Violation for minor violations of the municipal code.

In some cases, the baseline source control measures alone may not be sufficient to assure the reduction of pollutants in stormwater runoff to levels that will guarantee compliance with the applicable standards. In those instances, the municipalities have the legal authority to require the mitigation of pollution through the implementation of additional treatment controls. This is of

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elevated importance for areas of the MS4s that may discharge into receiving waters of increased environmental sensitivity or in need of special protection.

Conclusion

Because the ROWD submitted by the applicants does not include any proposed significant improvements and because the monitoring data submitted by the Permittees shows exceedances of water quality standards for a number of pollutants that can be released in stormwater runoff from industrial/commercial sites the proposed enhancements are appropriate and reasonable. The municipalities have performed an extensive effort to educate the industrial/commercial site owners/operators about the source control pollution prevention techniques for over a decade. They also familiarized the facility owners/operators with the requirements of the municipal ordinances as they pertain to the protection of the quality of stormwater runoff. The types of baseline source control measures required by the permit are proven very effective and inexpensive in most cases. Many of these measures should be part of the routine operations by now, such as good housekeeping, employee training, elimination of non-stormwater discharges, removal of illicit connections, etc. Since many of these techniques are already implemented, they should not represent a significant fiscal burden for compliance for the industrial/commercial facilities.

There is ample case law that demonstrates and supports Regional Board's authority to require the enhancements proposed in this permit. The additional requirements represent only an incremental fiscal burden for the Permittees, many of whom currently perform activities close to the level expected by the proposed permit. The permit also builds on the tools and activities prescribed in the previous permits in an iterative mode, focusing on implementation of better-tailored BMPs, inspection, enforcement activities and a better coordination with the Regional Board's activity for a more efficient use of limited resources.

The administrative record contains a substantial volume of technical and legal material that supports the findings of this permit. The significant amount of documentation material currently

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available demonstrates that many effective techniques and methods are available, in many cases at low or moderate costs levels. One of the remaining challenges is to assure their full and unequivocal implementation at every industrial/commercial site that contributes or has the potential to contribute significant quantities of pollutants in the stormwater runoff discharges. [Briefly, the level to be achieved is the "Pharmacy Cleanliness" level due to aggressive source control and pollution prevention BMPs implementation, inspection and enforcement.]

**E. Planning and Land Development Program**

Post construction land development control requirements on new development and redevelopment offer the most cost-effective strategy to reduce pollutant loads to surface waters. Retrofit of existing development will be expensive and may be considered on a targeted basis. Studies on the economic impacts of watershed protection indicate that storm water quality

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management has a positive or at least neutral economic effect while greatly improving the quality of surface waters.<sup>1</sup>

The USEPA storm water regulations at 40 CFR 122.26 require that pollutants in storm water be reduced to MEP. The USEPA's definition is intentionally broad to provide maximum flexibility in MS4 permitting and to give municipalities the opportunity to optimize pollutant reductions on a program-to-program basis.<sup>2</sup> The definition of MEP has generally been applied to mean implementation of economically achievable management practices. Because storm water runoff rates can vary from storm to storm, the statistical probabilities of rainfall or runoff events become economically significant and are central to the control of pollutants through cost

<sup>1</sup> *The Economics of Watershed Protection*, T. Schueler (1999), Center for Watershed Protection, Endicott, MD. The article summarizes nationwide studies to support the statement that watershed planning and storm water management provides positive economic benefits.

<sup>2</sup> *Storm Water Phase II Final Rule – Pre-Federal Register Version*, p 87 (USEPA 1999). See USEPA's discussion in response to challenges that the definition is sufficiently vague to be deemed adequate notice for purposes of compliance with the regulation.

effective BMPs. Further, it is recommended that storm water BMPs be designed to manage both flows and water quality for best performance.<sup>1</sup> It is equally important that treatment control BMPs once implemented be routinely maintained.

Financing the MS4 program offers a considerable challenge for municipalities. A proven successful financing mechanism is the establishment of a storm water utility.<sup>2</sup> Utility fees, which are assessed on the property owner based on some estimate of storm water runoff generated for the site, are a predictable and dedicated source of funds. Utility fees can also provide a mechanism to provide incentives to commercial and industrial property owners to reduce impervious surface areas. Such incentives offer flexibility to property owners to choose the better economic option – paying more fees or making improvements to reduce runoff from the site.

<sup>1</sup> *Urban Runoff Pollution – Summary Thoughts* – The State of Practice Today and For the 21<sup>st</sup> Century. Wat. Sci. Tech. 39(2) pp. 353-360. L.A. Roesner (1999)

<sup>2</sup> *Preliminary Data Summary of Urban Storm Water Best Management Practices* (1999), Report No. USEPA-821-R-99-012, USEPA. The document reviews municipal financing mechanisms and summarizes experience in the U.S. to date.

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Review of Design Standards

The American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for storm water that is derived from a mathematical equation to maximize treatment of runoff volume for water quality based on rainfall/ runoff statistics and which is economically sound.<sup>1</sup> The maximized treatment volume is cut-off at the point of diminishing returns for rainfall/ runoff frequency. On the basis of this equation the maximized runoff volume for eighty-five percent treatment of annual runoff volumes in California can range from 0.08 to 0.86 inches depending on the imperviousness of the watershed area and the mean rainfall.<sup>2</sup>

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<sup>1</sup> *In Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. 259 pp. (1998).

<sup>2</sup> *Sizing and Design Criteria for Storm Water Treatment Controls, Presentation to California Storm Water Quality Task Force,* November 13, 1998, Sacramento, CA. L.A. Roesner, Camp Dresser McKee.

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Other methods of establishing numerical BMP design standards include: (i) Percent treatment of the annual runoff; (ii) Full treatment of runoff from rainfall event equal to or less than a predetermined size; and (iii) Percent reduction in runoff based on a rainfall event of standard size.<sup>1</sup> These numerical design standards have been applied to Development Planning in Puget Sound, WA; Alexandria, VA; Montgomery County, MD; Denver, CO; Orlando, FL; Portland, OR; and Austin, TX.

Some States have established numerical standards for sizing storm water post-construction BMPs for new development and significant redevelopment. The State of Maryland has established storm water numerical criteria for water quality of 0.9 to 1 inch, and BMP design standards in a unified approach combining water quality, stream erosion potential reduction,

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<sup>1</sup> *Sizing and Design Criteria for Storm water Quality Infrastructure, Presentation at California Regional Water Quality Control Board Workshop on Standard Urban Storm Water Mitigation Plans, August 10, 1999, Alhambra, CA., R.A. Brashear, Camp Dresser McKee.*

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groundwater recharge, and flood control objectives.<sup>1</sup> The State of Florida has used numerical criteria to require treatment of storm water from new development since 1982, including BMPs sized for 80 percent reduction (95 percent for impaired waters) in annual TSS loads derived from the 90 percent (or greater for impaired waters) annual runoff treatment volume method for water quality.<sup>2</sup> The State of Washington has proposed at least six different approaches of establishing storm water numerical mitigation criteria for new development, which add 10,000 square feet of impervious surface or more for residential development, and 5,000 square feet of impervious surface or more for other types of development.<sup>3</sup> Other mitigation criteria options include the

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<sup>1</sup> *Maryland Storm Water Design Manual* - (Maryland Department of the Environment 2000).

<sup>2</sup> *Florida Development Manual: A Guide to Sound Land and Water Management* (Florida Department of Environmental Protection 19xx). The manual describes structural and non-structural construction and post construction BMPs design criteria.

<sup>3</sup> *Storm Water Management in Washington State Volumes 1 – 5*. (Washington Department of Ecology 2001). The volumes 1,3 and 5 are most relevant to new development standards and cover Hydrologic and Flow Control Designs, Minimum Technical Requirements and Treatment BMPs. The volumes were adopted as statewide standards in late 2001.

90<sup>th</sup> percentile 24-hour rainfall event (used by the State of Maryland) and the six month 24 hour rainfall event (used by the State of Washington).

On a national level, the USEPA is planning to standardize minimum BMP design and performance criteria for post-construction BMPs, and will likely build from the experience of effective state and local programs to establish national criteria.<sup>1</sup> The USEPA, based on the NURP, supports the first half-inch of rainfall as generating first flush runoff.<sup>2</sup> First flush runoff is associated with the highest pollutant concentrations, and not pollutant load. The USEPA considers the first flush treatment method, the rainfall volume method, and the runoff capture volume method as common approaches for sizing of water quality BMPs.

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<sup>1</sup> *Storm Water Phase II Final Rule* – 64 Fed. Reg. 68759. See USEPA's discussion on construction and post-construction BMP requirements for Phase II.

<sup>2</sup> *A Watershed Approach to Urban Runoff: Handbook for Decisionmakers*, Terrene Institute and USEPA Region 5 (1996). See discussion on sizing rules for water quality purposes, p 36.

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On April 22, 1999, the Los Angeles Regional Board approved a List of BMPs for MS4 Permittees to select from and required implementation of the most effective BMPs in their Development Planning and Development Construction programs.<sup>1</sup> The State Board issued a precedential decision<sup>2</sup> on the matter in Order WQ 2000-11, largely sustaining the new development requirements as approved by the LA Regional Board. The State Water Board articulated its support for regional solutions and the mitigation banking.

The post construction requirements for Ventura County were first adopted as Stormwater Quality Urban Impact Mitigation Plans in Board Order No. 00-108, in 2000. It established new development and significant redevelopment conditions for residential, commercial, and industrial new development and redevelopment projects in the following categories:

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<sup>1</sup> (Board Resolution No. 99-03).

<sup>2</sup> *State Water Board Order WQ 2000-11*: SUSMP; Memorandum from Chief Counsel to Regional Board Executive Officers, (December 26, 2000) discusses statewide policy implications of the decision.

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The SQUIMP included numerical design criteria for structural and treatment control BMPs. The criteria included were:

- a) the 85<sup>th</sup> percentile 24-hour runoff event, determined as the maximized capture storm water volume for the area from the formula recommended by the WEF and ASCE study<sup>1</sup>; or
- b) the annual runoff volume, based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the BMP Handbook;<sup>2</sup>
- c) the volume of runoff produced from each and every storm event up to and including a historical-record based reference 24-hour rainfall criterion for "treatment" that achieves

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<sup>1</sup> *In Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE Manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. (1998).

<sup>2</sup> *California Storm water Best Management Practices Handbook – Industrial/ Commercial,* (1993)



approximately the same reduction in pollutant loads achieved by the 85<sup>th</sup> percentile 24-hour runoff event; and/or

- d) the flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
- e) 10% of the 50-year design flow rate,
- f) the flow of runoff produced from a rain event equal to at least two times the 85<sup>th</sup> percentile hourly rainfall intensity for Ventura County; or
- g) the flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

The present Order integrates and advances the post-construction requirements in the Land Development and Planning Section as follows ----

#### **LOW IMPACT DEVELOPMENT (LID)**

The Ventura MS4 Order integrates and advances the post-construction requirements in the Land Development and Planning Section by incorporation numeric metrics for Low Impact Development (LID). This Order promotes land development and redevelopment strategies that consider water quality and water management benefits associated with smart growth techniques. Such measures may include hydromodification mitigation requirements, minimization of impervious surfaces, integrated water resources planning, and low impact development guidelines. (Reference: *Protecting Water Resources with Smart Growth*, EPA 231-R-04-002, U.S. EPA 2004; *Using Smart Growth Techniques as Storm Water Best Management Practices*, EPA 231-B-05-002, U.S. EPA 2005; *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*, EPA 231-K-06-001, U.S. EPA 2006; *Protecting Water Resources with Higher-Density Development*, EPA 231-R-06-001, U.S. EPA 2006.)

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LID is an approach to land development (or re-development) that works with nature to manage stormwater as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat stormwater as a resource rather than a waste product. LID practices that have been used to adhere to these principles include bioretention facilities, rain gardens, vegetated rooftops, rain barrels, and permeable pavements.

LID integrates small-scale measures scattered throughout the development site. Constructed green spaces, native landscaping, and a variety of innovative bioretention and infiltration techniques capture and manage stormwater on-site. LID reduces peak runoff by allowing rainwater to soak into the ground, evaporate into the air, or collect in storage receptacles for irrigation and other beneficial uses. In areas with slow drainage or infiltration, LID captures the first flush before excess stormwater is diverted into traditional storm conveyance systems. The result is development that more closely maintains pre-development hydrology. Furthermore, LID has been shown to be cost effective, and in some cases, cheaper than using traditional stormwater management techniques.

**Low Impact Development Principles and Practices** [DD2] (Natural Resources Defense Council, Stormwater Strategies Community Responses to Runoff Pollution, Chapter 12 Low Impact Development)

LID is grounded in a core set of principles based on the paradigm that stormwater management should not be seen as stormwater disposal and that numerous opportunities exist within the developed landscape to control stormwater runoff close to the source. Underlying these principles is an understanding of natural systems and a commitment to work within their limits whenever possible. Doing so creates an opportunity for development to occur with low environmental impact. The principles are:

- integrate stormwater management early in site planning activities
- use natural hydrologic functions as the integrating framework

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- focus on prevention rather than mitigation
- emphasize simple, nonstructural, low-tech, and low cost methods
- manage as close to the source as possible
- distribute small-scale practices throughout the landscape
- rely on natural features and processes
- create a multifunctional landscape

LID uses a systems approach that emulates natural landscape functions. A near limitless universe of runoff control strategies, combined with common sense and good housekeeping practices, are the essence of a LID strategy.

These basic strategies, also known as integrated management practices, rely on the earth's natural cycles, predominantly the water cycle, to reduce land development impacts on hydrology, water quality, and ecology. Integrated management practices combine a variety of physical, chemical, and biological processes to capture runoff and remove pollutants at the lot level.

Several strategies focus on disconnecting roofs and paved areas from traditional drainage infrastructure and conveying runoff instead to bioretention areas, swales, and vegetated open spaces. LID also strives to prevent the generation of runoff by reducing the impervious foot print of a site, thereby reducing the amount of water that needs treatment. The end hydrological results are a reduction in runoff volume, an increased time of concentration, reduced peak flow and duration, and improved water quality.

LID includes integrating land and infrastructure management. Activities such as street sweeping, toxic-free and low-impact landscaping, frequent cleaning of catch basins, sediment control, and downspout disconnection all reduce runoff contamination. LID works equally well in new development and redevelopment projects and is easily customized to complement local growth management, community revitalization, and watershed protection goals.

**Effective Impervious Area Principles** (California Stormwater Quality Association (CASQA), the Stormwater Monitoring Coalition (SMC), and the University of Southern California Sea Grant (USC Sea Grant) *Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California*)

The Tentative Ventura MS4 Order implements the LID provision by requiring new and redevelopment projects to disconnect Effective Impervious Area (EIA) by incorporating LID strategies into the site design. The increase in impervious cover has been shown to negatively impact water quality and increase runoff flow which can damage downstream habitat. Recent studies indicate that California's intermittent and ephemeral streams are more susceptible to the effects of hydromodification than streams from other parts of the United States (US). Physical degradation of stream channels in the central and eastern US can initially be detected when watershed impervious cover approaches 10%, although biological effects (which may be more difficult to detect) may occur at lower levels. In contrast, initial response of streams in the semi-arid portions of California appears to occur between 3% and 5% impervious cover.

**LID Techniques** [DD3] (U.S.EPA, Low Impact Development and Other Green Design Strategies)

LID can be simple and effective. Instead of relying solely on complex and costly collection, conveyance, storage and treatment systems, LID employs a range of economical devices that control runoff at the source.

- Bioretention cells, commonly known as rain gardens, are relatively small-scale, landscaped depressions containing plants and a soil mixture that absorbs and filters runoff.
- Cisterns and rain barrels harvest and store rainwater collected from roofs. By storing and diverting runoff, these devices help reduce the flooding and erosion caused by stormwater runoff. And because they contain no salts or sediment, they can provide

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"soft" chemical-free water for garden or lawn irrigation, reducing water bills and conserving municipal water supplies.

- Green roofs are roof-tops partially or completely covered with plants. Used for decades in Europe, green roofs help mitigate the urban "heat island" effect and reduce peak stormwater flows. The vegetated cover also protects and insulates the roof, extending its life and reducing energy costs.
- Permeable and porous pavements reduce stormwater runoff by allowing water to soak through the paved surface into the ground beneath. Permeable pavement encompasses a variety of mediums, from porous concrete and asphalt, to plastic grid systems and interlocking paving bricks suitable for driveways and pedestrian malls. Permeable pavement helps reduce runoff volumes at a considerably smaller cost than traditional storm drain systems.
- Grass swales are broad, open channels sown with erosion resistant and flood tolerant grasses. Used alongside roadways for years primarily as stormwater conveyances, swales can slow stormwater runoff, filter it, and allow it to soak into the ground. Swales and other biofiltration devices like grass filter-strips improve water quality and reduce in-stream erosion by slowing the velocity of stormwater runoff before it enters the stream. They also cost less to install than curbs, storm drain inlets, and piping systems.

**LID Cost Analysis** (U.S. EPA, Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices Fact Sheet<sup>(DD4)</sup>)

Seventeen case studies were reviewed and evaluated to compare the projected or known costs of LID practices with those of conventional development approaches. It concludes that applying LID techniques can reduce project costs and improve environmental performance. In most cases, LID practices were shown to be both fiscally and environmentally beneficial communities. In a few cases, LID project costs were higher than those for conventional stormwater management projects. However, in the vast majority of cases, significant savings were realized due to reduced costs for site grading and preparation, stormwater infrastructure, site paving, and landscaping. Total capital cost savings ranged from 15 to 80 percent when

LID methods were used, with a few exceptions in which LID project costs were higher than conventional stormwater management costs.

### Reference Numeric Standards for LID

Numeric storm water standards are available from jurisdictions nationwide. Specific citations are included below [DDs].

#### Pennsylvania:

- Pennsylvania Stormwater Best Management Practices Manual: *“Capture at least the first two inches of rainfall from all impervious surfaces and retain onsite (through reuse, evaporation, transpiration, and/or infiltration) at least the first one inch of runoff” (Pennsylvania Stormwater Best Management Practices Manual).*

As noted in the Pennsylvania Stormwater Best Management Practices Manual (PSBMPPM), Pennsylvania laws and regulation do not directly manage storm water at the state level, although some state level management occurs through the Stormwater Management Act and the NPDES permitting program. However, the PSBMPPM are required in the draft 2009 Pennsylvania Model Stormwater Management Ordinance (SMO) which then required in the draft March 2009 NPDES Stormwater Discharges from MS4s General Permit.

- Control Guideline 2 or the Simplified Method
  - The first 2” of runoff from NEW impervious surfaces be captured.
  - At least the first 1” of runoff from NEW impervious surfaces be permanently removed from the runoff flow through reuse, evaporation, transpiration and/or infiltration.

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- Where possible, all permanently removed runoff should infiltrated; however, it is suggested that in all cases at least 0.5" should be infiltrated.

**Anacostia, Washington, D.C.**

Final Environmental Standards June 2007: For all projects developed on

- AWC land or financed by AWC must implement enhanced stormwater management as follows *"Retain onsite the first one inch of rainfall and provide water quality treatment for rainfall up to the two-year storm volume"*

**West Virginia**

- Draft permit under consideration in West Virginia: *"Retain onsite the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation"*

**Georgia**

- Georgia Stormwater Management Manual: *"Treat the runoff from 85% of the storms that occur in an average year (i.e., provide treatment for the runoff that results from a rainfall depth of 1.2 inches)"*

**Central Coast, California (RWQCB)**

- Letter to small MS4s: *"Limit effective impervious area ("EIA") at development projects to no more than 5% of total project area (interim criteria); establish an EIA limitation between 3% and 10% in local stormwater management plans (permanent criteria)"*

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## F. Development Construction Program

### Introduction

Soil disturbing activities during construction and demolition exacerbate sediment losses. Sediment is a primary pollutant impacting beneficial uses of watercourses. Sediments, and other construction activity pollutants must be properly controlled to reduce or eliminate adverse impacts.

#### 1. Enhanced BMPs

- (a) Each permittee shall implement a program to control storm water discharges from construction activity at all construction sites within its jurisdiction.
- (b) Each Permittee shall implement, or require implementation of, enhanced practices to address the threat to water quality posed by all construction sites on hillsides as defined in this Order and construction sites that directly discharge to a waterbody listed on the CWA § 303 (d) list for siltation or sediment, or that occur within or directly adjacent to an Environmentally Sensitive Area (ESAs). Construction sites located on hillsides, adjacent to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to ESAs are termed "High risk sites."
  - (A) On hillsides with slopes 20% or steeper prior to land disturbance (If hillside development is not defined by a zoning ordinance, then the prohibition will apply to steep or long continuous slopes, or areas with silty soils, fine sands, or soils lacking vegetative cover.).
  - (B) Directly discharging to a waterbody listed on the CWA § 303 (d) list for siltation or sediment; or
  - (C) Within or adjacent to an environmentally sensitive area (ESAs)



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(c) Depending on the project area, the developer shall implement the Erosion and Sediment control BMPs listed in the following Tables 6, 7, and 8.

2. Construction Sites Less than an Acre

This permit intends that each permittee shall require the implementation of an effective combination of the following BMPs at all construction sites (see Table 6- BMPs at Construction sites less than 1 acre) to prevent erosion and sediment loss, and the discharge of construction wastes. The BMPs are from the California BMP Handbook, Construction, January 2003 and the Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March

2003, and addenda. Where the Erosivity Factor (R) for the construction project is 50 or greater, erosion controls (erosion avoidance) are the preferred BMPs.<sup>1</sup>

Table 1 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
<b>Scheduling</b>	EC-1	SS-1
<b>Preservation of Existing Vegetation</b>	EC-2	SS-2
<b>Sediment Controls</b>		
<b>Silt Fence</b>	SE-1	SC-1
<b>Sand Bag Barrier</b>	SE-8	SC-8
<b>Stabilized Construction Site Entrance/Exit</b>	TC-1	TC-1

<sup>1</sup> Fact Sheet, *Construction Rainfall Erosivity Waiver* (2001) EPA 833-F-00-014; *Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE)* (1997), USDA Agricultural Handbook No. 703.

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Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
For Erosion Control		
Non-Storm Water Management		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>1</sup>	NS-2	NS-2
Waste Management		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

<sup>1</sup> Ponedged storm water may be discharged at a concentration of Total Suspended Solids (TSS) of 100mg/L or less.

3. Construction Sites 1 acre or greater but Less than 5 acres
  - (a) Each permittee shall require the implementation of an effective combination of the following BMPs in Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) at all construction sites 1 acre and greater but less than 5 acres to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 2 - BMPs at Construction sites 1 acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
Non-Storm Water Management		

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Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

4. Construction Sites 5 acres and Greater

- (a) Each permittee shall require the implementation of an effective combination of the following BMPs in Table 8 (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) and Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 3 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
Sediment Controls		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Tracking Control BMPs		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
Non-Storm Water Management		
Vehicle and Equipment Maintenance	NS-10	NS-10
Waste Management		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

5. Local Agency Requirements

- (a) Each permittee shall require for all construction sites 1 acre or greater, compliance with all conditions identified in the preceding subparts F.1 - F.5, and the following requirements:

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- (1) Local Storm Water Pollution Prevention Plan (Local SWPPP),
  - (A) Each permittee shall require the preparation and submittal of a Local SWPPP, for the permittee's review and written approval prior to issuance of a grading or construction permit for construction projects. If the Local SWPPP is revised, the permittee shall review and approve those revisions. The permittees' approval signature shall be contained within the first pages of the Local SWPPP (with sufficient room for approval of revisions.)
    - (i) The permittee shall not approve any Local SWPPP unless it contains appropriate site-specific construction site BMPs, specific locations, and maintenance schedules.
    - (ii) The Local SWPPP must include the rationale used for selecting or rejecting BMPs. The project architect, or engineer of record, or authorized qualified designee, must sign a statement on the Local SWPPP to the effect:
      - (I) ***"As the architect/ engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project's construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity."***
- (2) Certification Statement
  - (A) Each permittee shall require that each landowner or the landowner's agent sign a statement on the Local SWPPP to the effect:
    - (i) *"I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and*

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*evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/ or adequately implement the Local SWPPP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

- (B) The Local SWPPP certification shall be signed by the landowner as follows:
  - (i) Corporation - by a responsible corporate officer which means the following:
    - (I) President, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
    - (II) Manager of the construction activity if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
  - (ii) Partnership or sole proprietorship - by a general partner or the proprietor; or
  - (iii) Municipality or other public agency - by an elected official, a ranking management official (e.g., County/ City Administrative Officer, City Manager, Director of Public Works, or City Engineer).

6. Roadway Paving or Repaving Operations (For Private or Public Projects)

- (a) Each permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.
  - (1) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
  - (2) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat
  - (3) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or watercourses
  - (4) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt
  - (5) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose properly
  - (6) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed off properly
  - (7) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly
  - (8) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm
  - (9) Cover loads with tarp before haul-off to a storage site, and do not overload trucks
  - (10) Minimize airborne dust by using water spray during grinding
  - (11) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or watercourses
  - (12) Protect stockpiles with a cover or sediment barriers during a rain

7. Site Tracking System

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- (a) Each permittee shall use an site system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each permittee. To satisfy this requirement, the use of a database or GIS system is encouraged.

8. Inspections

- (a) Each permittee shall inspect all construction sites for the implementation of storm water quality controls a minimum of once during the wet season. Concurrently, each permittee shall ensure that:
  - (1) The Local SWPPP is reviewed for compliance with local codes, ordinances, and permits.
  - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Local SWPPP.
- (b) Each permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
- (c) Each permittee can refer sites to the Regional Water Board for further joint enforcement actions for violation of municipal storm water ordinances and the Construction Activities Storm Water General Permit (CASGP), or Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), after conducting a minimum of 2 site inspections and issuing a minimum of 2 written notices to the operator regarding the violation (copied to the Regional Water Board). In making such referrals, permittees shall include, at a minimum, the following documentation:
  - (1) Name of the site
  - (2) WDID number
  - (3) Site developer
  - (4) Site owner

- (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report
- (6) Written notice of the violation copied to the Regional Water
- (d) Prior to approving and/ or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each permittee shall inspect the constructed site design, source control and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. The initial/ acceptance BMP verification inspection does not constitute a maintenance and operation inspection, as required in the preceding subpart E.IV.2(c).

9. State Conformity Requirements

- (a) Each permittee shall ensure that no grading permit, encroachment permit, demolition permit, building permit, electrical permit, or construction permit (or any other municipal authorization to move soil and/ or construct or destruct

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that involves land disturbance) is issued for any project requiring coverage under the CASGP or Small LUP General Permit<sup>1</sup> unless:

- (1) Proof of coverage under a State NPDES permit is demonstrated (a copy of a letter from the State Water Board showing a valid Waste Discharger Identification Number (WDID) for that site).
- (2) Demonstration or Certification that a SWPPP has been prepared by the project developer.
- (3) Proof of an updated NOI(s) and a copy of the modified SWPPP(s) at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

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<sup>1</sup> NPDES Permit No. CAS000005, Waste Discharge Requirements For Discharges of Storm Water Runoff Associated with Small Linear Underground/ Overhead Construction Projects (Small LUP General Permit) for any linear land disturbing activity or activities (cumulatively) that will cause one acre or more of land disturbance but not more than 5 acres.

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10. Interagency Coordination

(a) Referral of Violations:

A permittee may refer a violator of the municipal storm water ordinance and CWC § 13260 to the Regional Water Board provided that the permittee has made a good faith effort at progressive enforcement consistent with the preceding subpart F.8(c). At a minimum, the permittee's good faith effort shall be documented with:

- (1) A minimum of 2 follow-up inspection reports (inspections completed within 3 months).
- (2) A minimum of two warning letters or NOVs.

(b) Referral of Non-filers under the CASGP or the Small LUP General Permit:

Each permittee shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) under the CASGP or Small LUP General Permit, to the Regional Water Board, no later than 15 days after making a

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determination of failure to file. In making such referrals, permittees shall include, at a minimum, the following documentation:

- (1) Project location address
  - (2) Project description
  - (3) Developer or owners name with complete mailing address
  - (4) Project size
  - (5) Records of communication with the developer or owner regarding filing requirements
- (c) Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:

- (1) Each permittee shall initiate, within one business day,<sup>1</sup> an initial investigation of complaint(s) (other than non-storm water discharges) on the construction site(s) within its jurisdiction.
  - (A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water/ urban runoff ordinances, and to oversee corrective action.
- (d) Support of Regional Water Board Enforcement Actions – As directed by the Regional Water Board Executive Officer:
  - (1) Each permittee shall support Regional Water Board enforcement actions by:
    - (A) Assisting in identification of current owners, operators, and lessees of properties and sites.

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<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to “initiate” the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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- (B) Providing staff, when available, for joint inspections with Regional Water Board inspectors.
- (C) Appearing to testify as witnesses in Regional Water Board enforcement hearings.

Providing copies of inspection reports and other progressive enforcement documentation.

**G. Public Agency Activities Program**

- I. Each permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:
  - i. Public Construction Activities Management.
  - ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
  - iii. Vehicle and Equipment Wash Areas
  - iv. Landscape and Recreational Facilities Management
  - v. Storm Drain Operation and Management
  - vi. Streets and Roads Maintenance
  - vii. Infrastructure Maintenance - Long-term
  - viii. Public Industrial Activities Management
  - ix. Emergency Procedures
  - x. Employee Training
- 1. Public Construction Activities Management
  - (a) Each permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. of this Order at permittee owned or operated public construction projects for project types identified in part 5.E of this Order.

- (b) Each permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. for streets, roads, and highways construction of 10,000 square feet or more of surface area
  - (c) Each permittee shall implement and comply with the appropriate Development Construction Program requirements in part 5.F. of this Order at permittee owned or operated construction projects.
  - (d) For public projects that disturb less than one acre of soil the permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Table 5.
2. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Long Term Maintenance Programs
- (a) Each permittee shall implement the following BMPs<sup>1</sup> at all permittee owned, leased facilities and job sites including but not limited to vehicle/ equipment

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<sup>1</sup> These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda.

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maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Tables. Additionally, for any activity or area described in the footnote below,<sup>1</sup> each permittee shall also implement the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 9 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards).

Table 4 - BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards

From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide	Appendix B
Activity Specific BMPs	Page
General BMPs	B-4

<sup>1</sup> Scheduling and Planning; Spill Prevention and Control; Sanitary/ Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/ Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill / Discharge Control and Maintenance Facility Housekeeping Practices.

<b>Activity Specific BMPs</b>	<b>Page</b>
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3. Vehicle and Equipment Wash Areas
  - (a) Each permittee shall eliminate discharges of wash waters from vehicle and equipment washing no later than (365 days after Order adoption date) by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:
    - (1) Self-contain, and haul off for disposal
    - (2) Equip with a clarifier
    - (3) Equip with an alternative pre-treatment device; or
    - (4) Plumb to the sanitary sewer
  - (b) Each permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced has all vehicle and equipment wash areas plumbed to the sanitary sewer or be self contained and all wastewater/ washwater hauled for legal disposal.

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4. Landscape, Park, and Recreational Facilities Management

(a) Integrated Pest Management (IPM)

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each permittee shall implement a jurisdiction-wide IPM program and includes the following:

- (1) Pesticides are used only if, after monitoring indicates they are needed according to established guidelines.
- (2) Treatments are made with the goal of removing only the target organism.
- (3) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.
- (4) Its use of pesticides, including Organo-phosphates and Pyrethroids do not threaten water quality.
- (5) Partner with other agencies and organizations to ensure that pesticide use within their jurisdiction does not threaten water quality.
- (6) Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the permittees' overall operations and on municipal property.
- (7) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
  - (A) Quantify pesticide use by its staff and hired contractors.
  - (B) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
  - (C) Demonstrate reductions in pesticide use.

- (b) Each permittee shall implement the following requirements no later than (180 days after Order adoption date):

- (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers.
  - (2) Comply with the provisions and the monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2004-0008-DWQ).
  - (3) Ensure no application of pesticides or fertilizers are applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area.
  - (4) Ensure that no banned or unregistered pesticides are stored or applied.
  - (5) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.
  - (6) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs; and
  - (7) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment.
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills.
    - (B) Regularly inspect storage areas.
5. Storm Drain Operation and Management
- (a) Catch Basin Cleaning
    - (1) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:
      - Priority A: Catch basins that are designated as consistently generating the highest volumes of trash.
      - Priority B: Catch basins that are designated as consistently generating moderate volumes of trash.
      - Priority C: Catch basins that are designated as generating low volumes of trash.

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Within one year of Order adoption, Permittees shall submit a map or list of Catch Basins with their GPS coordinates and their designations. The map or list shall contain the rationale or data to support designations.

- (2) Each Permittee shall inspect catch basins according to the following schedule:

Priority A: A minimum of 3 times during the wet season and once during the dry season every year.

Priority B: A minimum of once during the wet season and once during the dry season every year.

Priority C: A minimum of once per year.

Catch basins shall be cleaned as necessary on the basis of inspections.

Permittees shall maintain inspection records for Regional Board review.

- (3) In addition to the preceding schedule, Permittees shall ensure that any catch basin that is determined to be at least 25% full of trash shall be cleaned out.

(b) Trash Management at Public Events

- (1) Each Permittee shall require for any event in the public right of way or wherever it is foreseeable that substantial quantities of trash and litter may be generated, the following measures:

(A) Proper management of trash and litter generated; and

(B) Arrangement for temporary screens to be placed on catch basins; or

(C) Provide clean out of catch basins, trash receptacles, and grounds in the event area within 24 hours subsequent to the event.

(c) Trash Receptacles

- (1) Each Permittee shall install trash receptacles, or equivalent trash capturing devices in areas subject to high trash generation within its jurisdiction no later than (one year after Order adoption date).

- (2) Each Permittee shall ensure that all trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.

(d) Catch Basin Labels

- (1) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest each catch basin and inlet before the rainy season begins.
- (2) Each Permittee shall record and re-stencil or re-label within 15 days of inspection, catch basins with illegible stencils.
- (e) Additional Trash Management Practices
  - (1) Each Permittee shall install trash excluders, or equivalent devices on or in catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water no later than two years after Order adoption date in areas defined as Priority A (Provision 1a(2)) except in sites where the application of such BMP(s) alone will cause flooding. Lack of maintenance that causes flooding is not an acceptable exception to the requirement to install BMPs. Alternatively the Permittee may implement alternative or enhanced BMPs beyond the provisions of this permit (such as but not limited to increased street sweeping, adding trash cans near trash generation sites, prompt enforcement of trash accumulation, increased trash collection on public property, increased litter prevention messages or trash nets within the MS4) that provide substantially equivalent removal of trash. Permittees shall demonstrate that BMPs, which substituted for trash excluders provide equivalent trash removal performance as excluders. When outfall trash capture is provided, revision of the schedule for inspection and cleanout of catch basins in task (a) may be proposed by the Permittee for approval by the Executive Officer.
- (f) Storm Drain Maintenance
  - (1) Each Permittee shall implement a program for Storm Drain Maintenance no later than (180 days after Order adoption date) that includes the following:
    - (A) Visual monitoring of Permittee-owned open channels and other drainage structures for debris at least annually.
    - (B) Remove trash and debris from open channel storm drains a minimum of once per year before the storm season.

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- (C) Eliminate the discharge of contaminants during MS4 maintenance and clean outs.
- (D) Quantify the amount of materials removed using techniques appropriate for quantifying solid waste and ensure the materials are properly disposed of.
- (g) Spill Response Plan
  - (1) Each permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response Plan shall clearly identify agencies responsible and telephone numbers and e-mail address for contact and shall contain at a minimum the following:
    - (A) Investigation of all complaints received within 24 hours of the incident report.
    - (B) Response within 2 hours to spills for containment upon notification.
    - (C) Notification to appropriate public health agencies and the Office of Emergency Services (OES).
- (h) Permittee Owned Treatment Control BMPs
  - (1) Each permittee shall implement an inspection and maintenance program for all permittee owned treatment control BMPs, including post-construction treatment control BMPs.
  - (2) Each permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
  - (3) Any residual water within a treatment control BMP when being maintained shall be:
    - (A) Hauled away and legally disposed of;
    - (B) Discharged to the sanitary sewer system (with permits or authorization); or
    - (C) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 10 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

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Table 5 - Discharge Limitations for Dewatering Treatment BMPs<sup>1</sup>

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

6. Streets and Roads

(a) Maintenance

- (1) Each permittee shall perform street sweeping of curbed streets in commercial areas and areas subject to high trash generation to control trash and debris at least two times per month.

(b) Road Construction and Reconstruction

- (1) Each permittee shall implement the following BMPs for road reconstruction:

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<sup>1</sup> Technology based effluent limits.

- (A) Drain Inlet protection from sediments.
- (B) Dewatering of below grade construction areas.
- (C) Secondary containment for cold mix.
- (D) Sheeting underneath cold mix (during storage) to prevent discharge of spray release, and
- (E) Sheeting to cover cold mix (during storage).
- (F) If street material is to be concrete, then provide a vehicle wash off area that is isolated from the MS4.

7. Emergency Procedures

- (a) Each permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.
  - (1) Where the self-waiver has been invoked, the permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implement to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
  - (2) Minor repairs of essential public service systems and infrastructure in emergency situations (can be completed in less than one day) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.

8. Municipal Employee and Municipal Contractor Training

- (a) Each permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors in targeted positions (whose interactions, jobs, and activities affect storm water quality) on the requirements of the overall storm water management program to:
  - (1) Promote a clear understanding of the potential for activities to pollute storm water.

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- (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
- (b) Each permittee shall, no later than (12 months after Order adoption date and annually thereafter before June 30), train all of their employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training programs shall address:
  - (1) The potential for pesticide-related surface water toxicity.
  - (2) Proper use, application, handling, and disposal of pesticides.
  - (3) Least toxic methods of pest prevention and control, including IPM.
  - (4) Reduction of pesticide use.
- (c) Each permittee shall, no later than (12 months after Order adoption date) and annually thereafter before June 30, train all of their employees and contractors who are responsible for illicit connections and illicit/ illegal discharges. Training programs shall address:
  - (1) Identification
  - (2) Investigation
  - (3) Termination
  - (4) Cleanup
  - (5) Reporting of Incidents
  - (6) Documentation of Incidents

## H. Illicit Connections and Illicit Discharges Elimination Program

### Introduction

During dry weather, much of the discharge to storm drain systems consists of wastes and wastewater from non-storm water sources. A significant amount of such discharges may be from

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illicit discharges or connections, or both. Illicit discharges may occur either through direct connections, such as deliberate or mistaken piping, or through indirect connections, such as dumping, spillage, subsurface infiltration, and wash-downs.

Monitoring data from MS4 programs across the nation have shown that dry weather discharges can contribute significant pollutant loads to receiving waters. *The Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments* finds, if these (dry weather discharges) are ignored by only focusing on storm water runoff (wet weather discharges), little improvements in receiving water quality may occur.

The objective of a municipality's illicit connection/illicit discharge (IC/ID) elimination program should be to detect illicit connections and illicit discharges to the storm drain system, and to promptly remove such discharges and connections. Municipalities typically employ the approaches listed below to achieve this objective:

- Permitting connections to the municipal storm drain.
- Mapping the storm drain system, locations of catch basins, outfalls, permitted connections, and the names and locations of all waters of the U.S. that receive discharges from the outfalls.
- Adopting a storm water/ urban runoff ordinance to prohibit unauthorized non-storm water discharges into the MS4, and implementing appropriate enforcement procedures and actions.
- Implementing a program to detect and eliminate non-storm water discharges to the MS4, including illegal dumping.
- Educating public employees, businesses, and the general public about the dangers associated with illegal discharges and improper disposal.
- Establishing a public reporting hotline or other mechanism to report illicit discharges and illegal dumping.
- Establishing measurable goals to evaluate successful program implementation.

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Discussion of New Requirements

- 1) The Draft Ventura MS4 Permit requires Permittees to develop and submit to the Principal Permittee, a map showing the length and location of underground pipes 18 inches and greater in diameter, and channels within their jurisdiction within a specified time frame. The intent of this provision is to enhance the Permittees ability to identify, locate, and eliminate sources of pollutants identified by monitoring results and spill/complaint notifications.
- 2) The Draft Ventura MS4 Permit requires Permittees to screen storm pipes greater than 36" in diameter, that have not been screened within 3 years of adoption of the Order, high priority areas identified during the mapping of illicit connections and discharges, that have not been screened within 3 years of adoption of the Order, and portions of the storm drain system 50 years or older in age that have not been screened within 3 years of adoption of the Order. The Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments states, "The average age of development in a subwatershed may predict the potential for illicit discharge problems. For example, a subwatershed where the average age of development is more than 100 years was probably constructed before sewer service was widely available, and many of the pipes and connections may have changed over the years as a result of modernization and redevelopment. Presumably, the risk of potential discharges would be higher in these older subwatersheds. By contrast, a recently developed subwatershed may have a lower discharge risk due to improved construction materials, codes and inspections. Therefore, high Illicit Discharge Potential (IDP) may be indicated when subwatershed development is more than 50 years old, with medium IDP for 20 to 50 year old development, and low IDP if fewer than 20 years old". The intent of this requirement is to identify and eliminate potential significant source of pollutants contributing to poor dry weather water quality.
- 3) The Draft Ventura MS4 Permit requires Permittees to conduct field screening of their storm drain systems in accordance with procedures described in, The Illicit Discharge Detection and Elimination A Guidance Manual for Program Development and Technical Assessments.

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The manual was developed as part of a cooperative agreement with the USEPA, to serve as a comprehensive up to date guidance manual for illicit connection/illicit discharge elimination programs. The manual was developed from surveys of Phase 1 MS4s serving multiple population sizes with the goal of coming up with cost effective methods for screening and eliminating illicit connections/illicit discharges. The goal of specifying the manual is to provide guidance and ensure effective methods are used for screening storm drain systems. The provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual.

- 4) The Draft Ventura MS4 Permit requires Permittees to upon discovery or upon receiving a report of a suspected illicit connection, to complete an investigation within 21 days, to determine the source of the connection, the nature and volume of discharge through the connection, and identify the responsible party for the connection. The Order requires Permittees upon confirmation of an illicit storm drain connection, to ensure the termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection. The intent of this requirement is to ensure the timely elimination of illicit connections upon discovery and their contributors to the degradation of storm water quality.
  
- 5) The Draft Ventura MS4 Permit requires Permittees to maintain records of all illicit/ illegal discharge discoveries, reports of suspected illicit/ illegal discharges, their response to the illicit/ illegal discharges and suspected illicit/ illegal discharges, and the formal enforcement taken to eliminate all illicit/ illegal discharges. The intent of this documentation provision is to facilitate the recognition of trends to assist in the discovery of unidentified illicit connections and identify areas where illicit connections and discharges have a greater probability of occurring.

## I. Reporting Program

The Reporting Program requires an Annual Report that is a Public Document Required under Federal Regulations

The Annual Report is composed of:

- 1) A Monitoring Report that contains the results that are to be used to refine BMPs for the reduction of pollutant loading, & for the protection & enhancement of the beneficial uses of the receiving waters within Ventura County.
- 2) A Program Report to track and oversee the progress each Permittee is making towards full compliance with the various requirements of the MS4 Permit.

## VI. MONITORING PROGRAM

### Background

Board based monitoring data collected through the Countywide Storm Water Monitoring Program provides a quantitative, statistically valid estimate of the impaired water segments within Ventura County. This water quality monitoring program has become a high priority, because of the number of water segments not supporting their beneficial uses due to constituent exceedances and therefore being placed on the State's 303(d) list of impaired waters. Monitoring has taken on a large role in determining compliance with the Total Maximum Daily Loads (TMDLs) developed within the Ventura waterbodies. Water quality issues have become more complex than in the past were monitoring focused mainly on conventional, bacteriological, and nutrient constituents. Now monitoring focuses on legacy pollutants, new and complex constituents such as synthetic organic compounds like pesticides and volatile organic compounds

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(VOCs) in solvents, which have been introduced into the environment and were not water quality issues in the past.

Water quality monitoring and assessments help prioritize water segments within a watershed that have the most degraded waters and to assess which stressors such as nutrients, sedimentation, and habitat disturbances are the most important in that watershed. Monitoring is a useful and cost-effective method for getting a broad picture of whether there is a problem and how big the problem is within a watershed. From this board based monitoring follows targeted monitoring that focuses on the associations between water quality conditions and the natural and human factors that contribute to the impaired conditions. Targeted monitoring establishes relations between water quality, and the natural and human factors that affect water quality. In general, a comprehensive monitoring program (board based and targeted) can supply a wealth of data that can be used in a wide range of applications for improving water quality.

#### Storm Water Monitoring History

The Ventura County Watershed Protection District has been conducting storm water monitoring within Ventura County pursuant to the 2000 Board Order No. 00-108. Over the last 8 years, the storm water monitoring program has consisted of 2 main components: water chemistry and aquatic toxicity monitoring at Mass Emission, Receiving Water (tributaries), and Land Use stations. It also has had a bioassessment monitoring component within the Ventura River. The pertinent parts of the Storm Water Monitoring Program include the following:

Mass Emission stations were designed to identify pollutant loads to the ocean, and long term trends in pollutant concentrations, and characterize surface water quality in major receiving waters. The 3 Mass Emission stations are located in the major Ventura County watersheds: Calleguas Creek (ME-CC), Ventura River (ME-VR), and Santa Clara River (ME-SCR). Stations ME-CC and ME-VR were installed and monitored for the first time during the 2000/01 monitoring season, while ME-SCR was first installed and monitored during the 2001/02 monitoring season. High flows during January and February of 2005 resulted in the relocation of

the ME-VR due to landslide activity and associated safety concerns to approximately one mile downstream from the historical ME-VR site to the Ojai Valley Sanitation District's Treatment Plant above the POTW outfall. The relocated station on the Ventura River (ME-VR2) was first monitored using portable sampling equipment in May 2005; and by September 2005 a permanent station was established. Stations ME-CC, ME-SCR, and ME-VR/ ME-VR2 were required to sample 6 station events per year, including a minimum of 2 dry weather samples during the permit term. The stations ME-CC and ME-VR/ ME-VR2 samples are composed of flow-based composite and toxicity grab samples, and station ME-SCR samples are composed of time-based composite samples and toxicity grab samples. All 3 Mass Emission stations collected wet and dry weather water quality samples and analyzed for chronic toxicity.

Land Use stations were designed to characterize storm water runoff (discharges to receiving waters) from 3 specific land use types: agricultural, industrial, and residential. The 3 Land Use stations are located at: Wood Road (A-1, agricultural), Ortega Street (I-2, industrial), and Swan Street (R-1, residential). Monitoring at these sites was first implemented during the 1992-93 monitoring season and was designed to capture storm water runoff from a specific type of land use. Station A-1 was required to sample a maximum of 5 storm events during the permit term, stations I-2 and R-1 were required to sample 3 storm events during the permit term. The stations' samples are composed of time-based composite samples and toxicity grab samples. All 3 Land Use stations collected wet weather water quality samples and analyzed for acute toxicity.

Receiving Water (tributaries) stations were designed to characterize the quality of receiving waters rather than discharges to receiving waters. This monitoring evaluated smaller tributaries to the main river systems. The 2 Receiving Water stations are located in the Revolon Slough watershed at: La Vista (W-3), upper Revolon Slough, and Revolon Slough (W-4), lower Revolon Slough. Monitoring at these sites was first implemented during the 1997-98 season and captures storm water runoff from the Revolon Slough sub basin. Stations W-3 and W-4 were required to sample a maximum of 5 storm events during the permit term. The stations' samples are composed of time-based composite samples and toxicity grab samples. All 2 Receiving Water stations collected wet weather water quality samples and analyzed for acute toxicity.

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Biological assessment (bioassessment) monitoring of the Ventura River watershed was designed to analyze the community structure of the in-stream benthic macroinvertebrate (BMI) assemblages in urban runoff-impacted stream segments at experimental sites. In bioassessment monitoring, a set of biological measurements (metrics), each representing a different aspect of the community, was calculated for each monitoring site. A total score was then calculated for the monitoring site, as the sum of the individual metric scores. Monitoring sites were then ranked according to their score, and then classified into groups (poor, fair, good and very good). The system of scoring and ranking sites is an Index of Biotic Integrity (IBI). The IBI used during 2001/02 through 2003/04 was the San Diego IBI; and the IBI used during 2004/05 through 2006/07 was the Southern California IBI (So CA IBI). There were fifteen BMI monitoring sites located in the Ventura River watershed, monitoring at these sites was implemented from the Fall of 2001 through 2005. A biological and physical/habitat assessment program within the Ventura River watershed was developed during the Spring of 2001.

#### New requirements

The new provisions of the monitoring program consist of:

- 1) Outfall monitoring (12 major outfalls)
- 2) Submittal of monitoring data electronically within 90 days from sample collection date & transmitted in standardized formats.
- 3) MS4 TMDL WLA Monitoring that incorporates the adopted storm water WLAs
- 4) Mass Emission stations' monitor storms that produce a 20% or greater increase in baseflow
- 5) Expanded toxicity testing
- 6) Special Studies
  - (a) Expanded Bio-assessment monitoring (Southern California Regional Bioassessment)
  - (b) Pyrethroid Insecticide
  - (c) Hydromodification Control
  - (d) Low Impact Development
  - (e) Beach Water Quality Monitoring

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**VII. FINAL QUESTIONS AND CHANGES**

The draft permit has several changes. These changes have been proposed based on the nearly 17 years of experience of controlling municipal storm water discharges within the Regional Water Board's region.

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**APPENDIX A. ECONOMIC CONSIDERATION OF THE  
PROPOSED ORDER 08-xxx**

Economic Considerations of the Proposed Order (February 25, 2008)  
State of California  
California Regional Water Quality Control Board  
Los Angeles Region

Order 08-xxx  
NPDES Permit No. CAS004002  
Waste Discharge Requirements  
For  
Storm Water (Wet Weather) and Non-Storm Water (Dry  
Weather) Discharges From  
The Municipal Separate Storm Sewer Systems Within The  
Ventura County Watershed Protection District, County of  
Ventura and  
The Incorporated Cities Therein

**ECONOMIC CONSIDERATIONS OF THE  
PROPOSED (February 25, 2008)**

**STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**ORDER 08-xxx  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR  
STORMWATER (WET WEATHER) AND NON-STORMWATER (DRY WEATHER)  
DISCHARGES FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF  
VENTURA AND THE INCORPORATED CITIES THEREIN**

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**Final Report  
6/18/2008**

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## EXECUTIVE SUMMARY

This report considers the economic impacts of not implementing, and implementing, the proposed Ventura County Stormwater Municipal Separate Storm Sewer Systems (MS4) Permit.

By not implementing the permit, stormwater pollution will degrade the water quality of rivers, coastal shorelines, beaches, lakes, reservoirs, bays, harbors, estuaries, groundwater, wildlife habitats and wetlands in Ventura and Los Angeles counties. Many of these waterbodies do not meet established water quality standards and are included on US EPA's 303(d) List of Water Quality Limited Segments. Many of these listed waterbodies are close to developed urban areas that are prone to stormwater pollution that will be the objective of this permit.

The 2006 303(d) list includes 488 miles of rivers and streams, 30 miles of coastal shorelines and beaches, 148,000 acres of bays, harbors, estuaries, lakes and reservoirs, and 12,000 acres of sensitive ocean habitat (Areas of Special Biological Significance). Also, the county overlies 527,000 acres of critical groundwater basins. All of these features and areas are subject to degradation from stormwater pollution that the Stormwater MS4 Permit is designed to reduce. The economic impact of not implementing the Permit was not quantified because the type and amount of stormwater pollution, and the extent and effectiveness of the permit conditions were not known.

The economic considerations of implementing the MS4 Stormwater Permit include the effect on public agencies, residents and commercial interests. This study focused on the economic effects on the public agencies responsible for implementing and complying with the conditions of the Permit. Estimating the economic impacts on residents and commercial interests would require that dischargers be identified and located. Residential and commercial development would also have to be projected to determine the costs of implementing and complying with the Industrial/Commercial Business Program, the Planning and Land Development Program and the Development Construction Program. These tasks were outside of the limits of this study.

Engineers from the California State University, Sacramento (CSUS), University of Southern California (USC), and the University of California at Los Angeles (UCLA) conducted a study funded by the State Water Resources Control Board to estimate the cost of implementing stormwater MS4 permits in six cities. Data from that study was used as a basis for this study. The CSUS study surveyed five municipalities and one metropolitan area that have implemented a MS4 permit. Cost data was collected and organized using a set of programs defined by US EPA that served as a basis for transferring the results to other cities.

Three cost scenarios based on the CSUS survey were selected to estimate the cost of implementing the Ventura County MS4 Stormwater Permit. They ranged from \$27.60 to \$42.00 (2008\$)<sup>1</sup> per household annually. Total annual cost ranged from \$7.1 million to \$10.9 million (2008\$). The Public Agency Program, which includes street cleaning and storm drain cleaning, is projected to comprise 62 percent of the total cost to public agencies for implementing and complying with the proposed permit.

## INTRODUCTION

The purpose of this analysis is to consider the economic effects of, not implementing, and implementing, the proposed Ventura County Stormwater permit. Considering economic effects allow evaluation of proposed actions in terms of economic values. This report presents a qualitative, and where possible, a quantitative evaluation of the positive and negative economic effects of the proposed permit.

This report is organized into two sections. The first section identifies the areas and activities that are affected by stormwater pollution if the Permit was not implemented. The second section contains a

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<sup>1</sup>Indicates the year the dollar value was indexed.

discussion of the data sources and methodology used to estimate the cost of implementing the permit, descriptions of the Principal Permittee and Permittees, and an estimation of the cost of implementing and complying with the proposed permit.

## **ECONOMIC CONSIDERATIONS OF NOT REGULATING STORMWATER**

Not regulating Ventura County stormwater will result in greater contamination of rivers, streams, lakes, reservoirs, bays, harbors, estuaries, groundwater, coastal shorelines and wetlands. The benefit of the Stormwater Permit is to improve water quality, enhance beneficial uses and increase employment, income and satisfaction from environmental amenities. Most of the benefits of the permit can be identified and, in some cases, quantified in monetary terms. Others cannot be expressed in dollar terms and can only be described. This report compiles the information and data that exists on areas and activities that will be covered by the permit. It does not attempt to value the improvements that will result from the permit because activities subject to the permit has not been identified, and the relationship between stormwater discharges and water quality levels is not known.

The Los Angeles Regional Board's Basin Plan designates beneficial uses for surface and groundwater, and sets narrative and numerical objectives that must be attained or maintained to protect the designated use. These data serve to identify the activities that will benefit as a result of pollution reductions but they are not sufficient to estimate economic values.

### **Waterbodies Affected by Stormwater Pollution**

This section contains the identification of waterbodies that exceed established water quality objectives and reduce the value of identified beneficial uses. The quality of these waterbodies will be improved by implementing the Ventura County Stormwater Permit.

Under Section 303(d) of the 1972 Clean Water Act, states are required to develop a list of water quality limited segments. These waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for water on the lists and develop action plans, called Total Maximum Daily Loads (TMDL), to improve water quality.

The TMDL is a number that represents the assimilative capacity of receiving waters to absorb a pollutant. The TMDL is the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources plus an allotment for natural background loading, and a margin of safety. TMDLs can be expressed in terms of mass per time (the traditional approach) or in other ways such as toxicity or a percentage reduction or other appropriate measure relating to a state water quality objective. A TMDL allocates the total allowable pollution among the different pollutant sources (through the permitting process or other regulatory means) to ensure that the water quality objectives are achieved.

On June 28, 2007, USEPA gave final approval to California's 2006 Section 303(d) List of Water Quality Limited Segments. Presented here are the 303(d) listed areas subject to stormwater pollution and will therefore benefit from implementing the Ventura County Stormwater permit.

### **Rivers and Streams**

Beneficial uses of rivers and streams generally include recreation and wildlife habitat and commercial and sport fisheries. In a few cases, they are used as a source of drinking water. Many regional streams are primary sources of replenishment for major groundwater basins that supply water for drinking and other uses, and as such must be protected as groundwater recharge. Improving water quality that enhances beneficial uses is a benefit to the Ventura County Stormwater Permit. Estimating the economic benefit in

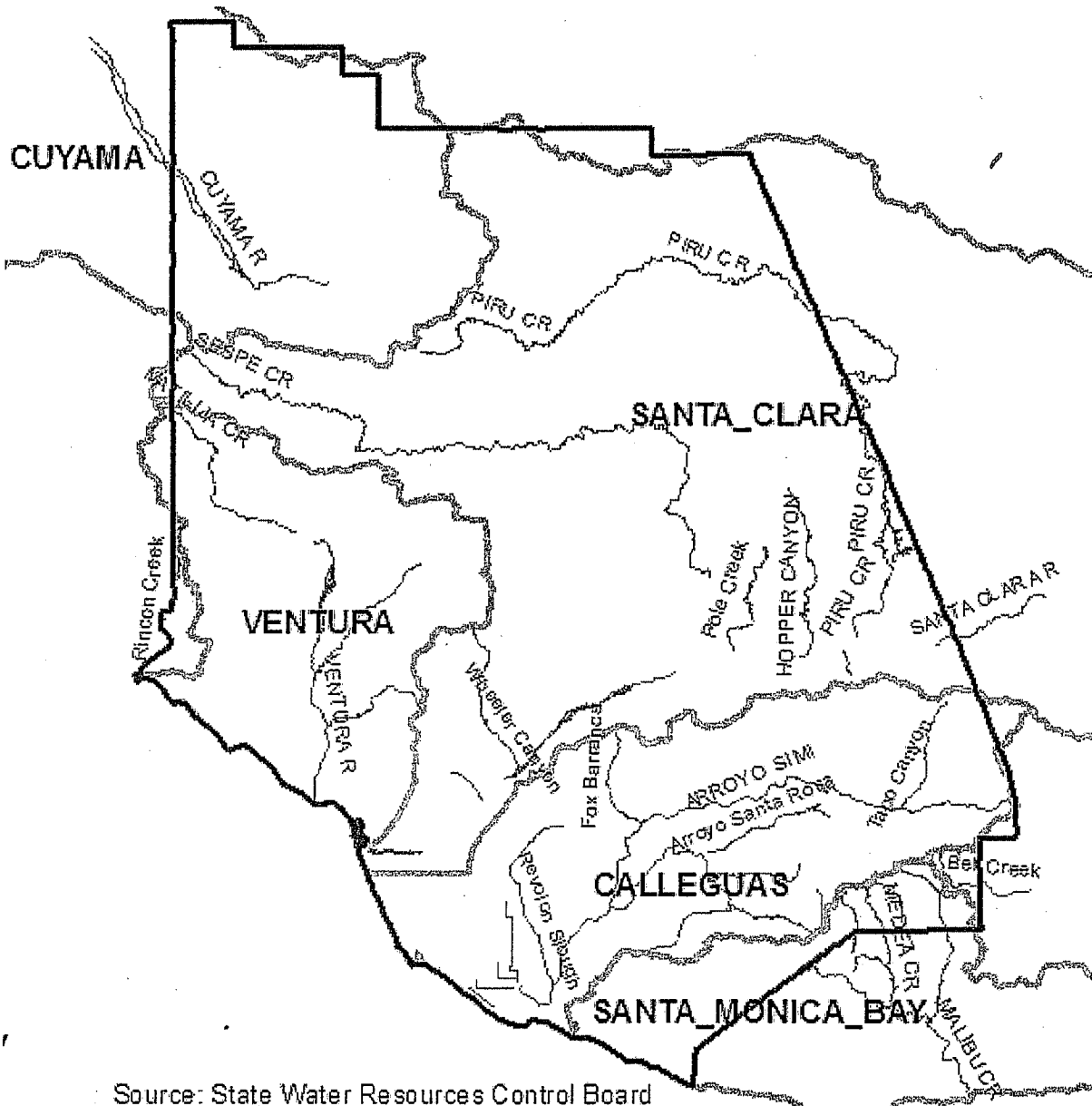
monetary terms is only possible after linking discharges and water quality, and determining the extent and effectiveness of the required BMPs.

Under federal law, all surface waters must have water quality standards designated in the Basin Plans. Most of the inland surface waters in the Los Angeles Regional have beneficial uses designated for them. Those waters not listed (generally smaller tributaries) are designated with the same beneficial uses as the streams, lakes, or reservoirs to which they are tributary. This is referred to as the "tributary rule." They do not appear on any of the following maps or included in any of the area totals.

Figure 1 depicts the major watersheds, and the 303(d) listed rivers and streams in Ventura County. Stormwater runoff from developed areas affect, not only waterbodies that are located in Ventura County, but also in Los Angeles County. 303(d) listed rivers originating in southern Ventura County (Santa Monica Bay watershed) flow through the western part of Los Angeles County and into the 303(d) listed Santa Monica Bay.

Table 1 contains the 303(d) listed rivers and streams by major watershed, their lengths, identified pollutant and the sources of pollution. There are 488 miles of rivers and streams that are listed for various pollutants.

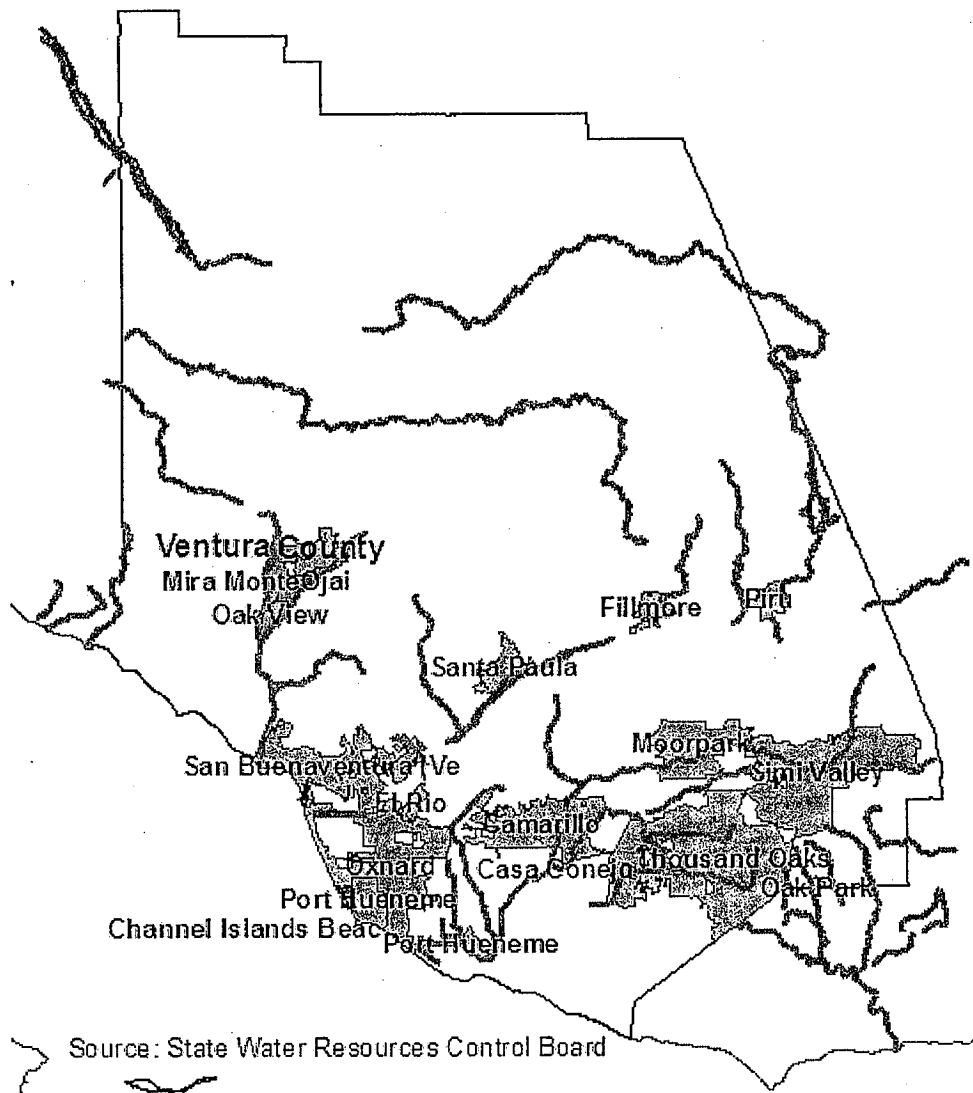
Figure 2 includes the urban areas under the Stormwater Permit and indicates their spatial relationship to the 303(d) listed rivers and streams. The Calleguas Creek river system has 119 miles that are 303(d) listed. Calleguas Creek is located in southern Ventura County in close proximity to the cities of Thousand Oaks, Moorpark, Simi Valley and Camarillo. These urban areas have a combined population of 172,000.



Source: State Water Resources Control Board  
**Figure 1. Ventura County Watersheds and 303(d) Listed Rivers and Streams, 2006.**

Table 1. Ventura County 303(d) Listed Rivers and Streams Lengths, Pollutant, and Sources, 2006.

<b>Watershed: Beneficial Uses</b>			
<b>River/Stream</b>	<b>Miles</b>	<b>Pollutant/Stressor</b>	<b>Sources</b>
<b>Santa Clara Watershed: Recreation, Habitat, Municipal, Agriculture, Groundwater, Freshwater Replenishment</b>			
Piru Creek	77	Chloride, pH	Nonpoint Source
Santa Clara River	54	Toxicity, Total Dissolved Solids, Coliform Bacteria, Pesticides	Nonpoint/Point Source
Sespe Creek	54	Chloride, pH	Nonpoint Source
Hopper Creek	13	Sulfates, Total Dissolved Solids	Nonpoint/Point Source
Wheeler Canyon/Todd Barranca	10	Sulfates, Total Dissolved Solids	Nonpoint Source
Pole Creek	9	Sulfates, Total Dissolved Solids	Nonpoint Source
Brown Barranca/Long	3	Nitrate and Nitrite	Nonpoint Source
<b>Total</b>	<b>220</b>		
<b>Calleguas-Conejo Creek Watershed: Industrial, Recreation, Municipal, Agriculture, Habitat, Groundwater, Freshwater Replenishment</b>			
Calleguas Creek	98	Bacteria, Pesticides, Lubricants, Sedimentation, Trash, Total Dissolved Solids, Fecal Coliform	Agriculture, Natural Sources, Nonpoint/Point Source
Fox Barranca	7	Boron, Sulfates, Total Dissolved Solids	Nonpoint Source
2	12	Indicator bacteria	Source Unknown
Rio De Santa Clara/Oxnard Drain No. 3	2	Pesticides, Chemicals, Nitrogen, PCBs, Sediment	Nonpoint Source
<b>Total</b>	<b>119</b>		
<b>Ventura River Watershed: Habitat, Municipal, Recreation, Agriculture, Industrial, Groundwater, Freshwater Replenishment</b>			
Ventura River	27	Total Coliform, Nutrients, Trash	Nonpoint/Point Source
Matilija Creek	15	Fish Barriers (Fish Passage)	Dam Construction
San Antonio Creek	10	Nitrogen	Nonpoint Source
Canada Larga	8	Fecal Coliform, Low Dissolved Oxygen	Nonpoint Source, Confined Animals
Ventura River Estuary	1	Total Coliform, Nutrients, Trash	Nonpoint/Point Source, Confined Animals
Rincon Creek	8	Boron, Toxicity	Source Unknown
<b>Total</b>	<b>69</b>		
<b>Cuyama Watershed: Municipal, Recreation, Agriculture, Habitat, Groundwater, Freshwater Replenishment</b>			
Cuyama River	21	Boron	Source Unknown
<b>Santa Monica Bay Watershed: Municipal, Industrial, Recreation, Agriculture, Habitat, Groundwater</b>			
Las Virgenes Creek	12	Nutrients (Algae), Low Dissolved Oxygen, Sedimentation, Trash	Nonpoint Source
Lindero Creek	7	Nutrients (Algae), Selenium, Trash	Nonpoint Source
Malibu Creek	12	Nutrients, Sedimentation, Selenium, Sulfates, Trash	Nonpoint/Point Source
Medea Creek	8	Nutrients, Sedimentation, Selenium, Trash	Nonpoint Source
Triunfo Canyon Creek	11	Lead, Mercury, Sedimentation	Nonpoint Source
<b>Total</b>	<b>50</b>		
<b>Los Angeles River Watershed: Municipal, Industrial, Recreation, Agriculture, Habitat, Groundwater, Freshwater Replenishment</b>			
Bell Creek	9	Coliform Bacteria	Nonpoint/Point Source
<b>Grand Total</b>	<b>488</b>		

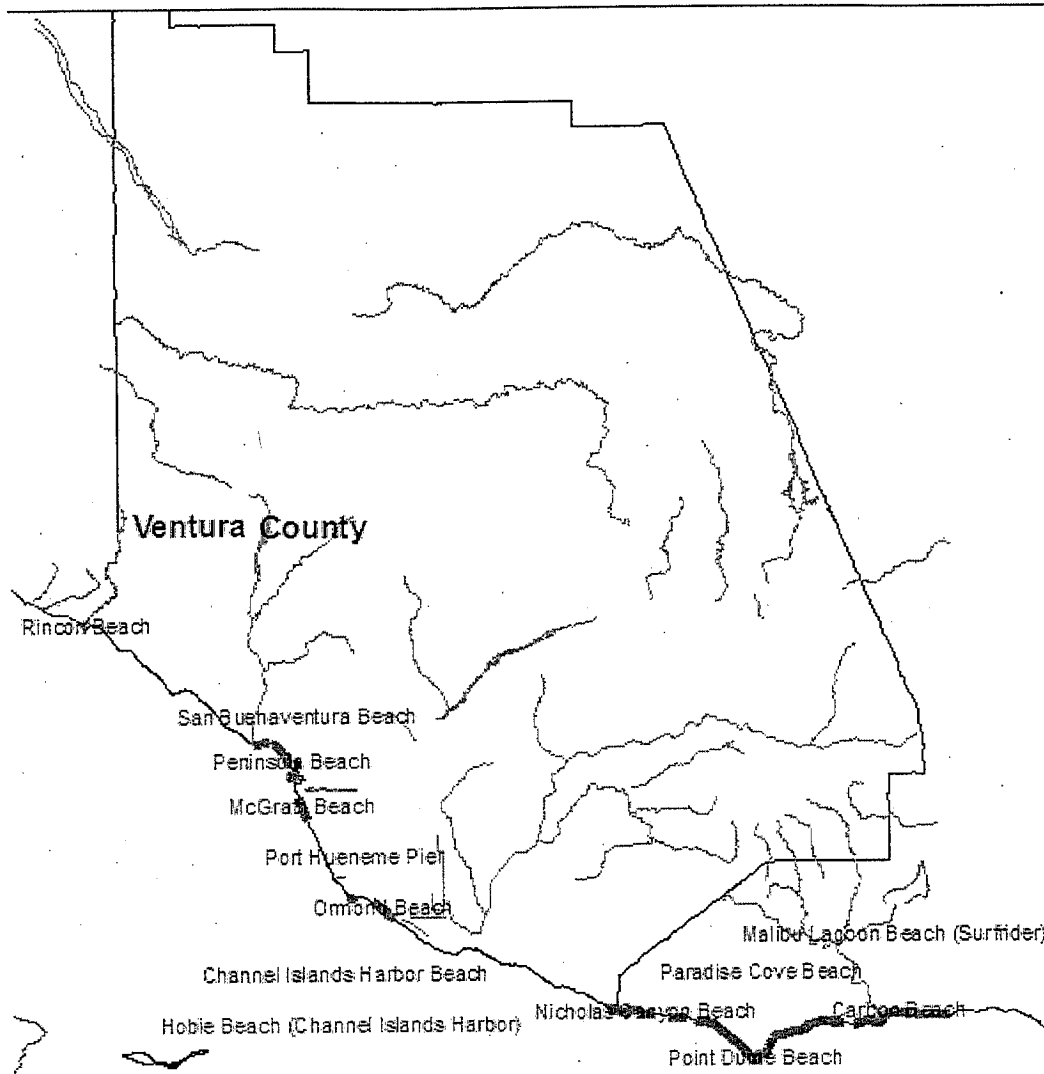


**Figure 2. Ventura County Urban Areas and 303(d) Listed Rivers and Streams, 2006.**

**Coastal Shorelines and Beaches**

Coastal waters in the Los Angeles Region include bays, estuaries, lagoons, harbors, beaches, and ocean waters. The Ventura Coast is the terminus of most of the rivers and streams listed in the previous section. Figure 3 shows those rivers and streams, and the 303(d) listed coastal shorelines and beaches. Beneficial uses for these coastal waters are habitat for marine life, recreation, boating, shellfish harvesting, and commercial and sport fishing.

A total of 29.65 miles of Ventura and Los Angeles County coastal shorelines and beaches are affected by Ventura County stormwater pollution (Table 2).



Source: State Water Resources Control Board

**Figure 3. Ventura County 303(d) Listed Coastal Shorelines and Beaches, 2006.**

**Table 2. Length of Ventura County and a Portion of Los Angeles County 303(d) Listed Coastal Shorelines and Beaches, 2006**

Feature	Miles
Point Dume Beach	2.50
Dan Blocker Memorial (Coral) Beach	2.05
Leo Carillo Beach (South of County Line)	1.77
San Buenaventura Beach	1.75
Paradise Cove Beach	1.66
Nicholas Canyon Beach	1.65
Ormond Beach	1.64
Zuma Beach (Westward Beach)	1.59
McGrath Beach	1.51
Carbon Beach	1.46
Trancas Beach (Broad Beach)	1.26
Escondido Beach	1.21
Robert H. Meyer Memorial Beach	1.17
Las Flores Beach	1.12
Malibu Lagoon Beach (Surfrider)	1.01
Big Rock Beach	1.01
Malibu Beach	0.78
La Costa Beach	0.74
Ventura Marina Jetties	0.69
Amarillo Beach	0.64
Surfers Point at Seaside	0.53
Puerco Beach	0.50
Promenade Park Beach	0.37
Port Hueneme Pier	0.33
Sea Level Beach	0.22
Peninsula Beach	0.20
Rincon Beach	0.09
Channel Islands Harbor Beach	0.08
Hobie Beach (Channel Islands Harbor)	0.06
Pacific Ocean at Point Rincon	0.06
<b>Total</b>	<b>29.65</b>



Stormwater pollution also affects beach posting and closings. The following table presents the Ventura County beach postings and closing from the year 2000 through 2007 in terms of beach-mile-days. Beach-mile-days is an index that characterizes beach posting and closures in extent (miles) and duration (days). Although beach postings and closures have diminished because of efforts to reduce beach pollution, these data indicate the potential damage that can occur. Stormwater pollution is one cause of beach postings and contributes to beach closures. The Los Angeles County beaches affected by Ventura County pollution is not included in the posting and closure totals listed in the following table because time did not permit individual beach data to be identified and totaled.

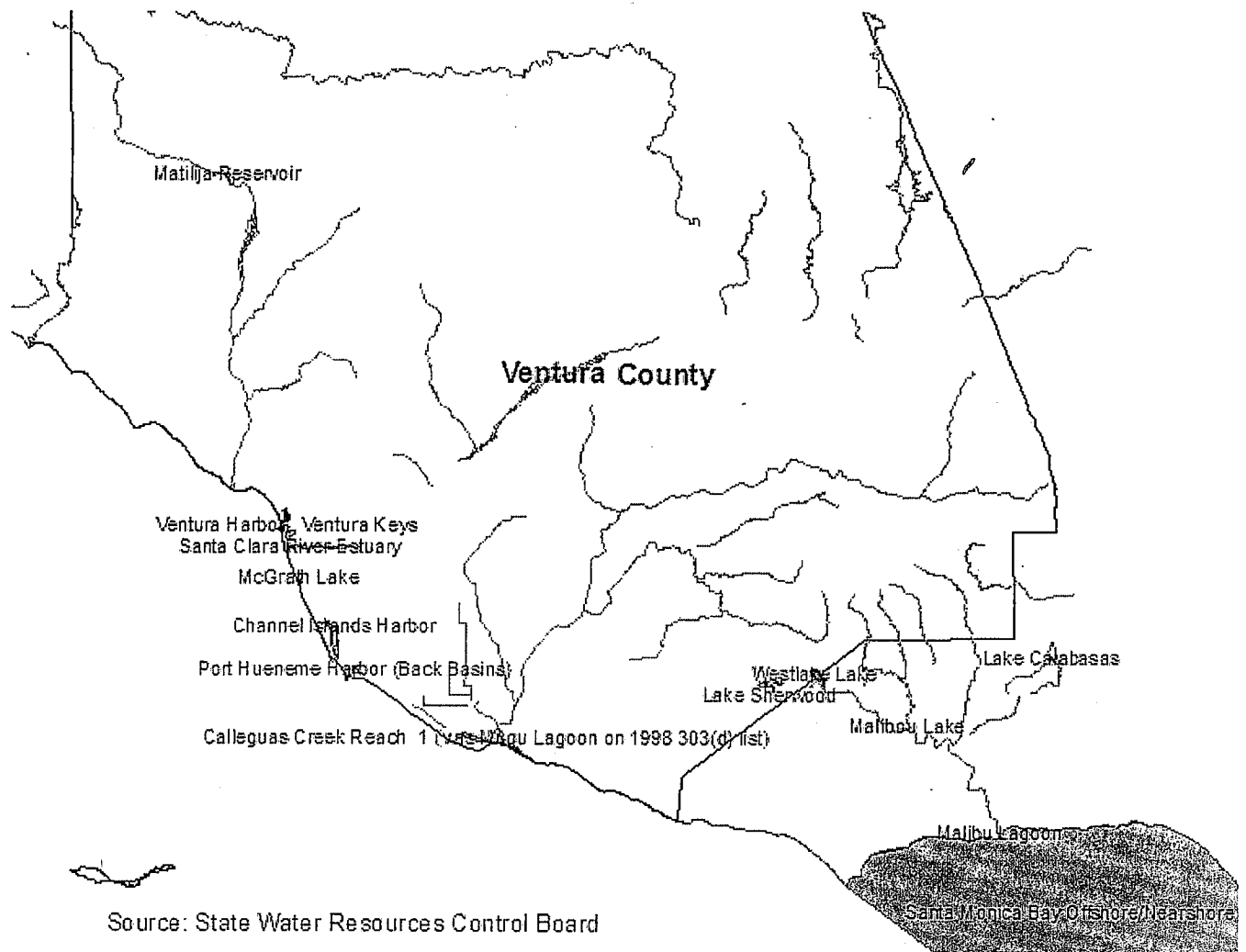
Year	Posting	Closure
2000	45.31	-
2001	98.30	37.67
2002	14.62	2.69
2003	199.43	-
2004	25.00	-
2005	21.70	-
2006	3.50	-
2007	2.10	-

Source: State Water Resources Control Board, Beach Watch.

[http://beachwatch.waterboards.ca.gov/BeachWatch/cia\\_common/BmdComparedCriteria.jsp](http://beachwatch.waterboards.ca.gov/BeachWatch/cia_common/BmdComparedCriteria.jsp)

#### **Lakes, Reservoirs, Bays, Harbors and Estuaries**

Beneficial uses of lakes, reservoirs, bays, harbors and estuaries affected by stormwater pollution are municipal water supply, recreation and wildlife habitat. Figure 4 shows the location of those 303(d) listed waterbodies and their proximity to the 303(d) listed rivers and streams of Ventura County.



**Figure 4. Ventura County 303(d) Listed Lakes, Reservoirs, Bays, Harbors and Estuaries, 2006.**

A total of 148,030 acres of Ventura County bay, harbors, estuaries, lakes and reservoirs are 303(d) listed (Table 3). The largest listed waterbody is the 146,642 acre Santa Monica Bay that is the terminus of the southern Ventura County rivers and streams. The Ventura and Channel Islands harbors, the Calleguas Creek reach, and the Sherwood and Westlake lakes are vulnerable to Ventura County stormwater because of their proximity to urban areas.

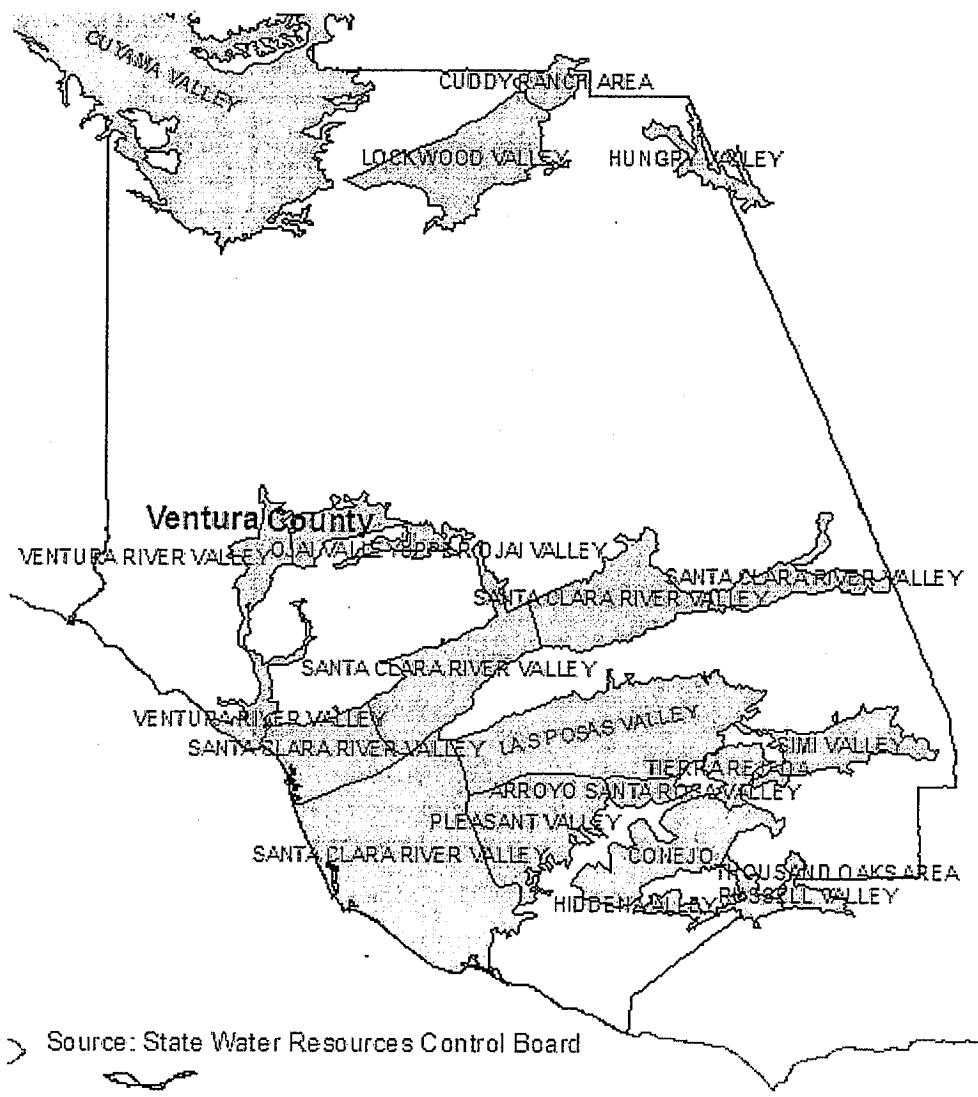
**Table 3. Acreage of Ventura County 303(d) Listed Lakes, Reservoirs, Bays, Harbors and Estuaries, 2006.**

Bays and Harbors	Acres
Port Hueneme Harbor (Back Basins)	65
Ventura Harbor: Ventura Keys	179
Channel Islands Harbor	209
Santa Monica Bay Offshore/Nearshore	146,642
Total	147,095
<b>Estuaries</b>	
Santa Clara River Estuary	49
Malibu Lagoon	15
Calleguas Creek Reach	344
Total	408
<b>Lakes/Reservoirs</b>	
Matilija Reservoir	121
Lake Calabazas	18
Malibou Lake	40
Westlake Lake	60
Lake Sherwood	135
McGrath Lake	20
Lake Lindero	15
Westlake Lake	119
Total	527
<b>Grand Total</b>	<b>148,030</b>

Source: State Water Resources Control Board

### Groundwater

Beneficial uses for Ventura County groundwater basins include municipal, industrial and agricultural water supply. Occasionally, groundwater is used in aquaculture operations at the Fillmore Fish Hatchery. The 242,114 acre Cuyama Valley groundwater basin is the largest aquifer in the county but it is located in the rural area of the County (Table 4, Figure 5). The Santa Clara River Valley groundwater basins are located under a number of urban areas and total 125,702 acres. The designated groundwater basins underlie 526,993 acres of Ventura County.



**Figure 5. Ventura County Groundwater Basins**

**Table 4. Acreage of Ventura County Groundwater Basins**

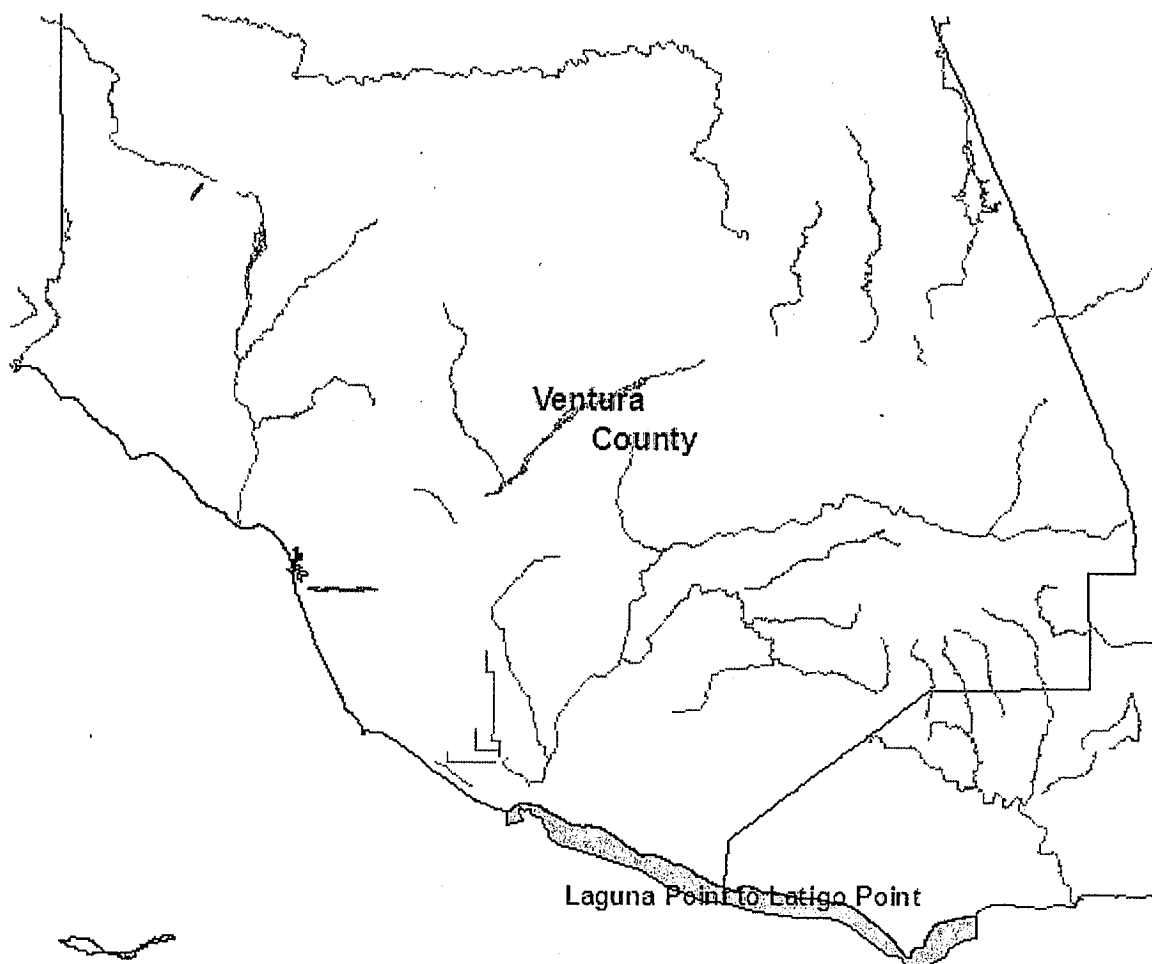
Groundwater Basin	Acreage
Arroyo Santa Rosa Valley	3,747
Conejo	18,848
Cuddy Ranch Area	4,213
Cuyama Valley	242,114
Hidden Valley	2,217
Hungry Valley	5,324
Las Posas Valley	42,353
Lockwood Valley	21,841
Ojai Valley	6,851
Pleasant Valley	21,654
Russell Valley	3,087
Santa Clara River Valley	125,702
Simi Valley	12,192
Thousand Oaks Area	3,115
Tierra Rejada	4,611
Upper Ojai Valley	3,815
Ventura River Valley	5,312
Total	526,993

Source: State Water Resources Control Board

#### **Areas of Special Biological Significance**

The Laguna Point to Latigo Point ASBS is located on the shoreline of Ventura and Los Angeles County and it is affected by Ventura County stormwater runoff (Figure 6). The ASBS is 11,842 acres.

A study completed by the Los Angeles Regional Water Quality Control Board in 1979 concluded that this ASBS is one of the least affected because of steep mountainous terrain, offshore currents and a publicly owned shoreline. However, the report mentioned the potential effect of outflows from Mugu Lagoon which contains stormwater runoff.



Source: State Water Resources Control Board

**Figure 6. Ventura County Areas of Special Biological Significance**

### **Wetlands**

Wetlands include freshwater, estuarine, and saltwater marshes, swamps, mudflats, and riparian areas. As the California Water Code (§13050[e]) defines "waters of the state" to be "any water, surface or underground, including saline waters, within the boundaries of the state," natural wetlands are entitled to the same level of protection as other waters of the state.

Wetlands also are protected under the Clean Water Act (CWA), which was enacted to restore and maintain the physical, chemical, and biological integrity of the nation's waters, including wetlands. Regulations developed under the CWA specifically include wetlands "as waters of the United States" and defines them as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Although the definition of wetlands differs widely among federal agencies, the US EPA and the U.S. Army Corps of Engineers use this definition in administrating the 404 permit program.

Recently, both state and federal wetlands policies have been developed to protect these valuable waters. Executive Order W-59-93 (signed by Governor Pete Wilson on August 23, 1993) established state policy guidelines for wetlands conservation. The primary goal of this policy is to ensure no overall net loss and

to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage in California. The federal wetlands policy, representing a significant advance in wetlands protection, was unveiled by nine federal agencies on August 24, 1993. This policy represents an agreement that is sensitive to the needs of landowners, more efficient, and provides flexibility in the permit process. The US EPA has requested that states adopt water quality standards (beneficial uses and objectives) for wetlands as part of their overall effort to protect the nation's water resources. The 1975 Basin Plan identified many waters which are known to include wetlands; these wetlands, however, were not identified as such. In the 1995 Basin Plan, a wetlands beneficial use category has been added to identify inland waters that support wetland habitat as well as a variety of other beneficial uses. The wetlands habitat definition recognizes the uniqueness of these areas and functions they serve in protecting water quality.

Beneficial uses of wetlands include many of the same uses designated for the rivers, lakes, and coastal waters to which they are adjacent, and include recreation, wildlife habitat and groundwater replenishment.

As some wetlands can not be easily identified in Southern California because of the hydrologic area, the Regional Board identifies wetlands using indicators such as hydrology, presence of hydrophytic plants (plants adapted for growth in water), and/or hydric soils (soils saturated during the growing season). The Regional Board contracted with Dr. Prem Saint, et al. (1993a and 1993b), to inventory and describe major regional wetlands. Information from this study will be incorporated in the next Basin Plan.

## **ECONOMIC CONSIDERATIONS OF REGULATING STORMWATER**

Implementing and maintaining the conditions of the proposed MS4 Stormwater Permit will economically impact the principal permittee, permittees, residents, commercial entities and real estate developers. This report presents the economic impact on the principal permittee and permittees only. The economic impacts to others although important was not estimated because of the lack of data and the limited amount of time.

This section of the report describes the methodology, data sources and estimated cost of implementing the permit.

### **Ventura Stormwater Permit Cost Categories**

The proposed Stormwater Permit designates seven special provisions. The provisions and data sources are summarized in the following sections.

#### **Public Information and Participation Program (PIPP)**

The public will be made aware of the benefits of a stormwater pollution prevention program. Target groups include residential and business. The CSUS cost survey was used to determine the cost to permittees. The CSUS study estimated that approximately five percent of the total stormwater costs should be in the Public Information and Participation Program.

#### **Industrial and Commercial Facilities Program**

Each permittee shall require pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in stormwater. This program requires an inventory of commercial and industrial sources of stormwater pollution. Inspections will ensure that each facility has implemented the required BMPs and they will be completed twice during the five-year permit. The first inspection will be made during the first two years.

The cost to the permittees of implementing this program is assumed to be included in the CSUS cost survey. The cost of implementing the BMPs by commercial and industrial firms was not estimated. US Census indicates that there are 2,009 commercial firms located in Ventura County subject to this

program. This total includes 1,198 restaurants, 427 automotive service facilities, 180 retail gasoline outlets and 204 nurseries.

The number of industrial firms subject to this program are identified by US EPA in 40 CFR 122.2(c) but no readily accessible data source of those firms currently exists.

The CSUS study estimated that approximately three percent of the total stormwater costs were used in the Industrial and Commercial Facilities Program.

### **Planning and Land Development Program**

The objective of this program is to minimize the effects from stormwater runoff on the biological integrity of natural drainage systems and the beneficial uses of waterbodies by minimizing the percentage of impervious surfaces on land developments to support the percolation and infiltration of stormwater into the ground.

Almost all development and redevelopment projects are subject to the provisions of this program. Those projects will reduce the percentage of Effective Impervious Area (EIA) to less than 5 percent of total project area.

All new development and redevelopment projects shall also integrate Low Impact Development (LID) principles into project design. LID is a stormwater management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect predevelopment hydrologic functions.

All new development and redevelopment projects shall implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems. The purpose of the hydrologic controls is to minimize changes in post-development hydrologic stormwater runoff discharge rates, velocities, and duration. This shall be achieved by maintaining the project's pre-development stormwater runoff flow rates and durations.

The Southern California Stormwater Monitoring Coalition (SMC) is developing a regional methodology to eliminate or mitigate the adverse effects of hydromodification from urbanization, including hydromodification assessment and management tools.

Until the completion of the SMC HCS, Permittees shall implement the Interim Hydromodification Control Criteria, to control the potential adverse impacts of changes in hydrology that may result from new development and redevelopment projects. Land development project of less than 50 acres shall implement hydromodification controls such that the two-year 24-hour storm event post development hydrograph peak flow and volume will match within one percent of the two-year 24-hour storm event pre-development peak flow and volume hydrograph. Projects of 50 acres or greater shall develop and implement a Hydromodification Analysis Study (HAS) that demonstrates that post-development conditions are not expected to alter the duration of sediment transporting flows in receiving waters. The HAS must demonstrate that the selected hydromodification control BMPs will maintain an Erosion Potential value of 1 unless an alternative value can be shown to be protective of the natural drainage systems from erosion, incision, and sedimentation that can occur as a result of flow increases from impervious surfaces and damage stream habitat in natural drainage systems.

The Permittees shall develop and implement watershed specific Hydrologic Control Plans (HCP) no later than 180 days after the completion of the SMC Hydrologic Control Study (HCS).

This Program will require permittees to start a tracking system, and an inspection and enforcement program for new development and redevelopment post-construction stormwater BMPs no later than one year after the Order adoption date.

The CSUS study estimated that approximately two percent of the total stormwater costs were used in the Planning and Land Development Program.



### **Development Construction Program**

Each Permittee shall start a program to control stormwater discharges from construction activity at all construction sites within its jurisdiction. During the wet season, the program shall ensure that all no grading will be done on areas that have high soil erosive potential.

Each Permittee shall require the implementation of a minimum set of BMPs at all construction sites to prevent erosion and sediment loss, and the discharge of construction wastes. Roadway paving or repaving operations will be subject to a set of BMPs to reduce site erosion. An electronic site-tracking system will be used to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each permittee.

The CSUS study estimated that approximately four percent of the total stormwater costs were used in the Development Construction Program.

### **Public Agency Activities Program**

Each Permittee shall minimize stormwater pollution impacts from storm drain operations which is primarily catch-basin cleaning, and streets and roads maintenance. Other public agency activities such as public construction, vehicle maintenance, material storage and operations, landscape and recreational facilities are also included in this program.

The CSUS study estimated that approximately 62 percent of total stormwater costs were used in the Public Agency Activities program.

### **Illicit Connections and Illicit Discharges Elimination Program**

Each Permittee shall eliminate all illicit connections and discharges to the storm drain system, and shall document, track, and report all such cases in accordance with the permit.

The CSUS study estimated that approximately two percent of total stormwater costs were used in this Program.

### **Reporting Program**

The Principal Permittee, VCWPD, in consultation with the Permittees and Los Angeles Regional Waterboard staff shall develop an electronic reporting program to assist in managing the requirements of this Order no later than six months after the Order adoption date.

The Principal Permittee shall submit by December 15th of each year beginning the year of 2008, an annual report to the Los Angeles Regional Water Board Executive Officer documenting the status of the Municipal Stormwater Program and the results of analysis of the monitoring program.

The Permit also recommends that a spatially oriented database (GIS) be developed to manage the provisions mandated in this permit.

Part 5.B of the permit designates an activity entitled Watershed Initiative Participation. For the purposes of cost comparison with the CSUS study, this was aggregated with the Reporting Program. The Reporting Program requires participation in Southern California Stormwater Monitoring Coalition activities and other watershed planning group programs.

The CSUS study estimated that approximately 22 percent of total stormwater costs were used in overall stormwater program management (14 percent) watershed management (two percent), and water quality monitoring (six percent).

### **CSUS Stormwater Cost Survey**

In 2004, the State Water Resources Control Board (SWRCB) funded a study to survey the costs to develop, implement, maintain and monitor municipal separate storm sewer system (MS4) management

and control programs.<sup>2</sup> The objectives of the CSUS study were to: 1) document stormwater program costs and; 2) assess alternative approaches to stormwater quality control. The six cities selected for the study were judged by SWRCB staff as having good stormwater management programs, adequate accounting systems, and represented a variety of geographic locations, hydrologic areas, populations and incomes. The cities selected were Corona, Encinitas, Fremont, Fresno-Clovis Metropolitan Area, Sacramento and Santa Clarita and the cost per household ranged from \$18 to \$46. These results were used to estimate the costs of complying with the Ventura MS4 Stormwater Permit.

Stormwater program expenditures by the six cities were compiled and normalized to be able to transfer the results to other cities. Factors considered for normalization of the data were size, location, tourism, and the degree of integration of programs. The compliance costs of construction, commercial, business and industrial firms were not considered in the study. An attempt to include private costs in this cost analysis was hindered by the limited timeframe to complete the study.

Table 5 contains demographic and economic data collected from the cities for 2002/2003 which in the case of city cost data, was the most recent. Population, household and income data are from the US Census for the year 2000.

Annual total cost per household ranged from \$18 to \$46. The average cost is \$35 and the median is \$36. The true mean which is derived by dividing the total sample costs by the total sample number of households, is \$29.

The CSUS study attempted to quantitatively associate costs with income, population, annual rainfall, years of incorporation, area and curb swept miles but due to the small sample size, correlation was statistically insignificant in almost all cases. However, a number of qualitative explanations were offered by the authors. The Fresno-Clovis cost estimate of \$18 may be low because of low land costs, climate, topography, soils and an integrated program approach. However, the latter factor was identified in the study as an important factor in permit costs.

An integrated program is one in which an overseeing agency establishes a common approach in implementing stormwater activities. Certainly in the case of Fresno-Clovis Metropolitan Area, an integrated program seems to be an important factor. No other city surveyed had a program in which a single agency implemented a comprehensive plan for post-construction stormwater control for all permittees as did Fresno Metropolitan Flood Control District for the Fresno-Clovis Metropolitan Area. This integration may contribute to relatively low cost per household; however, on the other extreme of the cost range was Fremont, who participates in the Alameda County Clean Water Program. (Source: CSUS, NPDES Stormwater Cost Survey, page 52)

The important factor is that permits that cover large numbers of households have the opportunity to achieve lower costs per household by applying a common approach to stormwater activities. Due to the large number of households, The Ventura County MS4 has the potential for applying an integrated approach.

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<sup>2</sup>Currier, Brian K., Joseph M. Jones, Glenn L. Moeller. "NPDES Stormwater Cost Survey, Final Report", Prepared for California State Water Resources Control Board, California State University Sacramento, Office of Water Programs, January, 2005

**Table 5. Stormwater Cost Sample Cities Demographic and Cost Data**

	Corona	Encinitas	Fremont	Fresno-Clovis	Sacramento	Santa Clarita
Mean Income Per Person.	\$ 21,001	\$ 34,336	\$ 31,411	\$ 15,495	\$ 18,721	\$ 26,841
Area, (sq. miles)	35	20	97	122	99	48
Curb Miles Swept	20,877	5,832	31,405	142,411	26,450	46,800
Active Construction Sites	41	40	24		417	64
Average cost per inspection	\$ 29	\$ 423			\$ 29	
Average cost per active construction site	\$ 1,302	\$ 4,244	\$ 738		\$ 628	\$ 1,172
Industrial and Commercial Sites	3,050	417	1,028			1,071
Households	39,271	23,843	69,452	195,311	163,957	52,442
City Actual General Fund Revenue,	\$ 78,413,063	\$ 42,592,755	\$ 98,456,011	\$ 216,089,323	\$ 267,464,000	\$ 61,659,874
Annual Rainfall (cm)	29	26	37	28	46	33
Years Since Incorporation	108	20	48	119	154	17
Construction Site Stormwater Runoff Control	\$ 53,382	\$ 169,751	\$ 17,715	\$ 81,800	\$ 261,716	\$ 74,998
Illicit Discharge Detection and Elimination	\$ 20,628	\$ 49,378	\$ 5,917	\$ 13,176	\$ 37,507	\$ 114,831
Average cost per inspection	\$ 157	\$ 287				\$ 311
Industrial and Commercial Management Programs	\$ 89,916	\$ 65,596	\$ 210,027	\$ 47,780	\$ 42,318	\$ 12,600
Average cost of inspection	\$ 134	\$ 247	\$ 334			\$ 115
Overall Stormwater Program Management	\$ 317,800	\$ 128,159	\$ 453,872	\$ 570,495	\$ 281,502	\$ 515,352
Pollution Prevention and Good Housekeeping for Municipal Operations	\$ 720,222	\$ 528,252	\$ 2,128,175	\$ 2,240,605	\$ 3,510,806	\$ 859,754
Average cost per curb mile swept	\$ 20	\$ 20	\$ 61	\$ 15	\$ 50	\$ 12
Post Construction Management in New Development and Redevelopment	\$ 13,509	\$ 15,344	\$ 35,083	\$ 57,539	\$ 38,517	\$ 106,925
Public Education, Outreach, Involvement, and Participation	\$ 28,409	\$ 41,898	\$ 101,717	\$ 210,716	\$ 361,440	\$ 49,130
Water Quality Monitoring	\$ 7,000	\$ 76,262	\$ 131,326	\$ 252,918	\$ 494,577	\$ 3,300
Watershed Management	\$ -	\$ 12,400	\$ 17,610	\$ -	\$ 31,591	\$ 332,949
Total Permit Cost	\$ 1,251,285	\$ 1,087,614	\$ 3,101,885	\$ 3,475,163	\$ 5,060,178	\$ 2,070,294
Cost per Household	\$ 31.86	\$ 45.62	\$ 44.66	\$ 17.79	\$ 30.86	\$ 39.48

Source: CSUS NPDES Stormwater Cost Survey

### Ventura Stormwater Permit Costs

The cost categories used in the CSUS study are different than the categories specified in the Ventura County permit. To be able to translate costs from the CSUS study to the Ventura County permit, the categories needed to be compatible. The CSUS study had nine categories based on the US EPA six minimum measures for Phase II stormwater programs plus additional categories that were based on the permits held by the six selected cities. The activities mandated by the permit, the comparable CSUS cost category, and the percent of total surveyed stormwater costs attributed to each category are presented in the Table 6.

**Table 6. Stormwater Permit and CSUS Cost Categories, and Percent of Total Cost**

Permit		CSUS Cost Study	
Sections	Title	Cost Category	Percent of Total Cost
Part 5.C	Public Information and Participation Program (PIPP)	Public Education, Outreach, Involvement, and Participation	5.00%
Part 5.D	Industrial/ Commercial Facilities Program	Industrial and Commercial Management Programs	3.00%
Part 5.E	Planning and Land Development Program	Post Construction Stormwater Management in New Development and Redevelopment	2.00%
Part 5.F	Development Construction Program	Construction Site Stormwater Runoff Control	4.00%
Part 5.G	Public Agency Activities Program	Pollution Prevention and Good Housekeeping for Municipal Operations	61.00%
Part 5.H	Illicit Connections and Illicit Discharges Elimination Program	Illicit Discharge Detection and Elimination	2.00%
Part 5.I	Reporting Program	Watershed Management	2.00%
Part 5.B	Watershed Initiative Participation	Water Quality Monitoring	6.00%
		Overall Stormwater Program Management	14.00%

**Ventura County Watershed Protection District**

The VCWPD is responsible for coordinating and facilitating activities to comply with the requirements of the proposed Permit. The VCWPD conducts the Ventura Countywide Stormwater Quality Management Program. Their mission statement is:

Enhance, protect and preserve water quality in Ventura County water bodies using proactive and innovative ideas for preservation of biodiversity, ecological viability and human health. Work as a countywide team with public agencies, private enterprise, the environmental community and the general public to locally implement Clean Water Act requirements, balancing the actions taken with social and economic constraints. (source: <http://www.vcstormwater.org/>)

They have initiated the basic programs required by NPDES regulations and probably meet some, if not most, of the requirements of the MS4 permit. A review of their Web site indicates that VCWPD has prepared a number of educational programs and materials to urge compliance with reducing stormwater pollution.

Businesses are encouraged to carry out Best Management Practices (BMPs) to reduce pollutants to stormwater runoff. BMPs are defined as general good housekeeping practices, schedules of activities, pollution prevention techniques, educational practices, maintenance procedures, prohibitions of practices and other management practices. BMPs also include treatment practices, operating procedures, and practices to control site runoff, spillage or leaks, sludge or water disposal, or drainage from raw materials storage.

Fact sheets have been made available to provide clear guidance. The BMPs described on these fact sheets are generally inexpensive to implement and may save money and resources. The fact sheets cover various topics and are available on their Web site.

Publications are also available on the Stormwater Pollution Control Plan and on various aspects of the complying with the State General Construction Activities Stormwater Permit.

**Ventura Stormwater Permittees**

The individual permittees are responsible for implementing activities specified in the permit. Ten cities and Ventura County have been designated as Permittees. Area, population and the number of households

for those Permittees are presented in Table 7. Population and the number of households are 2006 US Census estimates.

**Table 7. Ventura County Municipal Separate Stormwater System Permittees**

PLACE NAME	Permittee	Sq Mile*	Population**	Households**
Oxnard	City	24.8	169,649	46,443
Thousand Oaks	City	49.2	125,875	43,939
Simi Valley	City	33.4	124,653	39,899
San Buenaventura (Ventura)	City	20.4	99,969	39,723
Camarillo	City	18.4	57,077	21,438
Moorpark	City	12.5	31,415	8,994
Santa Paula	City	4.5	28,598	8,136
Port Hueneme	City	5.9	21,845	7,268
Fillmore	City	2.7	13,643	3,762
Ojai	City	4.4	7,862	3,088
Mira Monte	Ventura Co.	4.3	7,177	2,619
El Rio	Ventura Co.	1.6	6,193	1,467
Oak View	Ventura Co.	1.7	4,199	1,430
Meiners Oaks	Ventura Co.	1.4	3,750	1,288
Casa Conejo	Ventura Co.	0.5	3,180	985
Channel Islands Beach	Ventura Co.	0.5	3,142	1,362
Oak Park	Ventura Co.	0.3	2,320	747
Piru	Ventura Co.	2.8	1,196	308
Rest of County	Ventura Co.	1,668.0	87,977	26,197
Principal Permittee	VCWPD	1,857.3	799,720	259,093

\*US Census, 2000

\*\*US Census, 2006

As stated above, the CSUS study cost estimates for the six surveyed permittees range from \$18 to \$46 (2002\$) per household per year. The number of households ranged from 23,843 to 195,311. A linear relationship was estimated between the annual cost per household and the number of households. The resulting equation was:

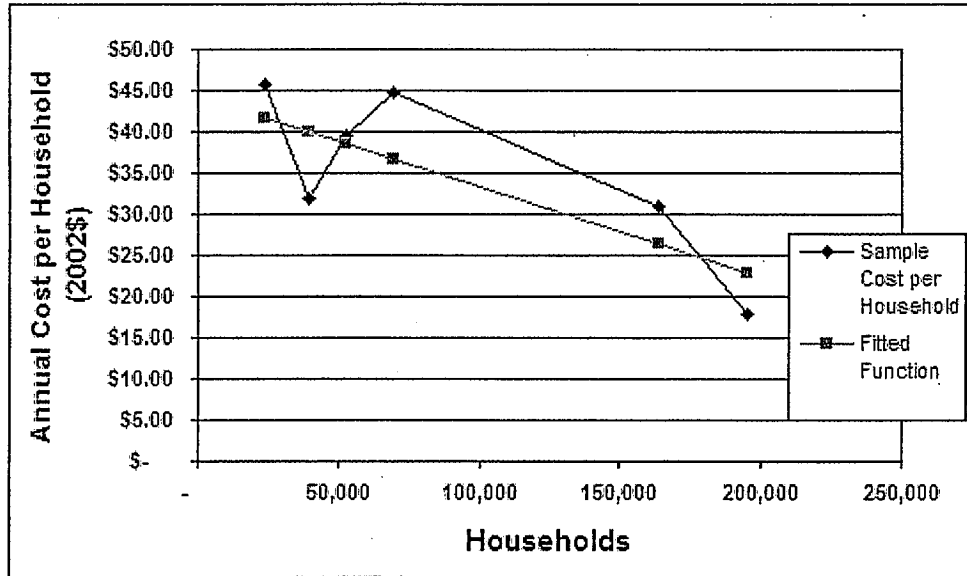
$$\text{Cost/Household} = 44.29 - .000109(\text{Number of Households})$$

This relationship is depicted in Figure 7. Extending this relationship to a permit with 200,000 households would result in a per household cost of \$22.46 per year (2002\$). Ventura County exceeds the number of Fresno-Clovis Metropolitan Area households by 33 percent and should be able to capture the economies of size when implementing the permit. Therefore a total annual cost of \$23 (2002\$) per household was judged to be applicable to the cost of implementing the Ventura County permit.

Two additional cost scenarios were considered to illustrate the range of the CSUS data (Table 8). The first is based on the true sample mean of the aggregate stormwater cost for all cities surveyed divided by the aggregate number of households which was \$29 per household (2002\$). The second is based on the mean of the six values for each city which is \$35 per household (2002\$). When adjusted for inflation, the annual cost estimates range from \$27.60 to \$42.00 (2008\$) per household (Table 9).

The estimated total annual cost to public agencies of implementing the Ventura County Stormwater MS4 permit range from \$7,148,400 to \$10,878,000 (2008\$).

**Figure 7. Annual Stormwater Permit Costs by Number of Households**



**Table 8. Summary of CSUS Normalized Stormwater Costs for Sample Municipalities, 2002\$.**

Municipalities	Municipality Description	Cost/Household (\$)
City of Encinitas	Coastal tourism, small city	46
City of Fremont	Bay Area, moderately integrated countywide program	45
City of Santa Clarita	Tourism and industrial	39
City of Corona	Industrial	32
City of Sacramento	Pumped stormwater, large city	29
Fresno-Clovis Metropolitan Area	65-90% infiltration, fully integrated multi-city program	18
<b>Summary Statistics</b>		
Mean of the six values for each city		35
Median of the six values for each city		36
Standard Deviation of the six values for each city		11
True Mean <sup>1</sup>		29

1. The "true" mean is the aggregate stormwater cost for all cities surveyed divided by the aggregate number of households

Source: CSUS NPDES Stormwater Cost Survey, page 50.

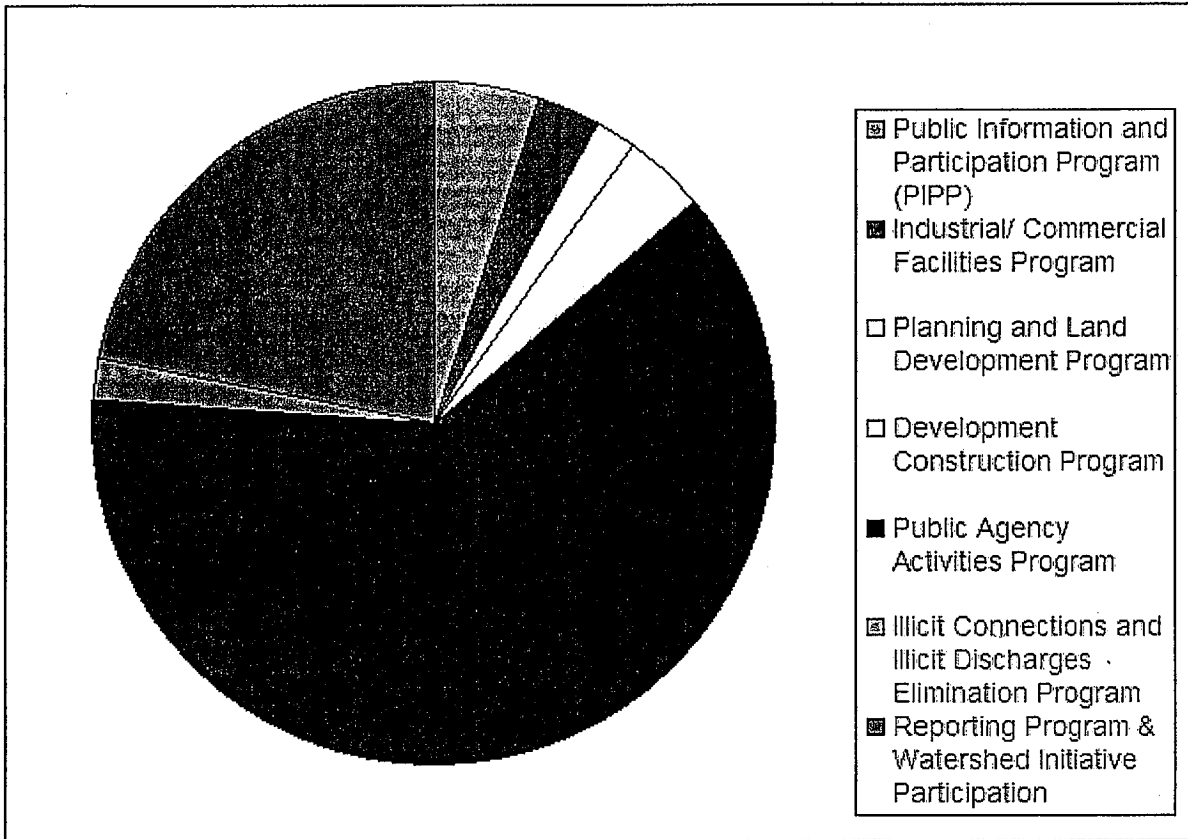
**Table 9. Annual Cost per Household and Total Annual Cost of Implementing the Ventura County MS4 Stormwater Permit by Program for Three Cost Scenarios.**

Cost Category	Based on Relationship of Number of Households to Cost		Based on True Sample Mean		Based on the Mean of the Six Values for Each City	
	Cost per Household	Total Cost*	Cost per Household	Total Cost*	Cost per Household	Total Cost*
Public Information and Participation Program (PIPP)	\$ 1.38	\$ 357,420	\$ 1.74	\$ 450,660	\$ 2.10	\$ 543,900
Industrial/ Commercial Facilities Program	\$ 0.83	\$ 214,452	\$ 1.04	\$ 270,396	\$ 1.26	\$ 326,340
Planning and Land Development Program	\$ 0.55	\$ 142,968	\$ 0.70	\$ 180,264	\$ 0.84	\$ 217,560
Development Construction Program	\$ 1.10	\$ 285,936	\$ 1.39	\$ 360,528	\$ 1.68	\$ 435,120
Public Agency Activities Program	\$ 17.11	\$ 4,432,008	\$ 21.58	\$ 5,588,184	\$ 26.04	\$ 6,744,360
Illicit Connections and Illicit Discharges Elimination Program	\$ 0.55	\$ 142,968	\$ 0.70	\$ 180,264	\$ 0.84	\$ 217,560
Reporting Program & Watershed Initiative Participation	\$ 6.07	\$ 1,572,648	\$ 7.66	\$ 1,982,904	\$ 9.24	\$ 2,393,160
<b>Totals</b>	<b>\$ 27.60</b>	<b>\$ 7,148,400</b>	<b>\$ 34.80</b>	<b>\$ 9,013,200</b>	<b>\$ 42.00</b>	<b>\$ 10,878,000</b>

\*2008\$. Based 259,000 households.

The Public Agency Activities Program comprises 62 percent of the estimated total annual costs. Street cleaning and storm drain cleaning operations are the main activities of the Program (Figure 8). These activities are being conducted at the municipal or county level, however the proposed Permit specifies the frequency of the operations. The cost of this program is not expected to benefit from economies of size and per household costs will be similar for small and large permittees.

The Reporting and Watershed Initiative Participation Program comprises 22 percent of annual costs. This program includes overall management, planning, monitoring and reporting activities mandated by the Permit. Because of the potential for sharing resources among permittees such as analyst's time, and computer hardware and software, the per household cost of this Program can benefit substantially from economies of size. Since the allocation of costs among categories is based on the CSUS cost survey which did not have cities with these attributes, the cost of this program could be less than reported here.



**Figure 8. Distribution of Total Permit Implementation Cost among Cost Categories**



Comment Letters Received Tentative Ventura County MS4 Municipal Separate Storm Sewer System (MS4) Permit, April 1, 2009, NPDES Permit No. CAS004002

Date	Comments/Letters Received/Permittees
April 10, 2009	City of Camarillo; Tom Fox, Public Works Director
April 7, 2009	City of Fillmore, Patti Walker, Mayor
April 10, 2009	City of Moorpark, Yugal Lall, City Engineer
April 9, 2009	City of Oxnard, Thomas Holden, Mayor
April 9, 2009	City of Port Hueneume, David Norman, Mayor
April 10, 2009	City of Simi Valley, Paul Miller, Mayor
April 10, 2009	City of Thousand Oaks, Thomas Glancy, Mayor
April 10, 2009	City of Ventura, Rick Cole, City Manager
April 10, 2009	Ventura County Public Works Agency, Jeff Pratt, Director
April 10, 2009	Ventura County Watershed Protection District, Tom Lagier, Director
April 10, 2009	Ventura Countywide Stormwater Management Program, Gerhardt Hubner
April 10, 2009	Ventura Countywide Stormwater Management Program, Gerhardt Hubner
April 9, 2009	U.S. EPA Region IX; Douglas E. Eberhardt, Chief, NPDES Permits Office
April 9, 2009	County of Los Angeles Department of Public Works, Gail Faber, Director of Public Works
April 5, 2009	City of La Canada Flintridge, Elroy Klepke, NPDES Consultant
April 6, 2009	City of Paramount, Christopher Cash, Director of Public Works
April 2, 2009	City of San Marino, Elroy Klepke, NPDES Consultant
April 9, 2009	Los Angeles River Watershed Management Committee, John Hunter, Chair
April 10, 2009	Coalition for Practical Regulation, Kenneth Farsing, City Manager, City of Signal Hill
April 10, 2009	Executive Advisory Committee Solrwater Program - County of Los Angeles, Gerald Greene, Chair
April 10, 2009	California Stormwater Quality Association (CASQA); Chris Crompton, Chair
April 10, 2009	Building Industry Association - LAVentura Chapter; Holly Schroeder, CEO, Building Industry Association of Southern California - LAVentura Chapter and Andrew Henderson, Vice President and General Counsel, Building Industry Association of Southern California and General Counsel, Building Industry Legal Defense Foundation
April 10, 2009	Construction Industry Coalition on Water Quality, Mark Grey Ph.D., Technical Director
April 10, 2009	Natural Resource Defense Council, David Beckman, Senior Attorney, Heal The Bay, Mark Gold, President, and Ventura County Storm Water Permittees, Rick Cole, City Manager, Edmund Sotelo, City Manager, Mike Sedell, City Manager, Jeff Pratt, Public Works Director
April 10, 2009	Surfrider Foundation, Ventura County Chapter, A. Paul Jenkin, Campaign Coordinator
April 10, 2009	Ventura Coastkeeper, Jason Weiner, Associate Director and Staff Attorney
April 10, 2009	Heal The Bay, Mark Gold, President and Kirsten James, Water Quality Director
April 10, 2009	Natural Resource Defense Council, David Beckman, Bart Lounsbury, and Noah Garrison and Heal The Bay, Mark Gold and Kirsten James
April 9, 2009	TECS Environmental Compliance Services, Ray Tahir
April 2, 2009	Resident of the City of Simi Valley, Ginn Doose
April 8, 2009	Resident of the City of Simi Valley, Teresa Jordan
April 9, 2009	Resident of the City of Simi Valley, Teresa Jordan
April 10, 2009	Resident of the City of Simi Valley, Teresa Jordan
Record for Comment Letters Received LATE After April 10, 2009, 1700 Deadline Tentative Ventura County MS4 Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. CAS004002	

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Comment Letters Received Tentative Ventura County MS4 Municipal Separate Storm Sewer System (MS4) Permit, April 10, 2009,  
 NPDES Permit No, CAS004002

April 10, 2009	Building Industry Association of Southern California - Los Angeles/Ventura Chapter, Nancy Jordan, Director
April 10, 2009	Nossaman LLP, Mary Lynn Coffee, Attorney at Law
April 10, 2009	Letter from Tim Honadel, MS, REHS
April 10, 2009	Graceful Development, Jeff McConnell, President
April 10, 2009	Letter from Joe Cadelago
April 10, 2009	Oro Vista, Matthew Breiner, Vice President
April 10, 2009	West Coast Products, Rochelle Ayars, President
April 10, 2009	Lawyers Title Company, Sara Soudani, Vice President
April 10, 2009	CDS Insurance Services, Eileen Merino, Account Executive
April 10, 2009	RBF Consulting, Scott Uhlesm Project Engineer

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Comments From Permittees

Tentative Ventura County  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002



# City of Camarillo

601 Carmen Drive • P.O. Box 248 • Camarillo, CA 93011-0248

Department of Public Works  
(805) 388-5380  
Fax (805) 389-9524/419-7820

April 10, 2009

Via Electronic Mail

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 Fourth Street, Suite 200  
Los Angeles, CA 90013

Subject: **Comments to 02-24-09 Tentative Order – Ventura County Municipal Separate Storm Sewer System Permit (NPDES No. CAS004002)**

Dear Ms. Egoscue:

The City of Camarillo respectfully submits the following comments regarding the above referenced Tentative Order for your consideration. As stated in our October 12, 2007 and May 29, 2008 letters, the City of Camarillo has been a co-permittee under the Ventura Countywide Municipal Permit since its adoption in 1994. Although our population of fewer than 66,000 classifies us as a Phase II municipality, Camarillo chose to join the countywide effort toward improving water quality in a proactive manner. We feel the collaborative countywide program has been very successful toward meeting that goal.

We appreciate the Regional Board's efforts in meeting with Camarillo and other co-permittees in working through several technical issues contained in prior draft permits. These meetings were productive and we feel they resulted in a better permit. The City of Camarillo supports the comments submitted in the Ventura Countywide Stormwater Program letter dated April 10, 2009 signed by Gerhardt Hubner. As stated in the Countywide Program letter, the Tentative Order sets a high bar for our municipal stormwater program. It will require Camarillo to substantially revise our existing stormwater program and, as a result, costs associated with implementation of the program will also increase substantially, without the ability for us to increase or impose new fees.

**Total Maximum Daily Loads (TMDLs)** – As reiterated in the Countywide letter, the TMDLs have been correctly incorporated in the Tentative Order consistent with 40 C.F.R. § 122.44(d)(1)(vii)(B). We appreciate that the Regional Board has been supportive of the Calleguas Creek Watershed stakeholder process and is not willing to accept arbitrary comments to deviate from the collaborative efforts that have gone into development of the TMDLs.

We look forward to working with the Ventura Countywide Stormwater Program and the Regional Board in implementing the new requirements in the Tentative Order and further improving water quality in the region. If you have any questions regarding our comments, please contact Anita Kuhlman, Stormwater Program Manager, at 805-383-5659.

Sincerely,

Tom Fox  
Public Works Director

cc: Tracy Woods, Sam Unger, LARWQCB  
Jerry Bankston, City Manager  
Camarillo City Council Members  
City Attorney  
Gerhardt Hubner, Ventura Countywide Stormwater Program Chair

E000942



CITY OF FILLMORE

CENTRAL PARK PLAZA

250 CENTRAL AVENUE

FILLMORE, CALIFORNIA 95021-1907

PHONE (530) 570-5700 FAX (530) 570-5700

April 7, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

SUBJECT: COMMENTS ON THE 4<sup>th</sup> DRAFT VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT (NPDES No. CAS004002) FOR THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES

Dear Ms. Egoscue:

With this permit the LA Board is making a major change in the storm water program by establishing Municipal Action Levels (MALs). We appreciate the changes in the 4<sup>th</sup> draft of the permit to change MALs from being "numeric limits" to making them "triggers" for action. However the precedence of using MALs is significant and we are concerned about their inclusion.

We are grateful for the RWQCB staff effort to meet with us and improve many parts of this permit. After two years of stalemate it was a relief to make some progress in these last few months.

Part 2 Municipal Action Levels:

Although the Tentative Order revises the use of MALs from being a determination of Maximum Extent Practicable (MEP) to being an assessment tool, please be assured that the revised MALs will require us to address discharges that exceed the MALs through the implementation of an MAL Action Plan. The requirements and cost of the MAL Action Plan are unknown and may be quite significant. As far as we know, this Tentative Order is the first of its kind in the nation to establish numeric metrics for assessing the storm water flowing from an older existing community with no installed treatment devices.

Storm water pollution comes from public and private properties with about an equal pollutant load coming from each. Retrofitting private properties and public streets is very expensive and will take over 20 years to accomplish. Therefore we expect MAL Action Plans will include appropriate implementation schedules that reflect the maximum extent practicable.

There are other issues of concern to Fillmore but they have been addressed in prior comment letters and in the joint comment letter by the Ventura County Watershed Protection District on

behalf of the Co-Permittees. We look forward to working with the RWQCB to implement the new requirements in this permit and further improve water quality in the Santa Clara River and Sespe Creek.

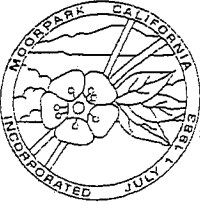
Very Truly Yours,

CITY OF FILLMORE



Patti Walker, Mayor

Cc: Ventura County Board of Supervisors  
Mayors of Ventura County Cities  
State Senators  
State Assembly Members



# City of Moorpark

CITY ENGINEER/PUBLIC WORKS DEPARTMENT

799 Moorpark Avenue, Moorpark, California 93021 (805) 517-6256 fax (805) 532-2555

April 10, 2009

Via Electronic Mail

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 Fourth Street, Suite 200  
Los Angeles, CA 90013

Subject: Comments to 02/24/2009 Tentative Order – Ventura County Municipal  
Separate Storm Sewer System (MS4) Permit (NPDES No. CAS004002)

Dear Ms. Egoscue:

In reference to the above subject, the City of Moorpark (City) wishes to inform you that we have completed our review and offers the following comments. The City supports the majority of the April 10, 2009 Ventura Countywide Stormwater Management Program (Ventura Program) Chair, Gerhardt Hubner, letter and attachments thereof addressed to you. The City would also like to emphasize a few comments.

Although the City, along with the Ventura Program, stands prepared to implement new programs in this groundbreaking permit, it must mention the significant costs that the Tentative Order will place on the City and its residents. The City is projecting that its NPDES program costs will dramatically increase 60% (from \$480,000/year to \$768,000/year). This increase in costs assumes that all parts of the Permit can be implemented without the need for additional City staff. As the Regional Board is aware, the nation is experiencing an economic crisis that has not been seen for several decades. This crisis is impacting everyone, from average citizens to large developers. All government agencies are feeling the economic downturn as well. As local governments in Ventura County face lay-offs, furloughs, hiring freezes, and cuts to popular programs, it is imperative that all regulatory agencies take into account the potential economic impacts of their regulations. As the Regional Board looks to adopt the Tentative Order, it should reconsider whether all the requirements in the Permit are necessary or even relevant, or can be deferred to a later permit when the economy stabilizes.

Municipal Action Levels (MALs) are one example of evaluating cost increases. Although the Tentative Order revises the use of MALs from being a determination of Maximum Extent Practicable (MEP) to being an assessment tool, the revised MALs will require Moorpark and the other Permittees to address discharges that exceed the MALs as the Tentative Order requires the Permittees to prepare and implement an MAL Action Plan. It is the City's understanding that this Tentative Order is the first of its kind to establish numeric metrics for assessing the effectiveness of a municipal program. We recommend for this action to be implemented at a later time.

JE S. PARVIN  
Mayor

MARK VAN DAM  
Mayor Pro Tem

E000945  
Councilmember

ROSEANN MIKOS  
Councilmember

KEITH F  
Council

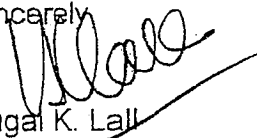
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The City appreciates the Tentative Order's incorporation of the wasteload allocations (WLAs) for effective Total Maximum Daily Loads (TMDLs) as permit limits which is consistent with 40 C.F.R. § 122.44(d)(1)(vii)(B). The City further appreciates that the permit limits in the Tentative Order have been modified from previous drafts of the permit to be consistent with the assumptions and requirements of available WLAs by being incorporated as receiving water limits in the permit. Additionally, the WLAs have been appropriately expressed in the form of BMPs consistent with EPA's 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs." The City concurs with the Countywide Stormwater Program letter's recommended revisions to the Tentative Order to provide further clarification that the WLAs will be implemented through BMPs and to provide a mechanism for making adjustments to the BMPs to ensure their adequate performance. As stated in previous comment letters, Moorpark is one of many stakeholders that have worked together collaboratively towards improving water quality, in the Calleguas Creek Watershed and it appreciates the Tentative Order's requirements being consistent with the adopted TMDLs for this watershed.

The City appreciates the Tentative Order's inclusion of a comprehensive approach for addressing trash in Ventura County. Although trash is not a significant issue in the water-ways of Ventura County (with less than 12 miles of water ways listed as trash impaired in the entire County), the City does support taking an aggressive approach to trash management. The Tentative Order provides the Permittees with the necessary flexibility to prioritize drainage systems for trash generation, and subsequent clean-up and removal. Furthermore, the Tentative Order allows the Permittees to develop alternative approaches that reflect the nature and composition of the municipality. The City supports the flexibility provided for in the Tentative Order and encourages the Regional Board to continue providing the flexibility needed to tailor municipal programs for relevant and identified water quality issues.

The City looks forward to your response to these comments and the comments in the Ventura Program's letter and attachments thereof. We would again like to emphasize our commitment to the collaborative effort in maintaining and enhancing water quality in its watersheds. Please feel free to contact Mr. Shaun Kroes at (805) 517-6257 if you have any questions regarding these comments. Thank you.

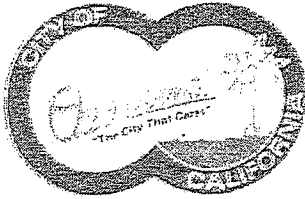
Sincerely,



Yugal K. Lall  
City Engineer/Public Works Director

C: Honorable City Council  
Steve Kueny, City Manager  
Shaun Kroes, Senior Management Analyst  
Gerhardt Hubner, VCWPD  
Sam Unger, LARWQCB





DR. THOMAS E. HOLDEN  
Mayor

OFFICE OF THE MAYOR  
305 West Third Street • Oxnard, CA 93030 • (805) 385-7435 • Fax (805) 385-7595  
E-mail: dtomholden@aol.com

April 9, 2009

Ms. Tracy Egoscue, Executive Officer  
Regional Water Quality Control Board - Los Angeles  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
SYSTEM ORDER (NPDES PERMIT No. CAS004002)**

Dear Ms. Egoscue:

Thank you for the opportunity to comment on the tentative Fact Sheet and tentative National Pollutant Discharge Elimination System Municipal Separate Storm Sewer System permit for the Ventura Countywide Stormwater Program. The City of Oxnard is a copermitttee on the permit, and staff have worked with other copermitttees on the development of county-wide comments on the draft permit, and concur with the majority of those comments transmitted to you under separate cover.

Although some of the comments submitted for the prior drafts have been addressed in the tentative Order, many have not. We therefore reference our earlier comments, dated March 5, 2007, and May 12, 2008. We also submit the following comments on the tentative Order and Fact Sheet for your consideration:

**Fact Sheet**

- 1) History of Ventura MS4 NPDES Permit (Page 6), states that "In 1990, populations in Oxnard, Thousand Oaks, and Unincorporated Ventura County met the Census definition of medium size municipalities."

Federal Regulations at 40 CFR Part 122.26 define a medium municipal separate storm sewer system:

*(7) Medium municipal separate storm sewer system means all municipal separate storm sewers that are either:*

*(i) Located in an incorporated place with a population of 100,000 or more but less than 250,000, as determined by the 1990 Decennial Census by the Bureau of the Census (Appendix G of this part); or*

*(ii) Located in the counties listed in appendix I, except municipal separate storm sewers that are located in the incorporated places, townships or towns within such counties; or*

*(iii) Owned or operated by a municipality other than those described in paragraph (b)(7) (i) or (ii) of this section and that are designated by the Director as part of the large or medium municipal separate storm sewer system due to the interrelationship between the discharges of the designated storm sewer and the discharges from municipal separate storm sewers described under paragraph (b)(7) (i) or (ii) of this section. In making this determination the Director may consider the following factors:*

*(A) Physical interconnections between the municipal separate storm sewers;*

*(B) The location of discharges from the designated municipal separate storm sewer relative to discharges from municipal separate storm sewers described in paragraph (b)(7)(i) of this section;*

*(C) The quantity and nature of pollutants discharged to waters of the United States;*

*(D) The nature of the receiving waters; or*

*(E) Other relevant factors; or*

*(iv) The Director may, upon petition, designate as a medium municipal separate storm sewer system, municipal separate storm sewers located within the boundaries of a region defined by a storm water management regional authority based on a jurisdictional, watershed, or other appropriate basis that includes one or more of the systems described in paragraphs (b)(7) (i), (ii), (iii) of this section.*

In 1990, none of the cities in Ventura County met the federal definition for a medium municipal separate storm sewer system, and none were included in Appendix G of the regulation. Additionally, Ventura County was not listed in Appendix I of the regulation.

The City of Oxnard did exceed the 100,000 population threshold following promulgation of the regulations, and prepared a Part 1 Application in May of 1992.

- 2) History of Ventura MS4 NPDES Permit (Page 6), further states that "After discussions with the Ventura County Flood Control District, and the City of Thousand Oaks, the Water Board decided that the VCFD as Principal Permittee would submit a system wide Part 2 application on behalf of all the municipalities in Ventura County, because of the interconnected nature of the flood control system."

It is more accurate to state that the cities in Ventura County requested, under 7(iv) above, a regional stormwater permit for similar discharges from municipalities to similar receiving waters.

- 3) History of Ventura MS4 NPDES Permit (Page 6), also states that "...more than a decade after the first permit was issued, we continue to see exceedances of water quality standards for storm water pollutants such as bacteria, and heavy metals."

There are no water quality standards for storm water pollutants. The 2004 Regional Board Triennial Review prioritized issues that needed to be addressed under the basin planning process. At this time, the City of Oxnard commented on the need for "Appropriate beneficial uses for wet weather". The staff report for the Triennial Review made the following observations:

Among the regulated community, four common themes emerged. One revolved around re-evaluating beneficial uses. Three related issues were identified including 1) reevaluating beneficial uses in engineered channels and effluent dominated waters (EDWs), 2) re-evaluating the application of beneficial uses during wet weather flows, and 3) re-evaluating how *potential* beneficial uses are applied and protected.

A second theme revolved around stormwater and how Basin Plan requirements are applied to stormwater. In addition to examining the beneficial uses as described above, commenters requested clarification on how the objectives contained in the California Toxics Rule (CTR) and the provisions of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) are applied to stormwater. Requests were also made to develop a policy for addressing peak storm flows, including the conditions under which storm flows should be subject to Basin Plan requirements (i.e. water quality standards, receiving water limitations in permits, etc.).

Until the water quality standards can be re-evaluated for wet weather, we recommend deletion of any references to exceedances of standards during storm events.

- 4) Report of Waste Discharge (Page 8), describes the Program's timely submittal of a Report of Waste Discharge (permit renewal application), and states that the Regional Water Board "determined it to be partially complete."

Please include a discussion in the Fact Sheet on the incomplete information provided, the rationale for lack of a request for follow-up information, and the impact of the incomplete application on the development of the permit requirements.

- 5) Regulatory Scheme (Page 11), states that the permittees will not be held responsible for effectively prohibiting "certain categories of non storm water discharges, such as uncontaminated ground water infiltration, natural springs,

rising groundwater, stream and diversions, from the MS4. Such discharges might need to be addressed under independent NPDES permits when specifically identified on a case-by case basis by the MS4 Permittee or the permitting authority” The Fact Sheet then references the proposed permit for releases of potable water from distribution systems, and the inclusion of this permit under Special Provisions (Page 15).

Please include the case-by-case identification of the need for a general permit for potable water discharges in the Tentative Ventura County Municipal Separate Storm Sewer System Order in the Fact Sheet.

- 6) State Regulatory Authority and Permit History (Page 14), again states that “Because of the complexity and networking of the storm drain system and drainage facilities with and tributary to the County of Ventura, the LA Water Board adopted a countywide approach in permitting storm water and urban runoff discharges.”

As described in 1) and 2) above, the countywide approach to addressing stormwater in Ventura County was a voluntary effort on the part of the copermitees. It allowed a consistent management program wherein successful elements developed by the larger cities could be applied in all jurisdictions. The actual storm drain systems for the copermitees are not part of a continuous or inclusive countywide network of drainage facilities.

- 7) Municipal Action Levels (Page 16), contains the following second paragraph “(<http://unix.eng.ua.edu/~rpitt/Research/Research.html>, last visited on August 14, 2007).”

The sentence seems to be a cut and paste error, and we recommend the removal of the sentence at its numerous locations throughout the Fact Sheet and Tentative Order.

- 8) Discussion of New Requirements (Page 20), states that the Tentative “requires Permittees to establish watershed Citizen Advisory Groups/Committees.”

The actual language in the Tentative Order requires us to “Work with existing local watershed groups or organize watershed Citizen Advisory Groups/ Committees to develop effective methods to educate the public about storm water pollution.” We prefer the “work with” language because of our successful collaboration with Neighborhood Councils in the City of Oxnard, which were established outside of the stormwater program. Although not strictly watershed-based, these councils bring many issues to the attention of City staff, including those that are stormwater-related. Similarly, “Organize events targeted to residents and population subgroups” should be changed to “Organize or participate in events targeted to residents and population subgroups”.

- 9) Legal Framework (Pages 23-30), provide the background for enhancements to the Tentative Order for the Industrial/Commercial Businesses Program.

Although there is reference to water quality monitoring data for receiving water from the Ventura MS4 Program, there is no nexus to the industrial land use data; there are only references to other programs outside of the county. Equally disturbing is the lack of data from the Industrial General Permit that would provide site-specific demonstration of receiving water impacts from industrial activity that would justify resources committed to the enhancements. Please provide the rationale for the enhanced Industrial/Commercial Businesses Program that is specific to the Ventura County Program.

- 10) Proposed Enhancement (Page 30), states that the ROWD "did not propose any improvements in the monitoring program to better characterize the discharge of pollutants from sites of industrial or commercial use and prioritize the activities to control them."

The monitoring program was modified by Regional Board staff for the second round of NPDES permit to better characterize watershed conditions. The monitoring originally proposed and implemented by the Permittees focused on the characterization of pollutants from land uses, including two industrial sites and one commercial site within the urban areas. In addition to the change in monitoring focus required by Regional Board staff, Regional Board staff have not provided general industrial permit data on dischargers within Ventura County to assist the Program in identifying problematic businesses. The Outfall Monitoring proposed under the Tentative Order will provide the mechanism for tracking these problematic businesses. There is no need or justification for the enhanced Industrial/Commercial Businesses Program in Ventura County at this time. As the Fact Sheet states, many of the Permittees "currently perform activities close to the level expected by the proposed permit".

- 11) Planning and Land Development Program (Page 37), provide the background for requirements to meet Maximum Extent Practicable (MEP) for development projects, and includes the statement "it is recommended that storm water BMPs be designed to manage both flows and water quality for best performance".

From the beginning of the Ventura Countywide Program, the intention for new development, as stated in our Part 2 application, was to capture and treat stormwater runoff from development. The flexible approach of the first Ventura Countywide Stormwater Permit allowed for the development of technical guidance wherein Permittees could tailor the requirements to site-specific conditions. Many of the projects in the City of Oxnard implemented BMPs that met our goal to "Reduce post-development TSS loadings and maintain post-development runoff peaks/volumes near predevelopment levels". Examples include Haas Automotive, which employed permeable pavement, and Sysco, which uses grassy swales and detention/infiltration basins, to maximize recharge of this valuable resource.

This changed with the second Ventura Countywide Stormwater Permit, which was more prescriptive and required that "BMPs shall be designed to mitigate (infiltrate or treat) storm water runoff". This requirement, designed to make the Ventura County Program consistent with the Los Angeles County Program, took away the ability of the Permittees to direct projects to infiltrate stormwater where appropriate. Most developers took advantage of the options that required less space, and proposed treatment BMPs for the various design criteria (included on Page 43 of the Fact Sheet).

This Tentative Order is even more prescriptive in an attempt to bring the direction of the Program back to its original course. While we readily acknowledge that the second Ventura Countywide Stormwater Permit did not work, there was never a finding that the first permit's flexible approach, combined with the Technical Guidance Manual, was not successful. This should be included as rationale for the more prescriptive approach of the Tentative Order.

#### Waste Discharge Requirements

1. Finding A.1, Permit Parties and History (Page 1) states that "Ventura County Watershed Protection District (Principal Permittee), County of Ventura, cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura (Ventura), Santa Paula, Simi Valley and Thousand Oaks (hereinafter referred to separately as Permittees) have joined together to form the Ventura Countywide Storm Water Quality Management Program to discharge wastes."

As discussed in Fact Sheet comments 1) and 2) above, the Ventura Countywide Program was not formed to discharge waste, but to implement a standardized, cost effective program for addressing urban runoff in Ventura County.

2. Finding A.1, Permit Parties and History (Page 2) states that "The Ventura County MS4 Permittees have entered into an agreement with the Watershed Protection District to finance the activities related to the Ventura County MS4 Permit for shared and district wide expenses."

This statement may not be accurate.

3. Finding B.2., Nature of Discharge (Page 2) describes pollutants commonly found in urban runoff and their sources, including "Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off".

The Ventura Countywide Monitoring Program has also identified forest and grass fires as a significant contributor of PAHs. This source should be added to the Finding.

4. B.5., Nature of Discharge (Page 3) states that "Elevated bacterial indicator densities impair the water contact recreation (REC-1) beneficial use at beaches.

creeks, estuaries, lagoons, and marinas. Swimming in waters with elevated bacterial indicator densities has been associated with adverse health effects. Specifically, local and national epidemiological studies indicate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities.”

There is no discussion or support information in the Fact Sheet for this finding. Please delete the finding, or provide rationale in the Fact Sheet.

5. B.8., Nature of Discharge (Page 3) states that “Rising groundwater and swimming pool water have been found to be sources of pollutants such as salts (chloride).”

One of the major sources of salt loading to local watersheds is imported water, and we recommend adding this source to the finding.

6. D.2., Permit Coverage (Page 8) states that “The Permittees covered under this Order were designated on a system-wide basis under Phase I of the CWA § 402(p)(3)(B)(i). The action of covering all Ventura County municipalities under a single MS4 permit on a system-wide basis was consistent with the provisions of 40 CFR 122.26(a)(3)(iv), which states that one permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems; and the Regional Water Board may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.”

As discussed in Fact Sheet comments 1), 2), and 6) above, the copermitttees proactively proposed a county-wide program to implement the stormwater program in a consistent and cost effective manner. This finding should be supported in the Fact Sheet by the documentation of the system-wide designation of all of the copermitttees, or the finding should be deleted.

7. E.16., Federal, State and Regional Regulations (Page 17) states that the “The Regional Water Board adopted and approved requirements for new development and significant redevelopment projects in Ventura County to control the discharge of storm water pollutants in post-construction storm water, on January 26, 2000, in Board Resolution No. R-00-02. The Regional Water Board Executive Officer issued the approved Standard Urban Storm Water Mitigation Plans (SUSMPs) on March 8, 2000 for Los Angeles County and the Cities in Los Angeles County. Since 2000, new development and redevelopment water quality criteria have been implemented by the Permittees to be consistent with SUSMP. The State Board affirmed the Regional Water Board action and SUSMPs in State Board Order No. WQ 2000-11, issued on October 5, 2000.

R-00-02, a Resolution entitled *APPROVING THE STANDARD URBAN STORM WATER MITIGATION PLAN FOR MUNICIPAL STORM WATER AND URBAN RUNOFF MANAGEMENT PROGRAMS IN LOS ANGELES COUNTY* clearly doesn't apply to Ventura County. In fact, the word Ventura is not even found in the document. Please delete this erroneous and misleading finding.

8. E.28., Federal, State and Regional Regulations (Page 21) and F.19. and F.22., Implementation (Pages 27 and 28) imply that an analysis of factors required under California Water Code section 13241 has been done, and is part of the Fact Sheet.

The Fact Sheet does not appear to contain this analysis.

9. Part 1, A.1., Prohibitions Non-Storm Water Discharges (Page 29) states that certain categories of waste, including discharges from potable water sources, are not a source of pollutants that exceed water quality standards. These discharges are allowed, using appropriate BMPs, until such time as their identification by the Regional Board as sources of pollutants that exceed water quality standard. Footnote number 2 on Page 29 then goes on to require that these discharges be covered under the General Permit when adopted.

See Fact Sheet comment 12) above. The General Permit for these discharges has been out in draft form for many months. Neither the Municipal Stormwater Permit Fact Sheet nor the General Permit for Potable Water Discharges contain findings on the identification of these waters as being sources of pollutants that exceed water quality standards. Additionally, Part 1, A.3.b., Prohibitions Non-Storm Water Discharges (Page 33) contains the same management practices that are required under the proposed General Permit. We recommend that the General Permit for Potable Water Discharges apply only to those water suppliers/distributors that are not already covered under a municipal stormwater permit.

10. Part 4, E.1., Designation and Responsibilities of the Principal Permittee (Page 39) states that the "Ventura County Watershed Protection District is hereby designated as the Principal Permittee."

The copermitees, in developing the Stormwater Quality Management Program, elected to have the Ventura County Flood Control District (now Watershed Protection District) serve as principal copermitees. This could change. We recommend changing the sentence to read "Ventura County Watershed Protection District is currently designated as the Principal Permittee."

11. Part 5, E.III.2., Hydromodification (Flow/ Volume/ Duration) Control Criteria (Page 55) states that its purpose is to "minimize changes in post-development hydrologic storm water runoff discharge rates, velocities, and duration".



The permittees are in favor of efforts to protect natural waterbodies from erosion. This is not possible given the prescriptive nature of the Tentative Order. Low impact development techniques, combined with effective impervious area criteria and treatment BMP performance standards, are guaranteed to take out what, under natural conditions, would be normal amounts of sediment. The lack of sediment discharge to the receiving water leads to erosive conditions. We recommend deleting this section of the permit, except for requiring participation in the Stormwater Monitoring Coalition and the Hydromodification Control Study, and allow permittees the flexibility to determine the best methodologies for protecting their natural waterbodies.

12. Part 5, H.1.1.(b), Illicit Connections and Illicit Discharges Elimination Program, Tracking (Page 83) requires all Permittees to map all known connections to their storm drain system and map incidents of illicit connection and discharges, and transmit the information to the Principal Permittee.

This, and other requirements in this section, take a bottom-up approach to illicit discharge investigations. This goes against guidance documents that start with larger waterbodies, and work their way up to smaller systems. In the City of Oxnard, for example, the WPD owns most of the above-ground stormwater conveyance systems. They would go through a process of identifying their known connections and provide that information to other Permittees. These Permittees would then take that information, and any information provided by WPD on illicit connections, to identify the source of the connection, and perform appropriate actions to remove or permit the connection. Please modify this requirement to provide for this two-way communication.

#### Monitoring Program

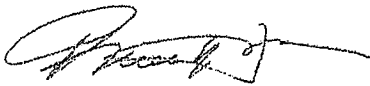
13. Requirement D.12, Aquatic Toxicity Monitoring (Page F-11) calls for immediately running a Toxicity Identification Evaluation (TIE) if toxicity is determined.

We prefer that the TIE is trigger by back-to-back determination of toxicity, or a demonstrated pattern of toxicity.

In summary, the Tentative Order, while far more prescriptive and financially burdensome than prior permits, appears to be making steps toward improving water quality. Much of the information requested in support of the Tentative Order, however, was not included in the Fact Sheet. This makes it very difficult for stakeholders in the watershed processes, like the City of Oxnard and its residents, to support the prescriptive requirements found in the permit, especially when it doubles the current implementation cost. As always, we are interested in working with Regional Board staff on building an effective and affordable program that will be successful in maintaining or improving water quality in Ventura County.

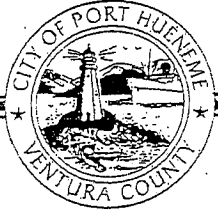
If you have any questions regarding our comments on the draft stormwater permit, please feel free to call me, or contact Mark Pumford, Technical Services Manager, at (805) 271-2220.

Sincerely,



Dr. Thomas E. Holden  
Mayor

c: Sam Unger, Regional Water Quality Control Board Los Angeles



# City of Port Hueneme

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April 9, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, Ca 90013

**REF: 02-24-09 TENTATIVE ORDER OF THE VENTURA COUNTY MUNICIPAL  
SEPARATE STORM SEWER SYSTEM PERMIT (NPDES No. CAS004002)  
FOR THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES**

Dear Ms. Egoscue:

City of Port Hueneme staff wishes to take this opportunity to express our appreciation of the Regional Water Board's staff efforts to meet and consider our concerns with the previous draft tentative orders. We believe the latest Tentative Order is comprehensive and provides a solid framework for us to assess the effectiveness of our program within our jurisdiction.

That being said, there is still major concern with the inclusion of MAL's within this permit. Although the Tentative Order revises the use of MAL's from being a determination of MEP to being an assessment tool, discharges that exceed the MAL's require the Permittees to prepare and implement a MAL Action Plan. The requirements and potential costs of the action plan are unknown and could be quite significant.

The City of Port Hueneme also supports all comments detailed in a letter dated April 10, 2009 from the Ventura Countywide Stormwater Program on behalf of all the co-permittees.

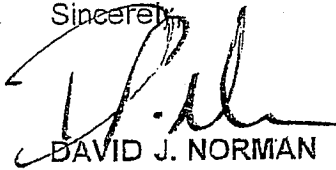
In closing, we once again thank you and your staff for the time and effort in meeting with the MS4s to work through the many issues in the previous draft permits.

NPDES DRAFT TENTATIVE ORDER

April 9, 2009

Page 2

Sincerely,



DAVID J. NORMAN  
CITY MANAGER

- c: City Council  
City Attorney  
Public Works Director  
Wastewater Superintendent  
Ventura Countywide Program Permittees  
Gerhardt Hubner, Ventura County Watershed Protection District



# CITY OF SIMI VALLEY

*Home of The Ronald Reagan Presidential Library*

April 10, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

SUBJECT: TENTATIVE ORDER OF THE VENTURA COUNTY MUNICIPAL  
SEPARATE STORM SEWER SYSTEM PERMIT (NPDES PERMIT NO.  
CAS004002)

Dear Ms. Egoscue:

The City of Simi Valley respectfully submits the following comments regarding the above referenced Tentative Order. The City acknowledges and appreciates the significant Regional Water Quality Control Board (Board) staff efforts. They collaborated over a series of meetings with the Ventura Countywide Stormwater Program staff to develop a Tentative Order that better protects water quality and is more flexible and affordable than previously proposed. In addition, the City supports and concurs with the Ventura Countywide Stormwater Program (Program) comment letter dated April 10, 2009.

As expressed in greater detail in the April 10, 2009, Program letter, the Municipal Action Levels (MALs) and Best Management Practice (BMP) Performance Standards, as well as other permit elements, set a standard for stormwater permitting, perhaps nationally. The Tentative Order would require Permittees to perform many new duties and construct many new programs, resulting in a significant implementation cost increase. While we have worked well together to reduce some cost impacts, the Tentative Order would still result in nearly doubling average costs from \$35 per household per year to over \$60. Particularly considering the current economy and the financial stress our City is under, such a substantial cost increase is difficult to accommodate. While the City in general supports the Tentative Order, it is imperative the Board continue to seek alternative approaches and schedules and remain open to the Permittees suggestions for alternatives to provide the Permittees the flexibility to protect water quality as cost effectively as possible.

ADMIN\A972.JH

Paul Millier, Mayor    Barbara Williamson, Mayor Pro Tem    Glen T. Becerra, Council Member    Steven T. Sojka, Council Member    Michelle S. Foster, Council Member

2929 Topo Canyon Road, Simi Valley, CA 93065-2199    805.523.6700    www.simivalley.org

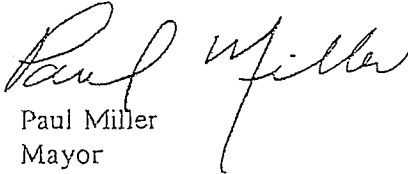
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Ms. Tracy Egoscue  
Los Angeles Regional Water Quality Control Board  
April 10, 2009  
Page 2

If you have any questions, please call Mr. Mike Sedell, City Manager, at (805) 583-6701 or Mr. Joe Deakin, Assistant Director of Public Works, at (805) 583-6401.

Sincerely,



Paul Miller  
Mayor

cc: City Council  
City Manager  
Assistant City Manager/L. Behjan  
Assistant City Manager/D. Paranick  
Director of Public Works  
Assistant Director of Public Works

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# City of Thousand Oaks

MAYOR THOMAS P. GLANCY

April 10, 2009

*Via electronic mail*

Mary Ann Lutz, Chair  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**Re: Tentative Order - Ventura County Municipal Separate Storm Sewer System Permit (NPDES No. CAS004002) for the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein**

Dear Chairperson Lutz:

The City of Thousand Oaks appreciates the opportunity to provide comments on the Tentative Ventura County Municipal Separate Storm Sewer System Permit for the Ventura County Watershed Protection District, County of Ventura and the incorporated cities.

Thousand Oaks has been an active and supportive member of the Ventura Countywide Stormwater Quality Management Program since its inception in 1992. In addition, for many years, and at significant cost, the City has worked cooperatively with the Regional Board and other stakeholders to develop the Calleguas Creek Watershed Management Plan and also to address water quality impairments through the development of Total Maximum Daily Loads (TMDLs). The City believes that the cooperative effort in the Calleguas Creek Watershed is unprecedented and will result in significant water quality improvements.

The City along with the other Ventura County co-permittees have worked together to review the Tentative Order and the City is pleased to say that we are substantially in agreement with the comments submitted on April 10, 2009 by Gerhardt Hubner, Chair of the Countywide Program, on behalf of all co-permittees. In addition to the Countywide Program comments, the City of Thousand Oaks is also submitting technical comments for the Regional Board's review and consideration (Attachment A).

The Ventura County Watershed Protection District, County of Ventura and the incorporated cities (the co-permittees) and the Regional Board embarked upon the permit renewal process in January 2005, when the countywide program submitted its Report of Waste Discharge, or permit application. Through a lengthy, but ultimately constructive process, the co-permittees and Board staff developed a better


Ms. Mary Ann Lutz  
April 10, 2009  
Page 2

understanding of each agency's concerns and constraints. The permit before you is the end result of that lengthy discussion process.

The Tentative Ventura County Municipal Stormwater Permit is a groundbreaking document; the requirements of this permit are, in total, more stringent than any other stormwater quality permit that has been adopted in this State. Commensurate with groundbreaking requirements come tremendous implementation costs for local government, as well as the residents and businesses that call Ventura County home. Given the difficult economic climate, with local government struggling to provide basic health and safety services, supporting the issuance of a permit that will require the expenditure of millions of dollars is a difficult premise. That being said, the City recognizes its responsibility to protect and improve water quality. We look forward to working with the Regional Board to implement the new requirements as we continue our common roles as leaders in environmental stewardship.

If you have any questions or need additional information, please feel free to contact Mark Watkins, Public Works Director at (805) 449-2399 at your convenience.

Sincerely,



Thomas P. Glancy  
Mayor

c: Ventura County Stormwater Permittees  
Ventura County City Managers

Attachment

CMO:\120-10\js\CMO\Glancy\Stormwater Permit Comment Letter 040609.doc  
DPW:530-25(2)\cm\glancy\stormwater permit comment letter 4\_09.doc



**Attachment A**

City of Thousand Oaks – Technical Comments

February 24, 2009 Tentative Order - Ventura County Municipal Separate Storm Sewer System Permit (NPDES No. CAS004002) for the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein

No.	Page	Citation	Comment
1	31-32	Table 1	<p><i>"Dechlorinated/debrominated swimming pool discharges [see definition Part 8]. Where discharge is not excepted [sic] by the sanitary sewer operator. Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled top prevent resuspension of sediments.</i></p> <p><i>"No discharges are allowed containing salts in excess of Water Quality Standards."</i></p> <p><i>Chlorine residual in discharge shall not exceed 0.1 mg/L."</i></p> <p>This requirement conflicts with the requirements on pages 36 and 37, Part 4 B.1.(b)(5) and on page 98 Definitions (see following comments)</p> <p>Also, "Swimming pool discharges are to be dechlorinated,....aerated to remove chlorine if necessary.." is redundant.</p>
2	36-37	Part 4 B.1(b)(5)	<p><i>"Permittees shall possess the necessary legal authority to prohibit...(5) Swimming pools that have a concentration greater than: (A) Chlorine/bromine – 0.1 mg/L (B) Chloride – 250 mg/L"</i></p> <p>This requirement conflicts with the requirements on pages 31-32 (Table 1) and on page 98 Definitions (see comments No. 1 and 3).</p> <p>Swimming pool discharges should not be subject to an arbitrary chloride standard since water quality standards differ throughout the county. The requirement should read as it does in Table 1.</p>

No.	Page	Citation	Comment
3	98	Definitions	<p><b>"Dechlorinated/debrominated swimming pool discharge</b> – means any swimming pool discharge with a residual chlorine or bromine level of 0.1 mg/L or less; and does not contain any detergents, wastes, algaecides, or cyanuric acid in excess of 50 ppm; or any other chemicals including salts from pools commonly referred to as "salt water pools". The term does not include swimming pool filter backwash or swimming pool water containing bacteria."</p> <p>The definition conflicts with requirements on pages 31-32 (Table 1) and pages 36 and 37, Part 4 B.1.(b)(5) (see comments No. 1 and 2)</p> <p>The requirement should read the same as it does in Table 1. Restrictions on salt water pools should not be required for ocean discharges. In the last sentence, "...or swimming pool water containing bacteria" should be deleted. It is not possible to remove all bacteria from water exposed to the atmosphere. Also change "ppm" to mg/L.</p>
4	37 and 38	Part 4.B.2 & Part 4.B4	<p>Legal Authority: These sections require Permittees to possess legal authority over persons and entities within their jurisdiction and hold them accountable for discharges to the MS4 system. Compliance with this section would require stormwater discharges from federal property, state property and public schools to be subject to Municipal Code requirements. This is not legally possible. Please include a footnote for the term "persons within their jurisdiction" (page 37, Part 4.B.2.(b)) indicating that the requirement does not apply to federal, state and public school property and/or facilities.</p>
5	50	Part 5.D.2(B)	<p><b>"The Permittees shall require implementation of additional BMPs where the stormwater from the MS4 discharges to 303(d) listed waterbody; or"</b> Please revise to read: The Permittees shall require implementation of pollutant specific controls to reduce pollutants in stormwater runoff that are causing or contributing to exceedances of water quality standards additional BMPs where the stormwater from the MS4 directly discharges to a CWA Section 303(d) listed waterbody; or</p>
6	53	Part 5.E.II.1.(3)	<p>Why is the descriptor "strip mall" included in this category? Although some developments are arranged in multiple-suites, some commercial developments of 10,000 SF are not what would be characterized as "strip malls" or "plazas".</p>



Comment		
No.	Page	Citation
14	96	Part 7. Definitions
Bacteria TMDL Dry Weather and Wet Weather need to be clarified to include the appropriate date ranges of April 1 through October 31 for dry weather and November 1 through March 31 for wet weather.		

April 10, 2009

Tracy Egoscue, Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Via Email: [VenturaMS4Comments041009@waterboards.ca.gov](mailto:VenturaMS4Comments041009@waterboards.ca.gov)

**SUBJECT: Comments on NPDES No. CAS004002 – Ventura County MS4 Tentative Order**

Dear Ms. Egoscue,

Thank you for working collaboratively to develop a progressive municipal stormwater permit that builds on the success of the Ventura program and meets our mutual water quality goals. The subject Tentative Order (Permit) is a precedence-setting permit that will create a high standard for municipal stormwater programs. While the City of Ventura appreciates the importance of such a permit, we also recognize the challenges of implementing the more than 70 required program activities at a time when our City and our community, like the rest of the country, is dealing with a serious economic downturn.

As major sources of revenue to the City's General Fund such as sales and property taxes continue to fall, Ventura, like most governmental agencies, is expected to face a serious budget imbalance for at least the next two years. Our Stormwater Quality Program does not have existing enterprise funding available, as do water and sanitary sewer service programs, and would need significant community support to obtain a funding source. This less well-known program must compete with other needs funded through the General Fund such as public safety (fire and police services), libraries, parks, and community programs for elderly, children and the needy. Recently, our City has attempted to develop additional revenue sources, which have been to date unsuccessful with Ventura residents. Therefore, we ask that your Board carefully consider the cost implications of this permit along with current and future TMDLs before making any modifications to its requirements.

We support the April 10, 2009 letter and technical comments submitted by the Ventura County Watershed Protection District on behalf of all co-permittees.

The City of Ventura continues to strive to be a "leaner and greener" organization. As a coastal community, bordered by two of the largest rivers in Southern California, our community supports environmental stewardship and understands the critical importance of improving our water quality, now and in the future.

We look forward to implementing practical and effective measures to improve water quality and protect the environment, within our available resources. If you have any questions, please contact me or Vicki Musgrove at (805) 340-1875 or [vmusgrove@ci.ventura.ca.us](mailto:vmusgrove@ci.ventura.ca.us)

Sincerely,



Rick Cole  
City Manager

c: Gerhard Hubner, Ventura County Watershed Protection District

April 10, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Transportation Department  
Wm. Butch Britt, Director  
Central Services Department  
Janice E. Turner, Director  
Water & Sanitation Department  
R. Reddy Pakala, Director  
Watershed Protection District  
Tom Lagier, Director  
Engineering Services Department  
Alec T. Pringle, Director

**SUBJECT: FEBRUARY 24, 2009 TENTATIVE ORDER OF THE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT (NPDES No. CAS004002) FOR THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES**

Dear Ms. Egoscue:

On behalf of the County of Ventura Stormwater Program (County), we appreciate this opportunity to provide written comments concerning the Regional Water Quality Control Board's (Regional Board) tentative order of Waste Discharge Requirements for Storm Water Discharges from the Municipal Separate Storm Sewer System (Tentative Order) in Ventura County (NPDES Permit No. CAS004002). This was released for public comment by the Regional Water Board on February 24, 2009. The County commented on previous drafts on March 6, 2007, October 15, 2007 and May 29, 2008.

The County supports the April 10, 2009 Ventura Countywide Program comment letter and all attachments.

We appreciate the Regional Water Board's staff efforts to meet and consider our many concerns with the previous draft orders. These efforts aided in crafting a Tentative Order that is both protective of water quality and implementable by the County. The resulting Tentative Order still represents a large increase in costs and effort, but is comprehensive and provides clear metrics for assessing the effectiveness of our program and addresses relevant water quality issues within our watersheds.

One issue the County would like to emphasize is that we are in agreement in how the TMDLs were incorporated into the Tentative Order. Consistent with 40 C.F.R. § 122.44(d)(1)(vii)(B), the Tentative Order incorporates wasteload allocations (WLAs) for effective TMDLs as permit limits. As required by 40 C.F.R. § 122.44(d)(1)(vii)(B), the permit limits in the Tentative Order are incorporated as receiving water limits and therefore are "consistent with the assumptions and requirements of available WLAs". Additionally, the WLAs have appropriately been expressed in the form of BMPs consistent with EPA's 2002 Memorandum *Establishing Total Maximum Daily Load*

consistent with EPA's 2002 Memorandum *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*.

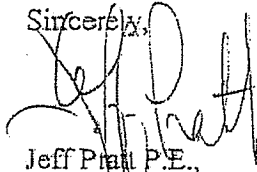
In accordance with EPA's Guidance, the BMPs included in the permit will be sufficient to implement and achieve the WLAs in the TMDLs. Further, the specified monitoring program is sufficient to determine compliance load reductions resulting from BMP implementation. This combined with the incorporation of the "iterative process" is consistent with USEPA's Guidance.

However, while the language in the Tentative Order meets the requirements of 40 C.F.R. §122.44(d)(1)(vii)(B) and is consistent with EPA's Guidance, we recommend revisions be made to provide further clarification that the WLAs will be implemented through BMPs and to provide a mechanism for making adjustments to the BMPs to ensure their adequate performance. To clearly implement the TMDL in accordance with EPA's 2002 memorandum the County again refers to the language changes suggested in the April 10, 2009 Ventura Countywide Stormwater Quality Program letter referenced above.

In conclusion, we acknowledge the efforts of Regional Board staff for the work done to date, however, the Tentative Order as a whole will be a considerable increase in cost and effort to implement over the current permit. We strongly urge Regional Board staff to consider the implications of any additional requirements that may be requested during the comment period, and of any future modifications that may strain an already burdened program. Furthermore, we encourage your staff to continue work with County staff for effective communication in the implementation phase of the new permit.

Again, thank you for this opportunity to comment.

Sincerely,



Jeff Pratt P.E.,  
Agency Director

- C: Chris Stephens, Director of RMA  
Wm. Butch Britt, Director of Transportation  
R. Reddy Pakala, Director of Water & Sanitation  
Tom Lagier, Director of Watershed Protection District  
Gerhardt Hubner, Deputy Director, Watershed Protection District  
Ventura County Stormwater Permittees





# VENTURA COUNTY



PUBLIC WORKS AGENCY  
JEFF PRATT, P.E.  
Agency Director

## WATERSHED PROTECTION DISTRICT

---

April 10, 2009

Ms. Tracy Egoscue  
California Regional Water Quality Control Board  
Los Angeles Region  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Tom Lagier  
District Director

Gerhardt Hubner  
Water & Environmental  
Resources

Peter Sheydayi  
Design/Construction

Sergio Vargas  
Planning/Regulatory

Karl Novak, P.E.  
Operations/Maintenance

Subject: **FEBRUARY 24, 2009 TENTATIVE ORDER OF THE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT (NPDES No. CAS004002) FOR THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES**

Dear Ms. Egoscue:

On behalf of the Ventura County Watershed Protection District (District), we appreciate this opportunity to provide written comments concerning the Regional Water Quality Control Board's (Regional Board) tentative order of Waste Discharge Requirements for Storm Water Discharges from the Municipal Separate Storm Sewer System (Tentative Order) in Ventura County (NPDES Permit No. CAS004002). This was released for public comment by the Regional Water Board on February 24, 2009. The District comments on the previous drafts were submitted on March 6, 2007, October 15, 2007 and May 29, 2008.

The District supports the April 10, 2009 Ventura Countywide Stormwater Quality Management Program comment letter and all attachments.

We wish to first express our appreciation of the Regional Water Board's staff efforts to meet and consider our concerns with the previous draft orders. These efforts aided in crafting a Tentative Order that is protective of water quality and builds upon an award winning stormwater management program. The Tentative Order is comprehensive and provides clear metrics for assessing the effectiveness of our program and addressing relevant water quality issues within our watersheds.

With respect to hydromodification criteria, the Tentative Order correctly identifies the need for such criteria but appropriately identifies exemptions for conditions where warranted. The Tentative Order also allows for the continued coordination and support of the Southern California Storm Water Monitoring Coalition's (SMC) efforts to develop a regional methodology to mitigate adverse impacts of hydromodification due to urbanization. The District supports such an approach because it is practical, while being protective of stream-bed integrity.

We also support the interim hydromodification requirements until such time that the SMC completes the Hydromodification Control Study. Lastly, the exemption provisions address many of our concerns expressed on the previous draft orders. These provisions should allow us to focus on discharges that pose the most significant threat to stream bed integrity and water quality.

The District is proud of its stormwater program, and understands that to continue to improve and protect water quality increases in permit requirements were expected, and this is reflected in the Tentative Order. The comments presented here are made to maximize the effectiveness of the program to improve stormwater quality discharging from MS4s. Wherever possible each comment suggests a viable alternative.

**Issue: Tentative Order should focus on infrastructure under Permittees control. Part 4 H. 3. (a) (1) (A) page 83.**

The District can only be responsible for infrastructure under its control. Please revise the Tentative Order to: A GIS layer showing the location and length of Permittee owned underground storm drain pipes.

**Issue: Extensive mapping required of the storm drain system is ambiguous and has conflicting deadlines. Part 5.H.(1).(b), page 83.**

The requirement is to map all known connections to storm drain system in 3 years. Taken literally this is a near impossible task. If the storm drain system means the MS4 then it is defined as including streets and gutters, and there are an endless number of connections draining to streets and gutters. Even with a more limited definition of storm drain to mean only below grade drainage structures this task will be extremely resource intensive. Countless French drains have been installed over the years, and there is an unknown number of small patio or area drains. The goal of this requirement should be stated and the clarity added to its intent and function.

The time given for the above requirement is 3 years, but a mapping requirement in 5.H.(3) gives 5 years for all pipes 18 – 35 inches in diameter. Mapping all known connections cannot occur before all pipes are mapped. Again, clarity is needed, if this requirement is for mapping all known illicit connections, then it is reasonable. We request this revision in the Tentative Order.

**Issue: The Tentative Order erroneously identifies the Watershed Protection District as having been given waste load allocations when incorporating provisions from adopted TMDLs. Part 6 V. 2(a)(1); 3(a)(1); 4(a)(1); 5(a)(1)**

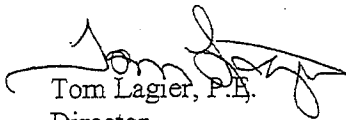
The TMDLs for Bacteria in Malibu Creek and Lagoon; and Toxicity, Chlorpyrifos, and Diazinon, Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation, Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon do not list the District as a responsible party. However, the Tentative Order erroneously lists the District for all

Ventura County Watershed Protection District  
April 10, 2009  
Page 3 of 3

of these TMDLs, and requires it to comply with waste load allocations. The Tentative Order should reference only the responsible parties identified in the adopted TMDLs.

Our aim is to have the best stormwater quality program possible. This permit will help us in that goal, ensuring that our resources are being used wisely and efficiently in order to meet that goal. We look forward to your response to all of the comments you have received. If you have any questions, please contact Arne Anselm at (805) 654-3942.

Sincerely,

  
Tom Lagier, P.E.  
Director

C: Jeff Pratt, Agency Director, County of Ventura Public Works Agency  
Gerhardt Hubner, Deputy Director, Watershed Protection District  
Ventura County Stormwater Permittees



*Ventura Countywide  
Stormwater Quality  
Management Program*

Participating Agencies April 10, 2009

Camarillo

County of Ventura

Fillmore

Moorpark

Ojai

Oxnard

Port Hueneme

San Buenaventura

Santa Paula

Simi Valley

Thousand Oaks

Ventura County  
Watershed Protection  
District

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**SUBJECT: FEBRUARY 24, 2009 TENTATIVE ORDER OF THE VENTURA COUNTY MUNICIPAL SEWER SYSTEM PERMIT (NPDES No. CAS004002) FOR THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND THE INCORPORATED CITIES**

Dear Ms. Egoscue:

The Ventura Countywide Stormwater Program ("Ventura Program") would like to take this opportunity to provide comments on the Regional Water Quality Control Board's ("Regional Water Board") Tentative Order of Waste Discharge Requirements for Storm Water Discharges from the Municipal Separate Storm Sewer System ("MS4") within the Ventura County Watershed Protection District, County of Ventura, and the Incorporated Cities therein (collectively referred to as the "Permittees") ("Tentative Order") (NPDES Permit No. CAS004002), which was released for public comment by the Regional Water Board on February 24, 2009.<sup>1</sup>

We wish to first express our appreciation of the Regional Water Board's staff efforts to meet and consider our concerns with the previous draft orders. These efforts aided in crafting a Tentative Order that is protective of water quality and builds upon an award winning stormwater management program. The Tentative Order is comprehensive and provides clear metrics for assessing the effectiveness of our program and addressing relevant water quality issues within our watersheds.

<sup>1</sup> In addition to the Permittees comments provided here, the Permittees have joined Heal-the-Bay and the Natural Resources Defense Council in a separate joint comment letter dated April 10, 2009 that articulates an agreement between the parties. As expressed in the joint letter, those comments and the positions expressed therein apply only to the extent that the Regional Water Board agrees with and revises the Tentative Order to reflect all of the comments contained in that letter. If the Regional Water Board determines that it is not appropriate to revise the Tentative Order accordingly, the Permittees comments expressed here on same or similar issues shall be considered the Permittees comments and position on those issues.



Before expanding upon our comments on the Tentative Order, we would like to highlight a couple of significant observations. First, the Tentative Order is, in every sense of the word, a ground breaking permit. From the development and use of municipal action levels, to establishing performance standards for treatment control best management practices (BMPs), to specifying specific BMP requirements for businesses, industries, and construction sites; the Tentative Order sets a high bar for California's municipal stormwater programs. Because of the ground-breaking nature of this Tentative Order, it will require the Permittees to substantially revise the existing Stormwater Management Program in Ventura County. As a result, costs associated with implementation of the Stormwater Management Program will also increase substantially.

Furthermore, the Tentative Order as proposed will protect existing high quality water and will lead to real water quality improvements. The Permittees take pride of the fact that we have some of the cleanest waterbodies and beaches in Southern California. This Tentative Order will continue to build on our existing efforts to protect these waters. However, as discussed further below, the Permittees would be remiss to not comment or acknowledge the substantial cost associated with implementing the Tentative Order. To that end, we encourage the Regional Water Board to carefully consider the potential economic impact of any future revisions or changes to the Tentative Order.

Our specific comments are organized around some of the overriding approaches acknowledged in this Tentative Order.<sup>2</sup> They include:

1. Economic Considerations
2. Municipal Action Levels (MALs)
3. Best Management Practice (BMP) Performance Standards
4. Construction BMPs
5. Planning and Land Development Program
6. Public Agency Trash Management Program
7. Total Maximum Daily Loads (TMDLs)
8. Monitoring

Each approach is discussed in this cover letter. More specific technical comments on the Tentative Order and its provisions are summarized in Attachment A. Additional Legal and Policy comments are provided in Attachment C.<sup>3</sup>

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<sup>2</sup> Although the Tentative Order addresses many of the concerns expressed in previous comments submitted by the Permittees, the Permittees still maintain a number of general concerns with the Tentative Order and its potential impact to Ventura County and its municipalities. To that extent, the Permittees hereby incorporate by reference all previous comments submitted on March 6, 2007, October 12, 2007, and May 28, 2008 in response to administrative draft versions of the Tentative Order.

<sup>3</sup> The additional comments provided in Attachments A and C are provided in attachment form for administrative ease only. The Regional Water Board shall consider all of the comments contained in the attachments as equal comments that are subject to the Regional Water Board's obligation under the Code of Federal Regulations to prepare responses thereto.

## I. Economic Considerations

As a preliminary matter, the Regional Water Board must recognize that the Tentative Order will significantly increase program costs for the Ventura County Stormwater Management Program. In fact, we estimate that the program costs to implement the Tentative Order will double from the current level of \$35 per household to \$60 per household. In Finding E.28, the Regional Water Board characterizes the requirements in the permit as reasonable and that the cost of compliance does not justify a lessening of the requirements as proposed in the Tentative Order. (See Tentative Order at p. 21.) The substance of this finding is based on the Regional Water Board's assessment of program cost in its "Economic Considerations of the Proposed Ventura Permit." The Permittees are concerned that the economic analysis relied upon by the Regional Water Board is flawed because it did not assess the cost of the Tentative Order but rather estimated the cost for the Permittees to comply with the stormwater permit issued in 2000. It is an understatement to say the current Tentative Order is a significant expansion of the County's 2000 permit. In its assessment, the state estimated a cost of \$29 per household. In contrast, the actual average household cost in Ventura County is \$35 to implement the 2000 permit. Thus, the Regional Water Board's economic assessment greatly underestimates costs associated with implementing the proposed Tentative Order.

While the Permittees are committed to the protection of our water resources, we must point out the fiscal constraints that are facing municipalities and private citizens in Ventura County and across the State. Thus, as we move forward to implement the Tentative Order, if adopted as is, we must have sufficient flexibility to identify more cost effective BMPs that may be substituted for the ones identified in the Tentative Order. As you know, the Tentative Order provides for a BMP substitution option. In implementing this option, we believe it imperative that the Regional Board remain open to alternative approaches and schedules to provide the Permittees with flexibility in addressing fiscal constraints while still protecting water quality. This is especially true in these challenging economic times.

## II. Municipal Action Levels

The Tentative Order significantly modifies the application of MALs from a numeric metric to assess compliance with the technology based Maximum Extent Practicable (MEP) standard to one of assessing the performance of the program. We believe, as noted in our previous comment letters, this revised approach is consistent with current USEPA guidance and regulations, and more recently the report prepared by the "Blue Ribbon Panel" as convened by the State Water Resources Control Board<sup>4</sup>. The Blue Ribbon Panel's (BRP) report clearly states the position that numeric limits for municipal stormwater discharges are not possible at this time. However, the BRP did agree that "action levels" may be used to identify "bad actor" catchments. Specifically, the BRP Report states:

*It is not feasible at this time to set enforceable numeric effluent criteria for municipal BMPs and in particular urban discharges ....*

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<sup>4</sup> The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities (June 19, 2006).

*For catchments not treated by a structural or treatment BMP, setting a numeric effluent limit is basically not possible. However, the approach of setting an 'upset' value, which is clearly above the normal observed variability, may be an interim approach which would allow "bad actor" catchments to receive additional attention. For the purposes of this document, we are calling this "upset" value an **Action Level** because the water quality discharge from such locations are enough of a concern that most all could agree that some action should be taken ... (BRP Report at p. 8, emphasis added.)*

Although the Tentative Order revises the use of MALs from being a determination of MEP to being an assessment tool, please be assured that the revised MALs will require the Permittees to address discharges that exceed the MALs as the Tentative Order requires the Permittees to prepare and implement a MAL Action Plan. To our knowledge, this Tentative Order is the first of its kind to establish numeric metrics for assessing the effectiveness of a municipal program.

Notwithstanding the revisions to the language in the Tentative Order, we are concerned that the Fact Sheet/Staff Report discussion with respect to the revised language is inconsistent. As indicated immediately above, the MAL language in the Tentative Order alters the MALs from being an assessment of MEP to an assessment of performance of certain catchments and BMPs. The Fact Sheet/Staff Report, however, describes the MALs as a metric for determining MEP. (See Fact Sheet/Staff Report for the Municipal Storm Water and Urban Runoff Discharges within Ventura County Flood Control District (May 7, 2009) at pp. 17-18.) To avoid confusion and uncertainty with respect to the use and intent of MALs within the Tentative Order, the Fact Sheet/Staff Report must be revised accordingly. We have provided suggested revisions on Attachment A, No. 76.

Finally, to the extent that the Regional Water Board determines that MALs are appropriate for inclusion in the Ventura County MS4 permit, the MALs contained in the Tentative Order are more appropriate as compared to the MALs included in previous drafts because they are derived from a more relevant data-base. More specifically, the Tentative Order uses U.S. EPA zone 6 database, which reflects data from the arid southwest areas of the country. In contrast, the MALs in previous drafts were derived from the more general national dataset, which included numerous east coast communities with higher rainfall amounts. Use of the zone 6 regional database will allow the Ventura County Permittees to focus their attention on watersheds that more closely reflect the semi-arid nature of their communities. In a similar vein the use of the 80<sup>th</sup> percentile value to establish the MAL is subject to debate. The Permittees recommend the substitution and the use of the 90<sup>th</sup> percentile value in the Tentative Order as more appropriate to identify problematic discharges.

### **III. BMP Performance Standards**

The Tentative Order establishes for the first time in California performance standards for treatment control BMPs. As noted in our previous comments, the Permittees support the idea of performance standards. Our previous concerns were directed to the derivation and application of the standards proposed. The Tentative Order addresses our concerns because it provides the

Permittees with the appropriate structure for elevating BMP performance and for holding developers accountable for their BMP design and construction.

#### IV. Construction BMPs

The Tentative Order establishes a risk-based approach for addressing runoff from construction sites. The Permittees support this BMP tiered approach as a constructive and implementable program. By establishing a defined set of BMPs as a function of the project size and impact on local water bodies, the Tentative Order provides the Permittees with the structure and flexibility necessary to direct local resources to real water quality concerns. Furthermore, the Permittees support the removal of the wet weather variance program for high-risk sites, as this variance program as originally proposed would have been cumbersome and expensive to implement. It also would have been susceptible to litigation because it was not adopted consistent with U.S. EPA regulations for developing technology based effluent limits.

#### V. Planning and Land Development Program

The Planning and Land Development Program contains extensive requirements for on-site low impact development (LID) strategies, hydromodification controls and treatment control BMPs. With respect to the LID strategies, the proposed requirements will fundamentally change land development in Ventura County. The Tentative Order will require municipalities to implement LID strategies (i.e., LID BMPs) by complying with an effective impervious area (EIA) of 5% for undeveloped sites. To render an impervious area ineffective the developer must implement LID BMPs for the water quality storm (e.g. 85%, 24 hour storm event) through infiltration, capture and reuse or through vegetated BMPs. While we support the concept of well designed BMPs to address the water quality storm, we would submit that the LID BMP(s) should be sized, at a minimum, to infiltrate, evapotranspire, reuse, or collect and detain the "delta" runoff volume, which is defined as the excess runoff<sup>5</sup> from the water quality (SQUIMP) design storm event.

As part of the Permittee's effort to assess the practicality of various approaches for LID, we prepared the attached white paper: "*Low Impact Development Metrics in Stormwater Permitting*" (Attachment B). This paper carefully examined the feasibility of implementing LID strategies for a range of development projects under various rainfall conditions in both Ventura and Orange Counties. The paper demonstrates the feasibility of certain strategies as well as identifies the challenges associated with the various strategies. For redevelopment projects the Tentative Order allows more flexibility in meeting the 5% EIA standard although still requiring compliance to treat the water quality storm event. The Permittees continue to support such an approach.

With respect to the EIA criterion, the Permittees would submit that there is considerable debate and concern within the stormwater quality management/science community as well as among planners and practicing landscape architects as to the efficacy of EIA as a controlling criterion. Specific aspects of this concern have been noted in our previous comments on the draft orders

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<sup>5</sup> Excess storm water runoff = volume of post-development runoff minus pre-development runoff for the 85<sup>th</sup> percentile storm event (or equivalent water quality design event).



and include whether this EIA criterion should be used and, if used, whether it should be applied on a site-by-site basis. We have also commented previously on our concerns regarding its potential implications to urban redevelopment, smart growth, and urban sprawl. Thus, the proposed EIA criterion should be further evaluated in light of larger environmentally beneficial societal goals, such as redevelopment, brownfield development, and infill development to avoid unintended consequences and further complications.

With respect to hydromodification criteria, the Tentative Order correctly identifies the need for such criteria but appropriately identifies exemptions for conditions where warranted. The Tentative Order also allows for the continued coordination and support of the Southern California Storm Water Monitoring Coalition's (SMC) efforts to develop a regional methodology to mitigate adverse impacts of hydromodification due to urbanization. The Permittees support such an approach because it is practical, while being protective of stream-bed integrity. We also support the interim hydromodification requirements until such time that the SMC completes the Hydromodification Control Study. Lastly, the exemption provisions address many of our concerns expressed on the previous draft orders. These provisions should allow the Permittees to focus on those discharges that pose the most significant threat to stream bed integrity and water quality.

#### **VI. Public Agency Trash Management Program**

The Tentative Order includes a comprehensive approach for addressing trash in Ventura County. Although trash is not a significant issue in the water-ways of Ventura County (e.g., less than 12 miles of water ways are listed as trash impaired for the entire County), the Permittees support taking an aggressive approach to trash management. The Tentative Order provides the Permittees with the necessary flexibility to prioritize drainage systems for trash generation, and subsequent clean-up and removal. Furthermore, the Tentative Order allows the Permittees to develop alternative approaches that reflect the nature and composition of the municipality. The Permittees support the flexibility provided for in the Tentative Order and encourage the Regional Water Board to continue providing the flexibility needed to tailor municipal programs for relevant and identified water quality issues.

#### **VII. TMDLs**

Consistent with 40 C.F.R. § 122.44(d)(1)(vii)(B), the Tentative Order incorporates wasteload allocations (WLAs) for effective TMDLs as permit limits. As required by 40 C.F.R. § 122.44(d)(1)(vii)(B), the permit limits in the Tentative Order have been modified from previous drafts of the permit to be "consistent with the assumptions and requirements of available WLAs" by being incorporated as receiving water limits in the permit. Additionally, the WLAs have appropriately been expressed in the form of BMPs consistent with EPA's 2002 Memorandum *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs*. (See Attachment C for further legal and policy discussions on this issue.) As stated in that memorandum:

- WQBELs for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of best management practices (BMPs) under specified

circumstances. (See 33 U.S.C. §1342(p)(3)(B)(iii); 40 C.F.R. §122.44(k)(2)&(3).) If BMPs alone adequately implement the WLAs, then additional controls are not necessary.

- EPA expects that most WQBELs for NPDES-regulated municipal and small construction storm water discharges will be in the form of BMPs, and that numeric limits will be used only in rare instances.
- When a non-numeric water quality-based effluent limit is imposed, the permit's administrative record, including the fact sheet when one is required, needs to support that the BMPs are expected to be sufficient to implement the WLA in the TMDL. (See 40 C.F.R. §§ 124.8, 124.9 & 124.18.)
- The NPDES permit must also specify the monitoring necessary to determine compliance with effluent limitations. (See 40 C.F.R. § 122.44(i).) Where effluent limits are specified as BMPs, the permit should also specify the monitoring necessary to assess if the expected load reductions attributed to BMP implementation are achieved (e.g., BMP performance data).
- The permit should also provide a mechanism (e.g. iterative, adaptive management BMP approach) to make adjustments to the required BMPs as necessary to ensure their adequate performance.

In accordance with EPA's Guidance, the BMPs included in the permit will be sufficient to implement and achieve the WLAs in the TMDLs. Further, the specified monitoring program is sufficient to determine compliance load reductions resulting from BMP implementation. This combined with the incorporation of the "iterative process" is consistent with USEPA's Guidance.

While the Permittees believe that the language in the Tentative Order meets the requirements of 40 C.F.R. §122.44(d)(1)(vii)(B) and is consistent with EPA's Guidance, we recommend the following revisions to provide further clarification that the WLAs will be implemented through BMPs and to provide a mechanism for making adjustments to the BMPs to ensure their adequate performance. Our suggested revisions to the findings and to Part 6 of the Tentative Order are as follows:

### **Finding F.3**

The permit provisions and BMPs implementation of measures set forth in this Order are reasonably expected to ~~reduce the discharge of pollutants conveyed in storm water discharges into receiving waters, and to implement~~ meet the TMDL WLAs for discharges from MS4s that have been adopted by the Regional Water Board.

### **Part 6 – Total Maximum Daily Load Provisions**

II. ~~Each permittee shall attain the storm water WLAs incorporated into this Order by implementing BMPs in accordance with the MS4 effluent quality workplan and source identification approved by the Executive Officer. The permit provisions and BMPs identified in Parts 1, 2, 3, 4, and 5 implement the approved WLAs for all TMDLs identified in this section. Each permittee shall modify their SMP to include BMPs to implement the approved WLAs.~~

Provision (b)(2) under each TMDL, to read as follows:

~~If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL Special Studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action.~~ Exceedances of the WLAs at the receiving water compliance locations will initiate the implementation of additional BMPs identified in the permit and modification of the SMP to include additional BMPs to further reduce discharges of pollutants to achieve compliance with the WLAs.

With these modifications, the Tentative Order will clearly implement the TMDL in accordance with EPA's 2002 memorandum.

### VIII. Monitoring

The Tentative Order reflects the great deal of work that has been done to resolve many technical issues and ultimately creates a monitoring and reporting program that will support and protect water quality. The Ventura Countywide Stormwater Management Program currently has an exemplary monitoring program with a state-of-the-art data management system; the new monitoring program will greatly expand upon this effort. The addition of special studies, outfall monitoring and beach water quality monitoring will more than double the cost of the monitoring program, all which is in addition to a significant amount of other monitoring occurring within the County: TMDLs, Ocean outfall, SWAMP, inland wastewater treatment plants and AB 411 (beach water quality) Programs.

The Permittees have put a great deal of effort into identifying appropriate urban outfall monitoring sites for each Permittee by utilizing Ventura County's Geographic Information System, overlying various land uses (residential, commercial, industrial, agricultural, open space) and jurisdictional responsibilities with watershed/subwatershed boundaries. The result of this effort is monitoring locations that capture a significant portion of each Permittees' urban runoff or signature independent of other land uses or pollutant sources. This will generate data that will support each Permittee's Stormwater Program, allowing each Permittee to use this data to improve their Program's effectiveness, which ultimately will improve water quality.

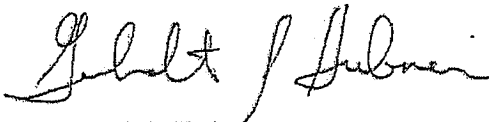
We would also like to point out that the Tentative Order identifies a number of special studies. Two of them, *Hydromodification Control Study* and *Low Impact Development*, are done in regional partnerships (Southern California Monitoring Coalition and Southern California Coastal Watershed Research Project (SCCWRP)) and will lead to better land development practices. The other special studies will help provide a detailed picture of the habitat and water quality of Ventura County. One of these is the expanded bioassessment study, also to be done in partnership with SCCWRP. As you know, Ventura County participates in SCCWRP as both a Commission member, and through SCCWRP's Technical Advisory Group. SCCWRP's regional study will cover all of Ventura County and south to the state border, going well beyond the established bioassessment currently performed by the Program. It includes new labor intensive field measurements along with new requirements for extensive chemistry and toxicity analysis at 75 sites. Additionally, a pyrethroid study will periodically examine local watersheds

to determine: 1) if there is a problem; where the problem may exist; and 3) if any trends can be identified. Thus, in total the Permittees are supporting either directly or indirectly extensive monitoring efforts. Such support must also be balanced with other permit obligations.

### Summary

The Permittees recognize that the Tentative Order is a significant step forward in addressing urban runoff in Ventura County. We would submit that the Tentative Order, when viewed in the whole and not as individual parts, is comprehensive and protective of water quality. However, the comprehensive nature of the Tentative Order will significantly increase local agency and citizen costs to implement the program. In light of these increased costs, we encourage the Regional Water Board to carefully consider the implications associated with any future modifications as such modifications to one program element would likely come at the expense of another. Again, we thank you and your staff for the time and effort in meeting with the Ventura County Permittees to work through the many issues in the previous draft orders. Although it will come with substantial costs, overall the Tentative Order is a significant improvement and will result in protection of water quality in a constructive and effective manner. If you have any questions, please contact me at (805) 654-5051, or via email at [Gerhardt.Hubner@ventura.org](mailto:Gerhardt.Hubner@ventura.org)

Sincerely,



Gerhardt J. Hubner  
*On Behalf of the Entire  
Ventura Countywide  
Stormwater Management Program*

cc: LARWQCB Board Members  
Sam Unger, Los Angeles Regional Water Quality Control Board  
Ventura County City Managers  
Marty Robinson, Ventura County Executive Officer  
Jeff Pratt, Ventura County Public Works Director  
Ventura Countywide Stormwater Management Program Permittees

### Attachments

- A. Specific Technical Comments Matrix
- B. White Paper: "*Low Impact Development Metrics in Stormwater Permitting*", dated January 2009, prepared for the Ventura Countywide Program and Orange County Stormwater Program, prepared by Geosyntec Consultants and Larry Walker Associates with assistance from Hawks and Associates; and "*Response to Critical Comments on 'Low Impact Development Metrics in Stormwater Permitting'*", dated April 9, 2009
- C. Legal and Policy Comments

ATTACHMENT A  
 SPECIFIC TECHNICAL COMMENTS  
 FEBRUARY 24, 2009 VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
 SYSTEM PERMIT (NPDES NO. CAS004002)  
 FOR THE  
 VENTURA COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA,  
 AND THE INCORPORATED CITIES

No.	Page	Citation	Comment
1	2	Finding B.2	Suggest the term "trash" be added as common pollutant found in urban runoff, thereby providing the basis for including requirements for trash management.
2	3	Findings B.5	A references for studies is needed: "local and national epidemiological studies indicate there is a causal relationship between adverse health effects and recreational water quality . . ." A 2003 SCCWRP Mission Bay Epidemiological Study found "The risk of illness was uncorrelated with levels of traditional water quality indicators and state water quality thresholds were not predictive of swimming-related illnesses."
3	4	Findings B.12	References for the studies are needed: "Studies have demonstrated a direct correlation between degree of imperviousness and receiving water degradation." Also suggest editing the first line to read " . . . runoff from developed areas has the potential to greatly accelerate downstream erosion . . ."; and the last sentence to read " pervious cover is a <u>reliable</u> indicator . . ." There is some debate as to whether it's a reliable indicator, and the primary cause of water quality degradation from new development is the <u>unabated</u> discharge of stormwater. With proper BMPs these discharges can be mitigated. Please include reference and amend finding accordingly.
4	4	Findings B.12	Add clarity: "Significant declines . . . with as little as 3-10 percent conversion from natural to impervious surfaces in a <u>subwatershed</u> ". As currently worded, the finding implies a 3-10 percent conversion at a lot level is also significant. To avoid confusion and provide clarity, the language should be revised to indicate that significant declines may occur if there are conversions for the entire subwatershed.
5	5	Findings B.13,14,	Please provide references for studies.
6	5	Findings B.16	Environmentally Sensitive Areas (ESA) as described here does not match definition, missing all unimproved 303(d) reaches.
7	6	Findings B.17,19	Please provide references for studies.
8	8	Findings C.6	No trash and debris study is included in the Monitoring and Reporting Program, please delete this reference.

ATTACHMENT A  
 PERMITTEES' COMBINED TECHNICAL COMMENTS  
 TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
 SYSTEM PERMIT (NPDES NO. CAS004002)

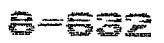
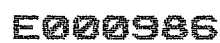
No.	Page	Citation	Comment
9	8	Finding C.6	Recommend modifying finding to read "This Order requires a monitoring program consisting of mass emission, outfall and special studies, <del>toxicity</del> , to support program evaluation and TMDLs <del>storm-water (wet-weather) MS4 water-quality-based-effluent-limits, TMDL non-storm-water (dry-weather) MS4 water-quality-based-effluent-limits, ...</del> " The current language is confusing and inconsistent with the intent of the finding.
10	8	Finding D.1	Recommend modifying the finding to read "The area covered by this Order includes all urbanized areas within Ventura County boundaries..." This permit is for discharges from urbanized areas of the County and does not apply countywide for un-urbanized areas. (See also Letter to Mr. Jonathan A. Bishop, Executive Officer, Los Angeles Regional Water Quality Control Board from Gerhardt Hubner, Chair, Ventura Countywide Stormwater Quality Management Program (March 6, 2007) (March 2007 Letter) at pp. 13-14.)
11	9	Finding D.6	Recommend modifying the finding to read "The CWA and the California Water Code contain specific provisions on how <u>wastewater discharges of waste</u> from point sources are to be permitted, <u>including urban stormwater and non-storm water</u> . We believe the intent of this finding is to establish the fact that <u>stormwater discharges are regulated under the CWA and CWC</u> ."
12	10	Finding E.4	When referring to the Porter-Cologne Water Quality Control Act (California Water Code), it should be clear that the State and Regional Water Board's have the authority to regulate the discharge of "wastes that could affect the quality of waters of the state." Thus, we recommend that the second sentence of the finding be revised as follows: The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board), through the Regional Water Boards, to regulate and control the discharge of <u>pollutants wastes that could affect the quality of waters into all-waters</u> of the State, including waters of the United States, and tributaries thereto.
13	13	Finding E.7	The Permittees disagree with the conclusive statements made in Finding E.7. In general, we do not agree that all requirements contained in the Tentative Order are required by federal law. Many of the provisions may in fact be more stringent than required by federal law and may therefore potentially be considered an unfunded local mandate subject to subvention under Article XIII B, Section (6) of the California Constitution. Additional legal and policy comments on this finding are provided on Attachment C.

**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
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No.	Page	Citation	Comment
14	21	Findings E.26 & E.27	The Permittees disagree with the conclusive statements made in findings as some of the requirements contained in the Tentative Order may well exceed the maximum extent practicable (MEP) standard. Additional legal and policy comments on this finding are provided on Attachment C. Furthermore, this finding as drafted is confusing because it blurs the distinction between the effective elimination of non-storm water discharges and the reduction of stormwater pollutants to the maximum extent practicable.
15	23	1.F. 6.	Please clarify not all impervious area is intended to be minimized but rather effective impervious area by adding the word "effective": "Smart growth techniques include the minimization of <u>effective</u> impervious area"
16	24	Finding F.9	This finding implies that under the CWA the Permittees are required to "attain water quality objectives from new development and redevelopment activities." Such a statement is incorrect. We recommend revising the finding accordingly by deleting this part of the sentence.
17	25	Finding F.12	This finding needs a lead in statement to support the position that the permit has established BMP performance, which are based on the ASCE and USEPA database.
18	27	Finding F.19	This finding claims that the Fact Sheet includes an analyses of the factors required by California Water Code section 13241. We disagree. The Fact Sheet does not include any analysis that is consistent with the statutory factors identified in Water Code section 13241. Thus, we recommend either deleting the finding, or revising the Fact Sheet to appropriately include the analysis identified.
19	29 – 32	Footnotes	The footnotes are redundant and should only be stated once. Further, footnotes are not formatted properly.
20	30	Part 1.A.1.(c)	The Tentative Order does not properly explain or describe the purpose of the information contained in Table 1. If the purpose of Table 1 is to identify conditions that apply to the categories of allowed non-storm water discharges identified in Part 1.A.1.(c), it should be explained accordingly. Otherwise, as currently incorporated there is no correlation between the Discharge Prohibition language and the information contained in Table 1.
21	30	Table 1	It is unclear of the distinction between the columns labeled: "Conditions under which allowed" and "Required conditions for discharge to occur". Recommend deleting one and if necessary expanding the explanation in the remaining column. Also it is unclear what is meant by "Permittees shall comply with all conditions in the authorization", specifically what authorization?
22	32 & 108	Table 1	Required conditions for discharge from sidewalk rinsing refers to the glossary description of "Sidewalk Rinsing" where it says "any waste generated from the activity must be collected". Please describe under what circumstance a discharge from sidewalk rinsing is allowed.

**ATTACHMENT A**  
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**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
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No.	Page	Citation	Comment
23	32	Part 1.A.2	This provision would require the Permittees to take certain actions if the Regional Water Board's executive officer determined that any of the preceding categories of non-storm water discharges are a source of pollutant that may exceed water quality standards. However, the provision does not specify that the Permittee's obligations occur only after receiving notice of the Executive Officer's determination. To ensure that the Permittee's obligations occur only after proper notice, we recommend that the first sentence be revised as follows: "If the Regional Water Board Executive Officer determines that any of the preceding categories of non-storm water discharges are a source of pollutants that exceed water quality standards, the Permittee(s) upon receiving written notice of the Executive Officer's determination, shall either:...."
24	33	Part 1.A.3	This provision should be deleted as it is redundant with requirements noted in Table 1.
25	34	Part 2.4	There is a conflict with the timelines given for two of the requirements. More specifically, the statements "Beginning year 3 after adoption" and "first MAL Action Plan due Dec. 15, 2011" conflict because year 1=2009-2010, year 2= 2010-2011, and year 3=2011-2012. By December of 2011, only the first wet season's data (four sites) will be available. To avoid the conflict, we recommend that the first sentence be modified as follows: <u>At the end of Beginning Year 3 after Order adoption date,</u> each Permittee shall submit a MAL Action Plan with the Annual Report (e.g. the first MAL Action Plan would be due with Dec. 15, 2014 the <u>2011/2012</u> Annual Report if the Order is adopted in 2009) to the Executive Officer ...
26	37	4.B.3	There are conflicting timelines for several of the provisions related to adoption and/or revision of municipal codes (i.e. one year to adopt ordinance to enforce all requirements of this order conflicts with 4.B.4, which allows two years for legal counsel statement, and 4.D.1, which allows two years for municipal codes to be consistent with requirements). To avoid the conflict, we recommend revising Part 4.B.3 to allow two years after Order adoption for each permittee to ensure that its Storm Water Quality Ordinance authorizes the Permittee to enforce all requirements of this Order.
27	38	4.C.1.(a).1.(B)	The budget provisions imply that the Program Implementation Activities apply only to storm water related activities. As stated throughout the Tentative Order, it contains requirements with respect to storm related activities as well as non-storm water discharges. Because this may imply that the costs of implementing the program are less than actually required, we recommend revising the phrase "storm water related activities only" to permit related activities as it would be more inclusive.
28	39	4.E.1.(e) & (g)	Subsections (e) and (g) appear to be duplicative.
29	39	Part 4.E.1.(i)	The District (i.e. Principal Permittee) does not have the same pollutant generating activities, legal authority and land use decision capability as the municipalities (i.e. Permittees) therefore (i) should be deleted.



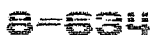


**ATTACHMENT A**  
**PERMITTEES' COMBINED TECHNICAL COMMENTS**  
**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER**  
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No.	Page	Citation	Comment
30	40	Part 5.B.2	Redundant – this section is repeated in Monitoring Program Attachment H
31	42	Part 5.C.2.(c)(1)(C)	Request 365 days to develop and distribute materials to retail stores. No time frame is currently provided.
32	44	Part 5.D.1.	Laundries are not listed as a Critical Sources under commercial facilities but are listed in attachment "D". Please clarify if the intent is to include laundries as a Critical Source, and if so a clear definition of size and function of the included business.
33	45	Part 5. D.1.(a)(2)	Please provide a definition for Phase II facilities. Phase I facilities are included in the definitions, but Phase II facilities are not.
34	45	Part 5.D.2.(a)	The sentence that refers to subpart 5.D.2 should be modified to refer to subpart 5.D.1.
35	46	Part 5.D.2.(a)(2)	The phrase "in cooperation with its appropriate department . . ." is unnecessary as all departments of a permittee are responsible for permit compliance and internal cooperation and communication would be expected.
36	49	Part 5.D.2.(b)(1)(A) & (B)	Part (A) refers to an "initial inspection" and "second mandatory compliance inspection," while part (B) refers to both "first mandatory compliance inspection" and "second mandatory compliance inspection." Please clarify the difference between the initial inspection and the first mandatory compliance inspection. Further, the Permittees continue to be concerned that the inspection requirements for industrial facilities is in fact an unfunded local mandate because determination of compliance with the State's General Permit is a state function, not a local function. Additional comments on this issue are provided in Attachment C.
37	50	Part 5.D.2.(b)(2)(B)	The last sentence in this provision, "[t]he Permittees shall require implementation of additional BMPs where the storm water from the MS4 discharges to a CWA 303(d) listed waterbody" is redundant with provisions contained in sub-section D.3.(b).. Thus, this sentence should be deleted.
38	50	Part 5.D.3.(a)	The reference to part 5.D.3 should be changed to part 5.D.2.
39	51	Part 5.D.4(c)	This provision seems to be inconsistent with a similar provision in the Construction section (see page 73) regarding investigating complaints received from the Regional Board. The provision should read as follows: Each Permittee shall initiate, within one business day, <sup>1</sup> investigation of complaints of (other than non-storm water discharges) to the MS4 from facilities within its jurisdiction (other than non-storm-water discharges).

ATTACHMENT A  
 PERMITTEES' COMBINED TECHNICAL COMMENTS  
 TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
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No.	Page	Citation	Comment
40	52	Part 5.E.(1)	Smart Growth should be included as one of the purposes for this section. We recommend that a new purpose be added as follows: <u>(a) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.</u>
41	52	Part 5.E.(1)(b)	"Minimize the percentage of impervious area" should be revised as follows: minimize the percentage of <u>effective impervious area.</u>
42	52	footnote	48 hour drain time is in conflict with table on page 32 calling for 72 hour drain time which is the time most BMPs use in design.
43	52	Part 5.D.4.(e)	Please clarify, is the Stormwater Task Force the same as the California Association of Stormwater Quality Agencies (CASQA)?
44	53	Part 5.E.II.1.(a)(6)	Please clarify by stating "25 or more <u>exposed</u> parking spacing"
45	54	Part 5.E.II.2.(a)(3)	The effective date for public projects is more strict than private projects and can create a hardship in costly redesigns of a project. A project is completely designed at the point a governing body approves authorization to bid the project. Requiring compliance with this section of the permit at that time would mean a costly re-design of the project. Language more comparable to the trigger for private projects would be preferable. We suggest: "For Permittee's projects the effective date shall be the date the governing body or their designee approves initiation of the project design." The reference in the last sentence should be changed from 5.E.III.4 to 5.E.III.3
46	55	Part 5.E.III.1 (b)	We would recommend that these three provisions be combined to read as follows:
47	55	Part 5.E.III.1 (c) -- (e)	(c) All features structured constructed to render impervious surfaces "ineffective" as described in provision (b), above, shall be properly sized to <del>infiltrate or store</del> <u>beneficial-reuse-at-least-capture</u> the volume of water that meets the criteria in subpart 5.E.III.3 (water quality volume). The hierarchy of BMPs for capturing the water quality volume are: (1) infiltration, harvesting, or evapotranspiration BMPs; and (2) vegetated BMPs such as bioretention. The water quality volume not captured by BMPs shall be treated consistent with Part 4.A.3 and Attachment C, Table 3.
48	57	Part 5.E.III.2.(a)(1)(F)	Reference to 5.E.III.3 (a)(2) should be 5.E.III.2. (a) (3) (A)



ATTACHMENT A  
 PERMITTEES' COMBINED TECHNICAL COMMENTS  
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No.	Page	Citation	Comment
49	58	Part 5.E.III.3.(a)	Numbering format needs correction
50	62	Part 5.E.IV.3(b)(3)	To be consistent with the rest of the Effective Impervious Area language please change "less than 5 percent" to ".5 percent or less"
51	68	Footnotes	Footnotes 17 and 18 are redundant.
52	69	F 1.4. (c)	Delete obligation of Permittees to require project proponents to collect samples in accordance with general construction permit. As indicated previously, any requirement placed upon the Permittees that requires them to implement or enforce the State's General Permit is an unfunded mandate for which subvention funds must be provided.
53	69	Part 5.F.5	The reference to subpart F.5 should be subpart F.4
54	66-69	Tables in Part 5.F	Tables 6 -9 are intended to build on each other. There is no need to repeat the BMPs in every table as the text requires the Discharge to implement appropriate BMPs in addition to the ones already identified in the previous tables. See provision F.2, F.3, or F.4. In general these provision state "Each Permittee shall require the implementation of an effective combination of appropriate erosion and sediment control BMPs from Table 7 in addition to the ones identified in Table 6 to prevent erosion and sediment loss..." (emphasis added).
55	70	Part 5.F.6.	Section is missing punctuation. Please include a footnote defining chance of rain (POP >50%).
56	74	Part 5.G.2.(a)	Table 9 should read Table 10.
57	74	Part 5.G.2.(a)	Please revise the provision as follows: "(a) Each Permittee shall implement the activity specific BMPs listed in Table 10 or related BMPs as listed in the 2003 California Stormwater Municipal BMP Handbook when such activities . . ."
58	77	Part 5.G.(4)(a)	No time frame given for implementing an Integrated Pest Management Program – request 365 days

ATTACHMENT A  
 PERMITTEES' COMBINED TECHNICAL COMMENTS  
 TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
 SYSTEM PERMIT (NPDES NO. CAS004002)

No.	Page	Citation	Comment
59		Part 5.G.1.4(a)(7) (C)	Several agencies have been implementing Integrated Pest Management programs for several years and have therefore already made significant reductions in pesticides used by the agencies. By requiring these same proactive agencies to now "demonstrate reductions in pesticide use" will be very difficult because reductions have already occurred. Further, the primary goal and purpose of Integrated Pest Management programs is to address pest issues in a holistic manner using a number of different types of control methods. The implementation of such programs may or may not result in the reduction of the use of pesticides. The need for pesticides even when implementing an Integrated Pest Management program may also vary based on the type of weather year and other circumstances beyond the control of local agencies. As such, we are concerned that a requirement "to demonstrate reductions in pesticide use" may not be feasible in all circumstances. Thus, we recommend revising the language as follows: "Demonstrate implementation of IPM alternatives where feasible to reduce pesticide use."
60	79	Part 5.G.(d)(1)	"rainy season" should be replaced with the defined term "wet season"
61	79	Part 5.G.(f)(1)(b)	"storm season" should be replaced with the defined term "wet season"
62	80	Part 5.G.(g)(1)	Section should specify that it pertains to spills by permittee facilities or activities.
63	81	Part 5.G.6.(b)	Redundant because G.1(b) requires compliance with 5.F.6 which is the exact same language.
64	83	Part 5.H.1.3(a)(2)	Please include the language that is used in the fact sheet noting "this provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual."
65	83	Part 5.H.(1).(b)	Confusing request and time frame. Requirement is to map all known connections to storm drain system in 3 years, but 5.H.(3) give 5 years for pipes 18 - 35 inches in diameter. Also, storm drain system is not defined, if this is synonymous with the MS4 this task would be extremely difficult. Request that the purpose of this requirement be made clear so the intent and criteria of what is a connection are easier to determine.
66	85	Part 5.I.1	Electronic reporting program submitted 12 months after permit adoption conflicts with Dec. 15 reporting deadline given at Part 2.4. (page 34) and in Attachment H.



ATTACHMENT A  
 PERMITTEES' COMBINED TECHNICAL COMMENTS  
 TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
 SYSTEM PERMIT (NPDES NO. CAS004002)

No.	Page	Citation	Comment
77	F-7	B.13	A reference should be added to attachment "A" for "Pollutants of Concern"
78	F-12	D.14	Add "significant" to first sentence, i.e. "... TIEs for all sites showing significant toxicity." To match language in the trigger for TIE in the same section.
79	F-14	E.1.a,d/e & E.2.a	Inconsistent frequency of pyrethroid monitoring: E.2 "shall monitor 1 sampling event per station per monitoring year" should be deleted or changed to match E.1.a,d/e it is to begin "no later than the second year of this Order" at "at least 2 stations [per watershed]" and is to be "repeated in the fifth year of the permit term" and in
80	F-17	I.1.a.1.A	Suggest clarifying frequency i.e. "Level of effort per watershed per year"
81	F-19	K.6.b	The intercalibration study consists of a small number of constituents (TSS, nutrients, metals, chlorinated hydrocarbons, and pyrethroid pesticides). Request change of language at end of K.6.a and K.6.b to add "where applicable" to allow use of laboratories to test for constituents not included in the intercalibration study (i.e. bacteriological, toxicity, and other chemical analyses).
82	F.7	B.12	This section requires results from major outfall stations to be compared to Basin Plan water quality objectives. Comparisons with WQO can be done for informative purposes, however these objectives are set for receiving waters and are not appropriate to determine compliance with the NPDES permit through the quality of discharges from MS4s
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# Low Impact Development Metrics in Stormwater Permitting

Prepared for the Ventura Countywide Stormwater  
Quality Management Program and the Orange County  
Stormwater Program

Prepared by Geosyntec Consultants and Larry Walker  
Associates with assistance from Hawks and Associates

January 2009

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# Low Impact Development Metrics in Stormwater Permitting

## I. Introduction and Purpose

Over the past decade, the U.S. EPA, the State Water Resource Control Board, and the Regional Boards have begun promoting and requiring the preferential use of Low Impact Development (LID) strategies to protect and improve water quality from new development and redevelopment projects. LID may be defined as site design incorporating LID Best Management Practices (BMPs) that strive to more closely mimic natural hydrology so as to reduce pollutant loads in post-development discharges and reduce hydromodification impacts. LID begins with functional conservation of watershed resources, reducing impacts of development, and then using innovative management practices to meet stormwater objectives; it is not the use of the management practices alone<sup>1</sup>. Site preservation practices coupled with small-scale BMPs that rely on the environmental services of vegetation and soils or systems that mimic these services comprise the LID approach.

It has also become increasingly clear that site design using LID alone cannot solve the problems with urban stormwater runoff. A watershed level approach that includes preventative actions is needed. Recently, a report prepared by the National Research Council for the US EPA<sup>2</sup> found that a comprehensive strategy must address impacts at a variety of scales and work to curb the development patterns that drive excess imperviousness and watershed disturbance. This marks the next phase in the evolution of stormwater management. It requires a much broader range of planning strategies, including urban infill, redevelopment, mixed use development, compact neighborhood design, and multi-modal transportation systems – all hallmarks of smart growth – to minimize watershed disturbance and impervious cover through compact community form, reuse of land, and shrinking the transportation footprint. This progression merges smart growth, urban design, and LID to address impacts at the site and builds on a growing body of research that is changing the way we look at the problem of stormwater runoff and the solutions we use to solve it. It presents the opportunity to apply new solutions across a wider range of scales and development contexts: using green infrastructure at site, neighborhood, district, community, and regional scales; minimizing pavement not only through permeable alternatives, but also by planning to reduce the overall transportation footprint; not only disconnecting impervious surfaces, but making fewer of them while reusing and retrofitting those that already exist.

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<sup>1</sup> *A Review of Low Impact Development Policies: Removing Institutional Barriers To Adoption*. Commissioned and sponsored by the California State Water Resources Control Board Stormwater Program and The Water Board Academy. December 2007.

<sup>2</sup> *Urban Stormwater Management in the United States*. Committee on Reducing Stormwater Discharge Contributions to Water Pollution. Water Science and Technology Board. Division on Earth and Life Studies. National Research Council of the National Academies.

Currently, there is intense discussion among the regulatory agencies, regulated communities, and environmental groups as to an appropriate metric for ensuring reasonable consideration and implementation of LID by new development and redevelopment projects. Recent draft MS4 permits have created an opportunity to further the discussion. Concurrently, the Southern California Coastal Water Research Project (SCCWRP) has undertaken technical studies related to developing analysis tools for hydromodification. This white paper has been prepared to: 1) to assess the practicality and environmental outcomes of the LID metrics proposed in the draft April 2008 Ventura Countywide and the November 2008 Orange Countywide NPDES permits, and 2) to identify and evaluate alternative metrics for implementation of LID strategies and improving environmental outcomes.

## II. Background

The municipal separate storm sewer system (MS4) permits issued throughout the state since the early 1990's have required permittees to address the adverse impacts to creeks, rivers, streams and coastal waters that can arise from the imprint of urban development on the landscape. Urbanization creates rooftops, driveways, roads, and parking lots (Schueler and Holland<sup>3</sup> use the term *imperviousness* as the unifying theme for understanding the adverse hydrologic impacts of urbanization) which (1) increase the timing and volume of rainfall runoff (compared to pre-development conditions) and (2) provide a source of pollutants that are flushed or leached by rainfall runoff into aquatic systems. The environmental consequences of these impacts can be loss or impairment of aquatic beneficial uses due to:

- Water quality degradation from increased loadings of sediment, nutrients, metals hydrocarbons, pesticides, and bacteria;
- Stream channel instability and habitat loss from increased stream flows;
- Increased water temperatures from solar energy absorption by urban surfaces and elimination of riparian shading, and
- Loss of groundwater recharge.

Assessments of stream system integrity show that these adverse impacts start to become apparent when as little as 3% to 5% of the watershed is urbanized without adequate runoff controls. These findings have led to the incorporation of a 5% effective impervious area requirement as one element of a prescribed performance standard for land development projects in recently issued MS4 permits in Southern California.

BMPs for controlling stormwater quality and hydrologic impacts from new development and redevelopment projects include site design (LID; smart growth), source control, treatment control, and hydromodification control BMPs. Effective management of wet and dry weather runoff water quality begins with limiting increases in runoff pollutants and flows at the source. Site design and source control BMPs are practices designed to

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<sup>3</sup> Schuler, T.R. and H.K. Holland. The Practice of Watershed Protection, The Center for Watershed Protection, 2000.

minimize surface runoff and the introduction of pollutants into runoff. Treatment control BMPs are designed to remove pollutants once they have been mobilized by rainfall and runoff but can also reduce runoff volume. Hydromodification control BMPs are specifically designed to control increases in post-development runoff flows and/or volumes. Hydromodification control can be accomplished with a combination of site design, hydrologic source control, and/or detention.

On April 29, 2008 the Los Angeles Regional Water Quality Control Board (LA Regional Water Board) issued the draft tentative NPDES permit for the Ventura County MS4. This draft permit applies to the Ventura Watershed Protection District, Ventura County, and the 10 incorporated cities within Ventura County. The relevant provision of this draft permit for this discussion is Part 4, Section E, Planning and Land Development Program. Although this provision has multiple requirements for new development and redevelopment, it may be summarized as follows:

- Reduce the effective impervious area to 5% or less of the total project area<sup>4</sup>;
- Treat the volume of runoff from the 85<sup>th</sup> percentile storm event (a minimum of 0.75 inches) and meet the performance standards in the form of effluent limitations noted in attachment C of the draft permit; and
- Install hydromodification controls such that Erosion Potential (Ep) in streams is maintained at a value of 1, unless an alternative value can be shown to be protective.<sup>5</sup>

Similarly, on November 10, 2008 the Santa Ana Regional Water Quality Control Board (Santa Ana Regional Board) issued the draft NPDES permit for Orange County Resources and Development Management Department and the incorporated cities in Orange County that are located within the Santa Ana River watershed. The relevant provision of this draft permit is Section XII, New Development (including Significant Redevelopment). As with the Ventura draft permit, the section is extensive but may be summarized as follows:

- Reduce the effective impervious area to 5% or less of the total project site<sup>6</sup>;

<sup>4</sup> In the draft permit, impervious surfaces may be considered "ineffective" if the storm water runoff is: (1) drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, all having soil characteristics either as native material or amended medium using approved soil engineering techniques; or (2) collected and stored for reuse such as irrigation, or other reuse purpose; or (3) discharged into an infiltration trench or other infiltration system. The draft Ventura Permit does not include sizing criteria for these three options.

<sup>5</sup> The draft Ventura Permit requires the permittees to develop watershed specific Hydromodification Control Plans (HCPs) that establish hydromodification management standards. In the interim, projects that impact less than 50 acres shall implement hydromodification controls such that the 2-year, 24-hour storm event post development peak flow and volume match the pre-development peak flow and volume within 1%. "Pre-developed" is defined in the draft permit as "native vegetation and soils that existed at the site prior to first development."

<sup>6</sup> The pervious areas to which the runoff from the impervious areas are connected should have the capacity to percolate at least the excess runoff volume from a two-year storm event.

- Treat the volume of runoff from the 85<sup>th</sup> percentile storm event; and
- Evaluate potential for hydromodification impacts and if potential for impacts is identified then implement hydromodification controls to mitigate those impacts. There are no hydromodification impacts if:
  1. The volumes and the time of concentration of storm water runoff for the post-development condition do not exceed those of the pre-development condition for a two-year frequency design storm event by more than 5%; or
  2. All downstream conveyance channels are engineered, hardened and regularly maintained to ensure design flow capacity, and no sensitive stream habitat areas will be affected; or
  3. The total effective impervious area on a site is increased by less than 5% in new development projects; or
  4. The post-development 2-year hydrograph is no more than 10% greater than pre-development hydrograph.
- If a hydrologic condition of concern exists, then the Water Quality Management Plan shall include an evaluation of whether the project will adversely impact downstream erosion, sedimentation or stream habitat. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 110% of the pre-development 2-year peak flow.

Another relevant effort, mentioned in both the draft April 2008 Ventura Countywide and the November 2008 Orange Countywide NPDES permits, is an ongoing technical study by SCCWRP on the assessment and management of hydromodification effects<sup>7</sup>. The goal of this SCCWRP project is to develop a series of predictive models, applicable to a range of stream types that support implementation of hydromodification management measures. This project will answer the following questions:

- 1) Which streams are at the greatest risk of hydromodification effects?
- 2) What are the anticipated effects (in terms of increased erosion, sedimentation, or habitat loss) associated with increases in impervious cover?
- 3) What are some potential management measures that could be implemented to offset hydromodification effects? How effective are they likely to be?

This SCCWRP project was initiated in 2007 and is anticipated to be completed in 2010.

<sup>7</sup> See: <http://www.sccwrp.org/view.php?id=247>.

Although slightly different, the two draft permits rely on the use of effective impervious area (EIA) as a key element of the metric to gage the level of implementation of LID strategies.

The Permittees' concerns related to these LID requirements are as follows:

1. The draft permits lack fully integrated and technically sound approaches to stream protection for new development. The separated provisions for LID, treatment controls, and hydromodification controls are disjointed, confusing and in some cases duplicative. These provisions, as written, leave much to the discretion of design engineers and compliance assessment extremely difficult.
2. The draft permits potentially create significant disincentives for redevelopment and smart growth projects. The application of single metrics for all types of development and individual sites (e.g., 5% EIA) in the draft permits work against redevelopment, infill, and smart growth projects, and other mandates, such as AB375, for more sustainable patterns of urban development. Furthermore the cost for complying for redevelopment projects is disproportionately higher than for new development projects.
3. The draft Ventura permit does not account for scale of application. All sites must meet the 5% EIA standard even though this metric was derived from watershed-scale studies<sup>8</sup>.
4. The EIA standard may lead to poor LID implementation. Compliance with 5% EIA can be manipulated and not result in the goal of mimicking pre-development hydrology.
5. The requirement for 5% EIA and encouragement of infiltration does not allow considerations of the overall site water balance and could lead to unnatural levels of deeper infiltration. Excessive infiltration could cause groundwater issues, including habitat changes in downstream water bodies that were formerly dry most of the year, raised groundwater levels and associated geotechnical issues, and/or issues with brownfields or naturally occurring pollutants being mobilized (e.g., selenium).
6. Preliminary results of the SCCWRP hydromodification study are available.<sup>9</sup> The project report states that management actions aimed at mitigating the effects of hydromodification will be most effective when tailored to different stream types. One-size-fits-all practices based on "single factor" geomorphology (e.g., a simple erosion index) or extrapolation of impervious area studies across stream types is not

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<sup>8</sup> Stein, Eric D. and Susan Zaleski, 2005. Managing Runoff to Protect Natural Streams: The Latest Developments on Investigation and Management of Hydromodification in California. Southern California Coastal Water Research Project Technical Report 475. December 2005.

<sup>9</sup> Bledsoe, Brian, Robert Hawley, and Eric D. Stein. Stream Channel Classification and Mapping Systems: Implications for Assessing Susceptibility to Hydromodification Effects in Southern California. Southern California Coastal Water Research Project Technical Report 562. April 2008.

likely to protect streams. Tools that account for land use change effects on both the continuous flow regime and sediment delivery are much more likely to manage hydromodification effects on streams in southern California.

7. The EIA metric, though conveniently simple, does not reflect the current understanding of stream dynamics and susceptibility to hydromodification as indicated in current and ongoing research.<sup>10</sup> To protect stream channel geomorphology and habitat, permit standards ideally should reflect channel conditions and rely on channel-related metrics.

In addition to these concerns, any effort to prescribe the implementation of LID must also address the enforceability of design standards, public acceptance, long-term maintenance and operation of numerous small-scale systems, and potential conflict with water conservation goals and broader sustainable development objectives. Another key consideration needs to be the context of the management effort, specifically the beneficial use that can be realized in highly modified stream channels within urbanized floodplains. For the purpose of this white paper, the discussion is focused on EIA requirements and the integration of LID controls, treatment BMPs, and hydromodification controls into one cohesive water quality protection strategy.

### III. LID Case Studies

#### *Approach*

Three case studies were conducted using actual redevelopment projects to evaluate the feasibility of utilizing landscaping and other LID BMPs, consistent with preserving the fundamental character of the development, while evaluating the effectiveness of such an approach in meeting draft MS4 permit LID BMP performance standards.

The first two case studies (i.e., Walnut Village and 60 California) were completed utilizing the following three performance standards:

- 1) Reduction of effective impervious area<sup>11</sup> to less than 5%;
- 2) Retention<sup>12</sup> of the difference between pre-development and post-development runoff volume for the water quality storm (SUSMP) event (i.e., the "delta" WQ volume); or

<sup>10</sup> Roesner and Bledsoe, 2003. Research Needs: Physical Effects of Wet Weather Flows on Aquatic Habitats, WERF; and Pomeroy, Roessner, Coleman, and Ranking, 2008. Protocols for Studying Wet Weather Impacts and Urbanization Patterns, WERF.

<sup>11</sup> As defined by the Ventura County Draft Permit, impervious surfaces may be rendered "ineffective" if the stormwater runoff is: (1) drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; (2) collected and stored for reuse such as irrigation, or other reuse purpose; or (3) discharged into an infiltration trench. The draft Ventura Permit does not include sizing criteria for these three options.

- 3) Retention of the difference between pre-development and post-development runoff volume for the 2-year design storm event (i.e. the "delta" 2-year volume).

The first two case studies were completed with the underlying philosophy that for the proposed LID requirements to be implementable, the fundamental character of the development project should not change. The following assumptions were made for these case studies:

- 1) Site boundaries are fixed and LID requirements cannot be fulfilled on adjacent parcels of land.
- 2) Building and parking footprints are fixed in size.
- 3) Limited modifications to site design may be considered feasible if conditions 1 and 2 are met.
- 4) Pervious pavement constitutes disconnection of that area, but cannot be used in high-traffic areas.
- 5) Proprietary BMPs do not constitute disconnection of impervious areas unless they incorporate substantial volume-reduction mechanisms.

An additional redevelopment case study of a commercial site in the City of Ventura (i.e., the Kmart site) was conducted. This case study investigated the cost impacts of the following two performance standards:

- 1) Retention of the difference between pre-development and post-development runoff volume for the water quality storm (SUSMP) event (i.e., the "delta" WQ volume); or
- 2) Retention of the difference between pre-development and post-development runoff volume for the 2-year design storm event (i.e. the "delta" 2-year volume).

Note that the intent of the third case study was primarily to evaluate the cost of implementing LID BMPs, while the intent of the first two case studies was to evaluate the feasibility and hydrologic effectiveness of various interpretations of the LID BMP performance standards in both draft permits, regardless of the cost to the project.

The following limitations to all three case studies are acknowledged:

- The case studies, as is the case with most investigations of feasibility, relied on subjective assumptions and interpretations which were based on professional judgment; and

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<sup>12</sup> Retention is defined as the capture and elimination of stormwater through percolation, evapotranspiration, or use.



- Computational methods used to evaluate effectiveness were simplified, as utilization of complex methods could be interpreted as reducing transparency while increasing the required level of effort.

### *Case Study Results*

The case study results are summarized below. Each case study is presented in its entirety in Attachment A.

#### **Walnut Village**

Walnut Village is a 7.6 acre multi-family redevelopment project in the City of Anaheim in Orange County. Proposed development consists of a main building with interior courtyards and two sets of smaller structures. Primary parking is provided below the grade of the large central building with some parking at the surface. The site is bordered on the west and north by a fire access road. Landscaping is generally present as narrow strips along some building edges and around the perimeter of the sites. Except for one vegetated filter strip, the landscaping in the proposed design does not accept runoff from adjacent impervious area.

The project as proposed has a total imperviousness of 84% and an EIA of 76%. Soils at the site are characterized as Class B<sup>13</sup> soils and the site and surrounding area are flat. The water quality design storm depth for this location was estimated to be 0.7 inches and the 2-year storm depth was estimated to be 2 inches.

#### **Reduction of Effective Impervious Area**

Modifications to stormwater routing and site design were identified in an attempt to meet the goal of reducing effective impervious area (EIA) to less than 5%. In this effort, it was critical to understand which areas of the site could be made available for vegetated treatment and/or infiltration. Based on site plans, the courtyard areas located over the underground parking structure could not accept runoff from adjacent impervious areas because water could not be infiltrated over the parking structures. Perimeter landscaping was deemed potentially appropriate for infiltration, thus disconnection of impervious area was achieved by routing runoff through these areas. Parking areas, driveways, and fire roads were routed to drain to landscaping where possible. It was assumed that entry driveways represented high traffic areas that would not be suitable for pervious pavement.

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<sup>13</sup> Soils are classified by the Natural Resource Conservation Service into four Hydrologic Soil Groups based on the soil's runoff potential. Soil groups do not necessarily correspond to soil types, however, in southern California. Group B is generally consistent with silt loam or loam. It has a moderate infiltration rate when thoroughly wetted.

A reduction from 76% EIA to 18% EIA was achieved by converting passive landscaped areas (those that do not accept runoff from adjacent impervious areas) to active landscaped areas (those that do accept runoff from adjacent impervious areas) and routing rooftop and some parking lot drainage over this area. A reduction to 0% EIA was achieved through converting non-essential hardscape to active landscaping.

Reduction of effective impervious area to less than 5% of the project area appears to be feasible, but in order to achieve this goal, additional active landscaping was created. It is important to note that this conclusion is based on limited available information of site constraints that may not have been evident from project documentation.

To estimate the approximate effectiveness of the disconnection scenarios in retaining stormwater, simple exploratory calculations were used for three levels of implementation:

- A. All actively landscaped areas assumed to retain and infiltrate or evapotranspire one inch of water over its surface,
- B. Half of the actively landscaped areas assumed to retain and infiltrate or evapotranspire six inches of water over its surface, or
- C. All of the actively landscaped areas assumed to retain and infiltrate or evapotranspire six inches of water over its surface.

The results of these calculations, expressed as the amount of runoff retained in a given storm event (in watershed inches), are presented in Table 1 below.

**Table 1: Approximate Retention Depth for Various Disconnection Scenarios and Types of Active Landscaping Employed**

Disconnection Scenarios		Effective Retention Depth (Watershed Inches)		
		76% EIA	18% EIA	0% EIA
A	1" retention over all active landscape	0.01	0.06	0.08
B	6" retention over half of active landscape	0.04	0.19	0.24
C	6" retention over all active landscape	0.08	0.39	0.47

The depth retained on the site was both a function of the reduction in impervious area and EIA and the increase in depth retained in actively landscaped areas. The results in Table 1 show that an increase from 1 inch retained to 6 inches retained over active landscaping (moving down the columns in Table 1) had a more pronounced effect than reducing the EIA from an easily achieved value (18%) to a more difficult to achieve value (0%) (moving left to right in Table 1). Certainly this result is a function of the cases that were selected, but nonetheless illustrates that LID benefits can be achieved by both extensive implementation (i.e., routing of runoff to vegetated systems) and more intensive design of active landscaping (i.e., greater retention depth) where opportunities exist. A fixed percent EIA LID metric promotes only the former option, but does not address the design of the LID BMP that is being used to disconnect the impervious area, and therefore does

not address the different levels of effectiveness that might be achieved for the same % EIA.

### Volume Retention Scenarios

Storage volumes required to retain the delta water quality and delta 2-year events were calculated using the methodology contained in the Orange County Drainage Area Management Plan (DAMP). Assumptions and resulting volumes are provided in Table 2 below.

**Table 2: Differential Volume of Runoff in WQ and 2-year Storm Event**

Storm	Storm Depth (inches)	Imperviousness <sup>1</sup>	Runoff Coefficient <sup>2</sup>	Runoff Depth (watershed inches)	ΔV (watershed inches)
WQ	0.70	0	0.15	0.11	0.45
	0.70	84	0.79	0.55	
2-year	2.05	0	0.15	0.31	1.31
	2.05	84	0.79	1.62	

<sup>1</sup> Imperviousness = 0 in the undeveloped condition and 84% in the post-developed condition.

<sup>2</sup> Table A-1 of OC DAMP, page 7-II-46

The required retention depths over all active landscaping for the delta water quality and delta 2-year events were computed using simplified volumetric routing assumptions and are shown in Table 3 below for two scenarios. Scenario X represents the case where the volumetric retention requirements are provided in active landscaping, while scenario Y represents the case where all pavement is assumed to be pervious pavement (i.e., self-mitigating) and remaining volumetric requirements are provided in active landscaping. An infiltration rate under active landscaping representative of compacted B soils (0.2 inches per hour) was assumed to explore the range of drawdown times that could be expected for the required retention depths.

**Table 3: Required Depth of Retention in Active Landscaping to Achieve Volumetric Retention Requirements and Range of Approximate Drawdown Times**

Disconnection Scenarios <sup>1</sup>		Required Retention Depth in All Active Landscaping (inches)		Time to Drain at 0.2 inches per hour <sup>3</sup> (hours)
		Delta WQ (0.45 watershed inches)	Delta 2-yr (1.31 watershed inches)	
X	Retention over all Active Landscaping	5.7	16.6	28 – 83
Y	Retention of 0.70 inches over all pavement <sup>2</sup> , with remaining volume retained in active landscaping	3.7	14.6	18 – 73

<sup>1</sup> Analysis is for the 0% EIA case, which assumed 8% of the site was active landscaping.

<sup>2</sup> Based on assumption that all paved areas can be designed to be self-mitigating (i.e. pervious pavement) for entire WQ storm; however, pavement does not accept building runoff.

<sup>3</sup> 0.2 inches per hour is at the high end of typically assumed saturated hydraulic conductivity for compacted B soils under long-term operation. Actual infiltration rates must be based on site-specific testing which

was not available for this site. The low end of the reported range is for the Delta WQ volume and the high end is for the Delta 2-yr volume.

The range of required retention depths over the active landscaping shown in Table 3 is not unreasonable, at least to retain the delta water quality volume, but it would require priority to be placed on converting all active landscaping to an LID BMP designed and maintained specifically as a retention facility. However, the 14-17 inches of retention required to capture the delta 2-year volume is much less feasible, as it would require a combination of fairly deep amended soils and significant surface storage. The drawdown time for such a depth is at or above the upper limit of what would typically be allowed for a surface storage facility to avoid vector concerns (72 hrs), which could be mitigated by the storage of some volume in soil pores but indicates that performance would be substantially reduced in sequential storm events. From this calculation, it is also apparent that feasibility is strongly dependent on site-specific infiltration rates. The retention of the lesser delta volume (i.e., Delta WQ) appears to be more feasible, but is also dependent on the ability to make use of all active landscaping for intensive BMPs and the site-specific infiltration rates. In addition, landscape plans typically include features that restrict usage of landscaping for runoff control (e.g., tree choice can limit inundation depths and duration), therefore, it is unreasonable to assume that all landscaping may be available.

## 60 California

60 California Street is a proposed four-story, multi-use commercial/retail redevelopment project in the City of Ventura in Ventura County. The site encompasses 0.14 acres in the downtown area. Nearly the entire project site is covered by the building roof, with only a negligible buffer around the edges. The surrounding area is highly urbanized and no vegetation exists directly on the site with the exception of two palm trees in planters on the sidewalk. These planters do not accept runoff from the site or the adjacent road. The total project imperviousness and EIA are 100%. Soils at the site are characterized as C soils and the slope of site and surrounding land is approximately 2 percent. The water quality design storm depth was assumed to be 0.75 inches and the 2-year storm depth was estimated to be 2.7 inches.

### Reduction of Effective Impervious Area

For this case study, the project land cover and proposed drainage patterns were first identified. Next, opportunities for "disconnection" of impervious area through the use of green roofs and cisterns for reuse were identified. The practicability of meeting the first goal (<5% EIA) was evaluated based on what could be achieved on the site in this manner without changing the fundamental site characteristics. Because the nature of the project is that of a multi-story building built to the lot lines, there is no opportunity to create vegetated areas for infiltration. The volume of cistern storage and effective retention depth of green roofs were computed and evaluated for their reasonableness and probable effectiveness.

Green roofs rely on highly porous media and moisture retention layers to store intercepted precipitation and to support vegetation that can reduce the volume of

stormwater runoff via evapotranspiration. As proposed,<sup>14</sup> the building's roof contains several features that limit the spatial applicability of a green roof (e.g., a tower, 2V:1H sloped perimeter). Thus, approximately 4,300 ft<sup>2</sup> of the total 6,200 ft<sup>2</sup> roof is available to support vegetated cover. Runoff from roof area that cannot be covered in green roof would need to be captured through the use of a cistern for reuse in flushing toilets and irrigating indoor plants in the building. Dry wells are also considered an acceptable means to disconnect impervious area, but were not considered to be feasible given the high density of development (dry wells are generally located away from building foundations) and the indication of poor soil infiltration rates (C soils) at the project site. The case study found that a reduction in EIA to less than 5% can be achieved, but with a combination of green roof and cisterns.

Green roofs can be engineered to store a range of precipitation depths through the use of different design features. It is important to note that green roofs do not eliminate volume through infiltration; only through evapotranspiration (ET). Regeneration of storage by means of ET is generally slower than by means of infiltration, indicating that antecedent conditions may be more important for performance of green roofs than for infiltration-based BMPs. Similarly, cisterns may be designed for any volume, but do not infiltrate water; rather water is held for reuse, the rate of which may be the limiting factor in how much water should be stored or the availability of storage during sequential rainfall events.

Reduction of effective impervious area to less than 5% of the project area appears to be feasible if the definition of EIA does not include a volumetric retention requirement to render an area ineffective or the cost implication of the improvements. The retention depth values shown in Table 4 below are based on typical design parameters for green roofs and cisterns, which are BMPs that are generally beyond the level of BMP implementation in common practice in the United States at this time. In order to achieve <5% EIA, rainwater collection and reuse or re-engineering of the building roof to eliminate areas of steep slope would be required. It is important to note that this conclusion is based on limited available information of site constraints that may not have been evident from project documentation.

To estimate the approximate effectiveness of the disconnection scenarios in retaining stormwater, simple exploratory calculations were used for two levels of implementation. Runoff volumes were generated by assuming that all rainfall on rooftops would run off, and were reduced as a function of the type of disconnection implemented. Results are presented as the amount of runoff retained in a given storm event, expressed as watershed inches (Table 4), assuming dry antecedent conditions.

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<sup>14</sup> Note, the project consists of construction of a new building; retrofit of green roofs onto existing buildings is a much more challenging proposition.

**Table 4: Approximate Retention Depth for Two Disconnection Scenarios**

Disconnection Scenarios		Effective Retention Depth (Watershed Inches)		
		100% EIA	31% EIA (no cistern)	3% EIA (Green roof and cistern)
A	0.5 in of retention over green roof	NA – No retention BMPs	0.15	0.27 <sup>1</sup>
B	2 in of retention over green roof		0.58	1.08 <sup>2</sup>

<sup>1</sup> With 1-500 gallon cistern.

<sup>2</sup> With 1-2,000 gallon cistern.

Table 4 shows that the depth retained on the site due to LID BMPs was dependent on the design criteria selected for the green roofs and cisterns. It was generally difficult to achieve fairly high retention depths within typical ranges of design criteria for these BMPs, especially for Scenario B.

**Volume Retention Scenarios**

Storage volumes required to retain the delta water quality and delta 2-year events are provided in Table 5 below.

**Table 5: Differential Volume of Runoff in WQ and 2-year Storm Event**

Storm	Storm Depth (inches)	% Imperv	Runoff Coefficient <sup>1</sup>	Runoff Depth (watershed inches)	ΔV	
					(watershed inches)	(gallons)
WQ	0.75	0	0.15	0.11	0.64	2,550
	0.75	100	1.0	0.75		
2-year	2.7	0	0.15	0.31	2.39	9,530
	2.7	100	1.0	2.7		

<sup>1</sup> Table A-1 of OC DAMP, page 7-II-46; all rainfall on rooftops assumed to run off

To help understand the quantity of storage that would be required to retain the delta volumes, the two scenarios were explored (Table 6).

**Table 6: Required Cistern Storage Volume to Achieve Volumetric Retention Requirements**

Disconnection Scenarios <sup>1</sup>		Required Cistern Volume (gal)	
		Delta WQ (2,550 gal)	Delta 2-yr (9,530 gal)
X	Green roof retaining 0.5 in of water and remainder captured by cistern.	1,210	8,200
Y	Green roof retaining 2 in of water and remainder captured by cistern.	Cistern not required	4,170

<sup>1</sup> Analysis is for 0% EIA, assuming use of green roof and a cistern.

The range of required storage volumes is not unreasonable but would require that a viable and sufficient demand exists for the stored water and that reuse of stormwater within the

buildings would be permitted. An exception is noted for Scenario Y, in which the volume of water stored by the green roof is sufficient to mitigate the delta of the water quality-sized storm and does not rely on storage and reuse.

It is important to note that suitability of both green roofs and storage/reuse systems for southern California is not well understood and there is a lack of test data on long term performance. Generally, during the rainiest times of the year in southern California, the potential evapotranspiration is the lowest, meaning that the ability to regenerate storage capacity between storms is low. During the summer, green roofs would likely need to be irrigated to sustain healthy vegetation and to reduce fire danger. Likewise, irrigation demand for stormwater stored in a cistern is generally highest over the long summer months when limited rainfall is likely to occur. This is not meant to say that the solutions would not work, but that they are possibly not the most climate-appropriate technologies. In addition, their use may conflict with existing building and health codes.

### Kmart Site

This case study site is of a former Kmart center located within the City of Ventura. The 12.4 acre site is in a highly urbanized area along South Victoria Avenue and includes a department store, a grocery store, and two restaurants. Currently, the site is covered by building roof and parking lot, with some inactive vegetation (curbed off trees) within the main parking lot.

The focus of this case study was to evaluate the cost of complying with the draft Permit requirement. As the draft Ventura County permit does not include volumetric criteria for the disconnection of impervious area, it was necessary to assume a range of volumetric criteria to render impervious area "ineffective." To facilitate this study, two possible volumetric interpretations of the draft Ventura permit requirement were considered:

- High volume interpretation – the difference between pre-development<sup>15</sup> and post-development runoff for a 3.1-inch storm (2-year, 24-hour rainfall event).
- Low volume interpretation – the difference between pre-development and post-development runoff for a 0.75-inch storm (approximate SUSMP water quality event).

It is recognized that the draft stormwater permit hydrologic controls are related to other drainage controls set by county or cities for the rarer, but larger runoff and flood events. For this case study, drainage/flood control and water quality BMPs were assumed to be the same for both scenarios and no cost was assigned to them. This assumption means that the cost developed for the low volume retention scenario would need to be increased to account for appropriately sized treatment BMPs, and potentially hydromodification controls, whereas the high volume retention scenario would have already fulfilled treatment requirements and potential hydromodification requirements.

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<sup>15</sup> Consistent with Draft Ventura County permit language, "pre-development conditions" were assumed to refer to the site condition prior to any development.

The case study included estimating required detention volume, selecting and sizing LID BMPs, and estimating the order of magnitude lifecycle costs. These costs are also compared to a range of potential site redevelopment costs to provide prospective on the total cost of redevelopment. The BMP sizing and cost results are developed to provide a practical example to evaluate the draft permit requirements.

Estimates of runoff volume in pre-development and post-development conditions were developed using the NRCS Curve Number Method for both design storm scenarios. The differences or "delta" of these volumes are shown in Table 7 below.

**Table 7: Runoff Estimates from Kmart Site<sup>1</sup>**

Permit Interpretation	Design Storm (inches per 24-hour)	Pre-Development <sup>2</sup> Runoff (Ac-Ft <sup>3</sup> )	Post-development Runoff (Ac-Ft)	Delta Volume: BMP Criteria (Ac-Ft)
High Volume	3.1	0.41	2.38	1.97
Low Volume	0.75	0.00	0.32	0.32

**Notes:**

1. Total site area equal 12.4 acres.
2. Pre-development = native vegetation and soils that existed prior to the first development
3. Ac-Ft = Acre-feet

LID BMPs were selected to treat the "delta" volume in both design storm scenarios assuming the LID BMP would control the draft permit hydromodification volume in a treatment train approach: vegetated filter strips followed by aggregate-filled infiltration trenches. For the low volume interpretation, it was assumed that a 1-foot wide filter strip would be provided prior to water entering the ribbon drains. For the high volume interpretation of LID requirements, it was assumed that filter strips would be sized to 5 percent of the tributary impervious area, yielding filter strips approximately 25 feet wide, collecting runoff prior to flowing into the infiltration trenches. It was assumed for this case study that infiltration trenches would be designed to drain in 72 hours into Ventura County Soil Type 3 (NRCS Category C) soils with a Ventura County standard infiltration rate of 0.5 inches per hour. This infiltration rate is the minimum for infiltration trenches. Assuming an aggregate porosity of 0.35, a trench depth of 8 feet, for the high volume interpretation, two basins were sized, one 600 feet long and 42 feet wide, the other 290 feet long and 18.5 feet wide. The low volume interpretation required an 8 foot deep basin 900 feet long and 5.5 feet wide. The project could also comply with LID criteria by using a variety of BMPs such as tree boxes, bioretention, pervious pavement, and other LID BMPs, however, the filter strip/infiltration trench treatment train was assumed based on its simplicity and suitability for a constrained commercial site.

The present worth cost estimates for the two volume retention scenarios ranged from approximately \$17,000 per acre to \$100,000 per acre for the 12.4 acre site (Table 8). For the high volume interpretation, 1.9 watershed inches (1.97 Ac-Ft) of water would need to be infiltrated. The LID BMPs for this scenario occupied 10 percent of the site; the filter strips covered approximately 5 percent of the site and the infiltration trenches covered approximately 5 percent of the site. Under the low volume interpretation of LID



requirements, 0.3 watershed inches (0.32 Ac-Ft) would need to be infiltrated. The LID BMPs for this scenario included an approximately one-foot wide vegetated filter strip placed along the drainage collection features of the site and infiltration trenches covering approximately 1 percent of the project site. The cost results presented in Table 8 are approximate and should be considered as an order-of-magnitude, relative comparison based on engineering experience and limited field data.

**Table 8: Present Worth Cost Comparison of Kmart Case Study**

Case Study	Proposed Permit Costs <sup>1</sup>	% of Total Redevelopment Cost <sup>2</sup>
High volume interpretation (2-year storm)	\$1,290,000	4 – 22%
Low volume interpretation (0.75-inch storm)	\$208,000	1 – 3%

<sup>1</sup> LID BMP Costs are developed as 20-year present worth (lifecycle) costs using a 4 percent interest rate.

<sup>2</sup> Assuming other present worth costs of redevelopment range from \$6 million to \$32 million

### **Case Studies Conclusions**

The following conclusions can be drawn from the case studies:

- In all of the case studies, it was possible to achieve less than 5% EIA based on the criteria provided in the draft Ventura Countywide permit that defines under what conditions imperviousness may be assumed to be disconnected. It is important to note that such conditions do not define engineering sizing criteria.
- The lack of a sizing criteria in the definition of EIA in the draft Ventura Countywide permit resulted in a wide range of possible interpretations, effectiveness (measured as retained runoff volume), and costs. In fact, the first case study (Table 1) showed that a site with an EIA of 18% could be designed to retain more runoff than a site with an EIA of 0%.
- An EIA criterion coupled with a volumetric matching requirement is a much more difficult performance standard to meet as it requires a focused effort to design retention BMPs for a large portion of the project area.
- The same or better hydrologic effectiveness (reduction in runoff volume) may be achieved through more intensive application of LID BMPs where opportunities exist, compared to a scenario in which LID features are spread more extensively throughout the project site, but with less emphasis on volumetric retention. For example, the first case study (Table 1) showed that 6 inch retention over all the active landscape area with 76% EIA provided the same runoff volume retention as 1 inch retention over all the active landscape area with 0% EIA. Therefore, if reduction in runoff volume is the desired outcome, a volumetric reduction standard would be more constructive than a % EIA standard.
- The feasibility of retaining the delta runoff volume on site in landscaped areas is highly dependent on the site-specific infiltration rate.

- Retention of the delta WQ storm volume is more feasible than the delta 2-year volume.
- The 60 California case study showed that it was possible to achieve less than 5% EIA in a downtown redevelopment scenario, but required use of LID BMPs such as green roofs and large volume cisterns due to typical high density downtown redevelopment site constraints. However, this case study did not consider cost implications.
- It is clear from the Kmart case study cost estimates that the proposed draft permit requirements would significantly increase the drainage costs of urban redevelopment projects. The LID BMP costs of the high volume interpretation would challenge the feasibility of the project, being as much as 22% of the total cost. The low volume interpretation could be as much as 3% of the total cost although this estimate does not include the cost for complying with the treatment and hydromodification controls.
- It is also clear from the Kmart case study that the ability to implement LID BMPs on the site without substantially reducing the developable area is dependent on the volumetric criterion that is selected. In the high volume scenario, a significant amount of area (approximately 10 percent of the site) was required for LID BMPs, while in the low volume scenario, the area requirements were less.

#### **IV. Alternative Metrics Currently Used in Other Jurisdictions for LID Implementation**

Representative MS4 permits within California and other key states were reviewed for alternative approaches to regulating low impact design and hydromodification. In addition, LID implementation and hydromodification control metrics that have been adopted by jurisdictions via ordinance, guidance, or technical manuals were reviewed. The discussion below summarizes the findings of this review.

##### ***Example LID and Hydromodification Performance Standards***

In the course of our research, many MS4 permit language examples were obtained. A summary of the LID and hydromodification control performance standards from these various MS4 permits is provided in Table 9 below. A summary of example LID implementation and hydromodification control requirements that have been adopted by jurisdictions via ordinance, guidance, or technical manuals is provided in Table 10 below.

Additional details are provided in Attachment B.

Table 9: Comparison of LID and Hydromodification Performance Standards in Various Stormwater Permits

Regulatory Program	LID Performance Standard	Hydromodification Control Performance Standard	Type of Performance Standard	
			LID	Hydromodification
Washington State Phase I and Phase II Permits (Stormwater Management Manual for Western WA) (February 2005)	<ol style="list-style-type: none"> <li>Infiltrate, disperse, and retain stormwater runoff onsite to the maximum extent feasible without causing flooding or erosion impacts.</li> <li>Roof downspout control BMPs, dispersion, and soil quality BMPs required.</li> </ol>	<ol style="list-style-type: none"> <li>Match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow.</li> <li>Standard requirement is waived for sites that will reliably infiltrate all the runoff from impervious surfaces and converted pervious surfaces.</li> </ol>	Narrative and prescriptive site design/LID BMP requirements with no LID metric	Flow duration control
San Diego MS4 Permit (January 2007) and Interim HMP Standard (October 2007)	<ol style="list-style-type: none"> <li>Drain a portion of impervious areas into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.</li> <li>Properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.</li> <li>Construct a portion of walkways,</li> </ol>	<ol style="list-style-type: none"> <li>For flow rates from 20% of the pre-project 5-year runoff event (0.2Q5) to the pre-project 10-year runoff event (Q10), the post-project discharge rates and durations shall not deviate above the pre-project rates and durations by more than 10% over more than 10% of the length of the flow duration curve.</li> <li>For flow rates from 0.2Q5 to Q5, the post-project peak flows shall not exceed pre-project peak flows. For flow rates from Q5 to Q10, post-project peak flows may exceed pre-project flows by up to 10% for a 1-year frequency interval. For example, post-project flows could exceed pre-project flows by up to 10% for the interval</li> </ol>	Prescriptive site design/LID BMP requirements with no LID metric	Flow duration control

Regulatory Program	LID Performance Standard	Hydromodification Control Performance Standard	Type of Performance Standard	
			LID	Hydromodification
	LID Performance Standard trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.	3. LID may be implemented to manage hydromodification impacts, using design procedures, criteria, and sizing factors (ratios of LID BMP volume or area to tributary area) specified by the Co-permittees' LID BMP designs and sizing factors shall be determined using continuous simulation of runoff from a long-term rainfall record.		
Draft San Francisco Bay Area Municipal Regional NPDES Permit (December 2007)	<ol style="list-style-type: none"> <li>1. Drain a portion of impervious areas into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.</li> <li>2. Properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.</li> </ol>	<ol style="list-style-type: none"> <li>1. <math>E_p = 1.0</math>. Match flow rates and durations from a critical low flow of 10% of Q2 up to the pre-project 10-yr peak flow.</li> </ol>	Prescriptive site design/LID BMP requirements with no LID metric	Erosion Potential and Flow duration control

Regulatory Program	LID Performance Standard	Hydromodification Control Performance Standard	Type of Performance Standard	
			LID	Hydromodification
Sacramento MS4 Permit (September 2008)	3. Construct a portion of walkways, trails, overflow parking lots, alleys, or other low-traffic areas with permeable surfaces, such as pervious concrete, porous asphalt, unit pavers, and granular materials.			
	1. Consider and incorporate all appropriate and applicable LID components and measures that have been successfully and effectively implemented in other municipal areas.	1. Hydromodification Management Plan shall require controls to manage the increases in the magnitude (e.g., flow control), frequency, volume and duration of runoff.	Narrative	Narrative. No numeric requirements
Central Coast Regional Board Phase II Permit SWMP Notification Letter (February 2008)	1. Minimum 30-ft buffer zone for riparian areas and wetlands. 2. Watershed-based Hydromodification Management Plans should incorporate LID strategies to achieve an EIA of 3% - 10% of watershed area.	1. All projects: ≤5% EIA. 2. Projects that add and/or replace 5,000 sf impervious area: match post-construction hydrograph to the undeveloped hydrograph within 1% for a range of events with return periods from 1-yr to 10-yrs. 3. Project > 2 acres: preserve pre-construction drainage density (miles of stream length/square miles of watershed) for all drainage areas serving a 1 <sup>st</sup> order stream <sup>16</sup> or larger and post-project time of concentration ≥ pre-project time of concentration.	Prescriptive site design/LID BMP requirements and EIA limit	EIA limit, match hydrograph, and match drainage density and time of concentration.

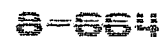
<sup>16</sup> A first order stream is defined as a stream with no tributaries.

Regulatory Program	LID Performance Standard	Hydromodification Control Performance Standard	Type of Performance Standard	
			LID	Hydromodification
Draft West Virginia Phase II Permit (August 2008)	<p>1. Develop quantifiable objectives, with a time frame for achieving them, for eight watershed elements.</p> <p>2. Infiltrate, evapotranspire, and reuse the first 1 in of rainfall from a 24-hr storm preceded by 48 hrs of no measurable precipitation. This first 1 in of rainfall must be 100% managed with no discharge to surface waters.</p> <p>3. A reduction of 0.1 in from the 1 in infiltration/ evapotranspiration/ reuse standard may be applied to any of the following types of development. Reductions are additive such that a maximum reduction of 0.5 inch is possible for a project that meets all five criteria:</p> <ul style="list-style-type: none"> <li>a) Redevelopment</li> <li>b) Brownfield redevelopment</li> <li>c) High density (&gt;7 units per acre)</li> <li>d) Vertical Density, (Floor to Area Ratio (FAR) of 2 or &gt; 18 units per acre)</li> <li>e) Mixed use and Transit Oriented Development (within ½ mile of transit)</li> </ul>	<p>1. "Hydromodification" is included in the definitions, but no specific performance standard is included in the draft permit.</p>	<p>Prescriptive site design/LID BMP requirements and volume retention standard.</p> <p>Allowance for reduction in volume retention standard for infill/redevelopment/ Smart Growth</p>	N/A

Regulatory Program	LID Performance Standard	Hydromodification Control Performance Standard	Type of Performance Standard	
			LID	Hydromodification
	<p>4. For projects that cannot meet 100% of the infiltration/evapotranspiration/reuse requirement on-site, two alternatives are available: off-site mitigation and payment in lieu.</p> <p>5. These alternatives are only available, in combination or alone, for up to 0.4 in of the original obligation at a 1:1.5 ratio, i.e., mitigation or payment in lieu must be for 1.5 times the amount of stormwater not managed on site.</p>			
Draft SWRCB Construction General Permit (March 2008)	<p>1. Runoff volume from 85th percentile storm event <math>\leq</math> pre-project runoff volume.</p>	<p>1. Post-project time of concentration <math>\geq</math> pre-project time of concentration.</p> <p>2. Preserve pre-project drainage density.</p>	Match runoff volume	Match drainage density and time of concentration

**Table 10: Comparison of LID and Hydromodification Requirements Adopted by Jurisdictions**

Jurisdiction	LID Requirements	Hydromodification Control Requirements	Type of Performance Standard	
			LID	Hydromodification
Pierce County, WA Stormwater Management & Site Development Manual (2005)	<ol style="list-style-type: none"> <li>1. Retain 65% of the site in open space or natural resource protection areas where feasible.</li> <li>2. Within the County's Urban Growth Area, when retention of 65% native vegetation cannot be achieved, residential LID projects shall retain a minimum of 50% native soil/vegetation protection areas and provide specified BMPs.</li> <li>3. Commercial and industrial LID projects shall retain a minimum of 25% native soil/vegetation protection areas and provide specified BMPs.</li> <li>4. The required order of preference for LID BMP selection: <ul style="list-style-type: none"> <li>• Infiltrate where Type A and B soil exists.</li> <li>• Bioretention areas (rain gardens) or vegetated channels designed with detention (Type C and D soils).</li> <li>• Dispersion techniques for roof runoff to rain gardens.</li> <li>• Dispersion of road runoff into natural resource protection areas down gradient of the road.</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Match developed discharge durations to pre-developed durations for the range of pre-developed discharge rates from 50% of the 2-year peak flow up to the full 50-year peak flow.</li> <li>2. The definition of the pre-developed condition is the native vegetation and soils that existed on the site prior to 1800 A.D.</li> </ol>	<p>Volume reduction with sizing metric related to site design and water quality storm. Sliding scale for maximum impervious area based on project type</p>	<p>Flow duration control</p>





Jurisdiction	LID Requirements	Hydromodification Control Requirements	Type of Performance Standard	
			LID	Hydromodification
Draft Elovah Aquatic Habitat Conservation Plan (December 2007)	<ul style="list-style-type: none"> <li>Pervious pavements outside the traveled lane, within driveways, and within parking stalls.</li> <li>More conventional collection, conveyance, and detention methods.</li> </ul> <ol style="list-style-type: none"> <li>Priority 1: Runoff volume from 2-yr/24-hr event <math>\leq</math> pre-development (forested) runoff volume for 2-yr/24-hr event</li> <li>Priority 2: Runoff volume from 2-yr/24-hr event <math>\leq</math> pre-development 95% forested + 5% impervious runoff volume for 2-yr/24-hr event</li> <li>Development nodes: Runoff volume <math>\leq</math> volume from project site with 50% less impervious area.</li> </ol>	<ol style="list-style-type: none"> <li>Preservation, restoration and/or reforestation (with native vegetation) of any stream buffers protected through other regulations; and</li> <li>Erosion prevention measures such as energy dissipation and velocity control; and</li> <li>24-hour extended detention storage of the 1-year, 24-hour return frequency storm event. This requirement may be reduced or waived through the use of other structural and nonstructural measures that allow for infiltration of runoff. The storage volume may be reduced by the volume that is infiltrated.</li> </ol>	Match runoff volume with a sliding scale based on protection of endangered species (i.e. Priority 1 – most sensitive species present to Priority 3 – no endangered species present).	Match peak flow
City of Santa Barbara (June 2008)	<p>Small Projects:</p> <ol style="list-style-type: none"> <li>Voluntary use of basic LID options.</li> </ol> <p>Medium Projects:</p> <ol style="list-style-type: none"> <li>Mandatory use of basic LID options.</li> </ol>	<p>Large Projects:</p> <ol style="list-style-type: none"> <li>Post-project peak flow rate <math>\leq</math> pre-development peak flow rate for 2, 5, 10, and 25-yr/24-hr events</li> </ol>	Prescriptive site design/LID BMP requirements and volume retention standard.	Match peak flow

Jurisdiction	LID Requirements	Hydromodification Control Requirements	Type of Performance Standard	
			LID	Hydromodification
County of Los Angeles Department of Public Works Draft Low Impact Development Standards Manual (December 2008)	<p>Large Projects:</p> <ol style="list-style-type: none"> <li>Runoff volume from 25-yr/24-hr event <math>\leq</math> pre-development runoff volume for 25-yr/24-hr event, or</li> <li>Runoff volume from one-inch/24-hr storm event, whichever is larger.</li> </ol> <p>Single Family Residential <math>&lt; 5</math> Units:</p> <ol style="list-style-type: none"> <li>Install a minimum of 2 LID BMPs from a list provided in the manual.</li> </ol> <p>Non-Residential or Residential <math>\geq 5</math> units:</p> <ol style="list-style-type: none"> <li>First preference is to infiltrate the difference in the post-project SUSMP design storm runoff volume and the undeveloped SUSMP design storm runoff (<math>\Delta V</math>).</li> <li>Second preference is to store and reuse <math>\Delta V</math>.</li> <li>Third preference is to treat <math>\Delta V</math> and release slowly (detention).</li> <li>If the Director of Public Works determines that compliance with the above 3 LID requirements is technically infeasible, the applicant shall submit a proposal for approval by the Director that incorporates design features</li> </ol>	<ol style="list-style-type: none"> <li>Match the flow velocity, flow volume, and depth/width of flow for the SUSMP, LID, 2, 5, 10, 25, and 50-year storm events.</li> <li>Conduct sediment transport analysis to determine long-term impacts of streambed accretion and degradation for major drainages.</li> </ol>	<p>Prescriptive site design/LID BMP requirements and volume retention or detention standard.</p>	<p>Match peak flow, volume, and depth/width of flow, consider reduction in sediment supply</p>

Jurisdiction	LID Requirements demonstrating compliance with the LID requirements to the maximum extent practicable.	Hydromodification Control Requirements	Type of Performance Standard	
			LID	Hydromodification
Contra Costa County Clean Water Program C.3. Guidebook (September 2008)	<p>1. The CCCWP's LID design guidance (Chapter 4 of the Guidebook) was crafted to ensure LID facilities comply with the NPDES permit's hydraulic sizing requirements for stormwater treatment facilities and flow control facilities.</p> <p>2. Self-retaining areas are designed to retain the first one inch of rainfall without producing any runoff.</p> <p>3. Drainage from roofs and paving can be directed to self-retaining areas. The maximum ratios are 2 parts impervious: 1 pervious (treatment only) or 1 part impervious: 1 pervious (treatment and flow control).</p>	<p>1. Show no increase in impervious area and no increase in efficiency of drainage collection and conveyance.</p> <p>2. Use the design procedures and design criteria in the Guidebook, and the Program's sizing tool, to select and size BMPs for flow control (also meets treatment requirements).</p> <p>3. Use a continuous-simulation model and 30 years or more of hourly rainfall data to simulate pre-project and post-project runoff, including the effect of proposed control facilities to show that post-project runoff does not exceed pre-project rates and durations.</p> <p>4. Show that all downstream channels between the project site and the Bay/Delta are enclosed pipes, are engineered hardened channels, are subject to tidal action, or are aggrading.</p> <p>5. Propose and implement appropriate in-stream restoration projects to fully mitigate potential risk.</p>	<p>Sizing metric for BMPs included in manual to meet water quality and/or hydromodification control standard.</p> <p>Volume retention standard for self-retaining areas.</p>	Flow duration control

The example LID performance standards listed in Table 9 and Table 10 above generally fall into one (or a combination) of the following two general categories:

1. *Prescriptive site design and LID BMP requirements with no metric.* Examples of this approach include the Stormwater Management Manual for Western Washington, San Diego MS4 Permit, and Draft San Francisco Bay Area Municipal Regional NPDES Permit. Narrative site design and LID BMP performance standards are included, with some specific BMPs required, typically to the "maximum extent practicable."
2. *Site design and LID BMP requirements with metrics.* The Pierce County Stormwater Management & Site Development Manual provides an example of a sizing metric related to site design (e.g., retain 65% of the site in open space or natural resource protection areas where feasible). Several of the examples incorporate metrics based on volume reduction (e.g., infiltrate, evapotranspire, or reuse the first one inch of rainfall). The Central Coast Regional Board Phase II Permit SWMP Notification Letter incorporates an LID performance standard based on limiting effective impervious area at the watershed scale related to hydromodification control.

Note that none of the example LID performance standards listed in Table 9 and Table 10 included a requirement for 5% EIA at the project level. Also note, the following statement from the State Water Resources Control Board<sup>17</sup>:

"... existing development exerts a tremendous pollution impact largely due to the resulting, developed landscape and its associated runoff characteristics. Addressing it by matching pre-development hydrology may not always be possible because many urban areas lack land for stormwater control and natural hydrology has been altered so significantly. **In these instances, the urban stormwater regulations in Portland and Washington, D.C. that require volume retention can serve as appropriate models. (emphasis added)**"

A feature that is common to several of the example performance standards and requirements are recognition of site conditions that limit the feasibility of implementing infiltration (e.g., the San Diego MS4 Permit, the Draft San Francisco Bay Area Municipal Regional NPDES Permit, and the County of Los Angeles Department of Public Works Low Impact Development Standards Manual). These standards and requirements generally allow for use of other types of site design and LID BMPs in these circumstances.

One of the more interesting approaches is the draft West Virginia Phase II Permit LID performance standard, which incorporates a metric that allows for a credit in the volumetric reduction standard for redevelopment projects, brownfield redevelopment.

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<sup>17</sup> *A Review of Low Impact Development Policies: Removing Institutional Barriers To Adoption.* Commissioned and sponsored by the California State Water Resources Control Board Stormwater Program and The Water Board Academy, December 2007.

high density projects, mixed use projects, and transit oriented development (within ½ mile of transit). Also, two alternatives are available for projects that cannot meet the onsite infiltration/evapotranspiration/reuse volumetric requirement: 1) off-site mitigation, and 2) payment in lieu. Both of these off-site options require a ratio of 1:1.5 of the original volumetric obligation to the off-site mitigation, and cap the total amount of off-site mitigation that is allowable to a fraction of the total obligation.

The draft Etowah Aquatic Habitat Conservation Plan (HCP) is an example of a watershed specific study that was prepared by a group of jurisdictions to mitigate take of three species listed under the Endangered Species Act. The stormwater management policy of the Etowah Aquatic HCP is centered around a stormwater ordinance that includes performance standards for water quality protection, stream channel protection, and flood protection. In addition, the Etowah Aquatic HCP stormwater ordinance includes a performance standard that limits the volume of runoff in areas most critical to the survival of the fish species covered under the Etowah Aquatic HCP. The areas where the Runoff Limits apply are known as Priority Area 1 and Priority Area 2. Priority Area 1 is home to the most sensitive species protected by the HCP and so has the most restrictive standard. Priority Area 2 supports species that are less sensitive and has a less restrictive standard. Parts of the Upper Etowah that do not currently provide essential habitat to any imperiled fish are classified as Priority Area 3 and are not subject to the Runoff Limits.

## V. Land Development Performance Standard

### *Overview of Use of EIA as a Metric*

Effective impervious area as a metric for LID BMP implementation has serious limitations, however, the use of EIA as a planning principle may be relevant to overall watershed protection goals. In 2003, the Water Environment Research Foundation published a report entitled "Physical Effects of Wet Weather Flows on Aquatic Habitats: Present Knowledge and Research Needs"<sup>18</sup>. This report emphasized the limitations of current attempts to link stream impacts to gross measures of development such as imperviousness, observing that these measures provide little meaningful information to understand key processes and to create practical strategies for mitigation. The authors contended that conveyance and storage facilities in urban drainage systems exert a strong influence on runoff hydrology, but this fact is not recognized in studies that attempt to relate stream impacts to gross imperviousness only. They stressed that predictive models of reach-scale habitat changes must account for the connectivity and conveyance of the drainage system and relevant stormwater controls. Moreover, more recent research on the effects of development on aquatic habitat indicate that the preferred metrics rely on hydrologic measures that reflect the watershed response to not only changes in imperviousness, but effects of the drainage infrastructure and stream conditions.<sup>19</sup>

<sup>18</sup> Roesner, L.A., and Bledsoe, B.P., 2003. Physical Effects of Wet Weather Flows on Aquatic Habitats: Present Knowledge and Research Needs, Water Environment Research Foundation, 00-WSM-4.

<sup>19</sup> Protocols for Studying Wet Weather Impacts and Urbanization Patterns. Water Environment Research Foundation 03WSM3, 2008.

Per Schueler's *Cautionary Note*<sup>20</sup>, while the research on impervious cover and stream quality is compelling, it is doubtful whether it can serve as the sole foundation for legally defensible regulatory actions at this time. Key reasons include: 1) the research has not been standardized, so different investigators have used different methods to define and measure/estimate imperviousness; 2) researchers have employed a wide number of techniques to measure stream quality characteristics that are not always comparable to each other; 3) most of the studies have been confined to a few ecoregions, and few studies have been conducted in California; 4) the absolute measure of watershed imperviousness that could cause stream instability depends on many factors, including watershed area, land cover, vegetative cover, topography, and soil type; development impervious area and connectedness; longitudinal slope of the river; channel geometry; and local boundary materials, such as bed and bank material properties and vegetation characteristics; and 5) none of the studies has yet examined the effect of widespread application of stormwater treatment, LID controls and/or hydromodification control practices on impervious cover/stream quality relationships.

## ***Proposed Land Development Performance Standard***

### **LID Controls**

The following approach to establishing a reasonable, quantitative LID metric is suggested based on our case study analysis and review of alternative LID MS4 performance standards and requirements for new development and redevelopment.

***STEP 1 – SITE DESIGN PLANNING PRINCIPLES.*** Technical literature and policy studies conducted to date unanimously conclude that to effectively implement site design and LID BMP techniques, regulatory and management strategies must be developed for, and integrated into, project planning, design and environmental review phases and processes. Planning principles for controlling the adverse effects of new development and significant redevelopment emphasize the need to address potential impacts in the earliest stages of the development planning process, namely during the site assessment, site planning and layout, vegetation planning, and grading planning stages.

Preliminary and final project plan submittals prepared for priority projects should integrate site design strategies and LID BMPs into project design to infiltrate, disperse, and retain runoff onsite to the extent technically feasible and appropriate. In determining the degree to which site design strategies and LID BMPs must be implemented, it is appropriate for projects to consider the scale of development, site planning BMPs employed, and volume and flow controls achieved by other BMPs and measures implemented for a project area, including, without limitation, regional, subregional and site-specific treatment control, hydromodification, and LID measures and BMPs. Permittees should incorporate a site design planning principle to achieve an effective impervious area of no more than 5% of watershed area, depending on local conditions. Local conditions are particularly important in highly urbanized areas with improved

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<sup>20</sup> Schueler, Thomas R. and Heather K. Holland. 2000. *The Practice of Watershed Protection*. Article 1. "The Importance of Imperviousness", pp. 7 – 18.

drainage channels, in which case the use of EIA as a site design planning principle is less effective and relevant.

The following site design planning principles should be implemented for each project at the applicable project planning scale (Master Planned Community/Tract Map or Project Site) unless shown to be infeasible or inappropriate given applicable goals and constraints:

1. Master Planned Community/Tract Map Site Design Measures
  - (a) Cluster development to preserve open space.
  - (b) Provide riparian buffers.
  - (c) Preserve and/or restore and enhance natural slopes and native vegetation on slopes adjacent to natural drainage systems.
  - (d) Minimize impervious areas by incorporating open space and/or parks.
  - (e) Locate development on least infiltrative soils.
  - (f) Utilize infiltration properties of sandy soils for groundwater recharge when migrating pollutants or groundwater levels are not a problem.
  - (g) In areas not subject to mass grading, delineate and flag the smallest site disturbance area possible and restrict temporary storage of construction equipment in these areas to minimize soil compaction.
  - (h) Use vegetated or infiltration-based treatment control and/or hydromodification control BMPs.
  - (i) Construct streets, sidewalks, and parking lot aisles to the minimum widths specified in the land use code and in compliance with regulations for the Americans with Disabilities Act (ADA) and safety requirements for fire and emergency vehicle access.
  - (j) Construct trails with open-jointed paving materials, granular materials, or other pervious materials, in compliance with regulations for ADA and safety requirements for fire and emergency vehicle access.
  - (k) Use native and/or non-native/non-invasive, climate-appropriate landscaping vegetation that requires less watering and chemical application.
  - (l) Use efficient irrigation technologies and centralized irrigation controls for landscape watering in common areas, commercial areas, multiple family residential areas, and parks.
  - (m) Identify potential water reuse options.
2. Project-level Site Design Measures
  - (a) Drain impervious areas into pervious areas prior to discharge to the MS4. The amount of runoff from impervious areas that is to drain to pervious

areas shall correspond with the total capacity of the project's pervious areas to infiltrate or treat runoff, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors.

- (b) Properly design and construct the pervious areas to effectively receive and infiltrate or treat runoff from impervious areas, taking into consideration the pervious areas' soil conditions, slope, and other pertinent factors..
- (c) Use vegetated or infiltration-based treatment control and/or hydromodification control BMPs.
- (d) Use efficient irrigation technologies for landscape watering.
- (e) Do not use copper or zinc building materials for roof gutters and downspouts.

**STEP 2 – LID BMP PERFORMANCE STANDARD.** Priority projects should prioritize the selection of LID BMPs to remove stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to protecting water quality and managing water resources. One or a combination of the three LID BMP options listed below should be implemented. The order of preference is for options 1 and 2 first (with equivalent preference), and option 3 second.

LID BMP options include:

1. BMPs that promote infiltration.
2. BMPs that store and reuse stormwater runoff.
3. BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses, and BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly.

The LID BMP(s) should be sized, at a minimum, to infiltrate, evapotranspire, reuse, or collect and detain the LID design runoff volume, which is defined as the excess runoff<sup>21</sup> from the water quality design storm event. It is recognized that LID BMPs may be sized to provide treatment control and/or hydromodification control in addition to meeting the LID performance standard, as applicable and feasible.

If a priority project is not able to implement one of the above three LID BMP requirements due to technical infeasibility, in whole or in part, the priority project should incorporate design features demonstrating compliance with the LID BMP requirements to the maximum extent practicable.

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<sup>21</sup> Excess storm water runoff = volume of post-development runoff minus pre-development runoff for the 85<sup>th</sup> percentile storm event (or equivalent water quality design event).



## LID BMP Options

*LID BMP Option 1: BMPs that Promote Infiltration and Groundwater Recharge.* Infiltrate stormwater runoff throughout the project site where possible. This can be accomplished on a lot-by-lot, subregional, and/or regional scale.

Infiltration may not be possible in all development scenarios. Exceptions may include, but are not limited to, the following:

- Locations where seasonal high groundwater is within 10 feet of the surface.
- Within 100 feet of a water supply well.
- Brownfield development sites or other locations where pollutant mobilization is a documented concern.
- Locations with potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations with soil infiltration rates that do not support infiltration-based BMPs.<sup>22</sup>
- Locations where excessive infiltration to groundwater could cause adverse biological impacts to hydraulically connected ephemeral or intermittent natural drainage courses.
- Development projects in which the use of infiltration BMPs would conflict with local ordinances and building codes.
- Locations where excessive infiltration could cause health and safety concerns.

*LID BMP Option 2: BMPs that Store and Reuse Stormwater Runoff.* Store and reuse stormwater runoff. Storage and reuse of the LID design volume may not be possible in all development scenarios. Exceptions may include but are not limited to the following:

- Projects that would not provide sufficient irrigation demand or (where permitted) domestic grey water demand for use of stored runoff due to limited landscaping or extensive use of low water use plant palettes in landscaped areas.
- Projects that are required to use reclaimed water for irrigation of landscaping.
- Development projects in which the storage and reuse of stormwater runoff would conflict with local, state or federal ordinances or building codes.
- Locations where storage facilities would cause potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations where storage and reuse could cause health and safety concerns.

*LID BMP Option 3: BMPs that Incorporate Vegetation.* LID BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction, integrate multiple

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<sup>22</sup> Infiltration should be regarded with caution in soils with an infiltration rate less than 0.5 inches per hour.

uses and/or BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly shall be implemented. These LID BMPs shall be sized to collect and detain the LID design. These LID BMPs include, but are not limited to, bioretention with underdrains, dry extended detention basins, constructed wetlands, green roofs, planter boxes, sand filters, vegetated buffers, vegetated swales, and wetponds.

### **Redevelopment and Infill Projects**

To promote redevelopment and infill projects, it is recommended that a credit system be established such as a reduction of 0.15 inch from the LID design runoff volume that would be applied to any of the following types of projects. Reductions are additive such that a maximum reduction of 0.65 inch is possible for a project that meets all five criteria:

- a) Redevelopment
- b) Brownfield redevelopment
- c) High density (>7 units per acre)
- d) Vertical Density, (Floor to Area Ratio (FAR) of 2 or >18 units per acre)
- e) Mixed use and Transit Oriented Development (within ½ mile of transit)

### **LID Implementation**

Compliance with the LID BMP requirements may not be feasible in all development scenarios. In these situations, the priority project shall demonstrate the infeasibility of compliance with the LID requirements in the project report submittal to the satisfaction of the permittee. The LID goal of mimicking natural hydrology by increasing groundwater recharge, enhancing water quality, and preventing degradation to downstream natural drainage courses should be used in the evaluation, approval, and implementation of alternative BMPs, as well as any determination of infeasibility.

Priority projects that cannot meet the LID BMP performance standard onsite shall incorporate design features demonstrating compliance with the LID BMP requirements to the maximum extent practicable.

Priority projects that infiltrate, evapotranspire, reuse, or collect and detain less than the LID design runoff volume onsite (even after the application of redevelopment credits) should mitigate the remaining LID design runoff volume either with off-site mitigation or via payment in lieu. The permittee must develop and fairly apply criteria for determining the circumstances under which these alternatives would be available. A determination that standards cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria that would rule out an adequate combination of infiltration, evapotranspiration, reuse, and detention.

Off-site mitigation or payment in lieu, in combination or alone, should meet the original obligation. For either of these options to be available, the permittee must create an inventory of appropriate mitigation projects, and develop appropriate institutional standards and management systems to value, evaluate and track transactions.

*Off-site mitigation.* LID BMPs may be implemented at another location in the same or equivalent sewershed/watershed as the original project, approved by the permittee. The permittee should identify priority areas within the sewershed/watershed in which mitigation projects can be completed. Mitigation must be for retrofit or redevelopment projects, and cannot be applied to new development.

*Payment in lieu.* Payment in lieu may be made to the permittee, who will apply the funds to a public stormwater project.

### **Treatment Control**

Consistent with the current draft permit requirements, it is recommended that treatment control BMPs be designed and implemented for the remaining water quality volume or flow not already addressed by LID BMPs.

### **Hydromodification Control**

Until such time that the Southern California Storm Water Monitoring Coalition (SMC) completes the Hydromodification Control Study, an interim hydromodification control criterion to protect natural drainage systems<sup>23</sup> is suggested as follows:

- Projects disturbing land area of less than fifty acres should include LID BMP(s) such that, at a minimum, the 2-year 24-hour storm event post-development runoff volume is less than the 2-year 24-hour storm event pre-development runoff volume. Alternatively, hydromodification controls should control runoff by matching the pre-development flows and durations for the continuous range of return periods from 10 percent of the two year to the 10-year, based on long-term rainfall records. Within this range, the post-project flow duration curve should not deviate above the pre-project flow duration curve flows by more than 10 percent, and shall not deviate above the pre-project flow duration curve flows over more than 10 percent of the length of the curve. A site specific critical flow may substitute for the lower return period (10 percent of the two year) if available.
- For projects disturbing more than 50 acres, the project should develop and implement a Hydromodification Analysis Study that demonstrates that the pre-project sediment transport capacity (erosion potential) in the receiving channel is maintained to within an identified tolerance based on local or regional data. The analysis shall be based on a continuous simulation of the long-term, local rainfall record, with acceptable hydrologic models and assumptions.

## **VI. Conclusions**

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<sup>23</sup> Projects that discharge to non-susceptible stream channels are exempt; see hydromodification control exemptions.

This white paper was prepared to facilitate discussion among the regulatory agencies, regulated communities, and environmental groups as to appropriate metrics for ensuring reasonable implementation of LID and an integrated strategy for water quality protection for discharges from new development and redevelopment projects.

Case studies of three redevelopment projects were presented that showed that using effective impervious area as a metric with no size requirement can result in a wide range of possible hydrologic effects and costs. The same or greater reduction in runoff volume may be achieved through more intensive application of LID BMPs where opportunities exist, compared to a scenario in which LID features are spread more extensively throughout the project site, but with less emphasis on volumetric retention. For example, the first case study showed that 6 inch retention over all the active landscape area with 76% EIA provided the same runoff volume retention as 1 inch retention over all the active landscape area with 0% EIA. Therefore, if reduction in runoff volume is the desired outcome, a volumetric reduction standard would be more constructive than a % EIA standard. Although retention of the delta water quality storm volume appears to be a more reasonable standard than the delta 2-year storm volume, the feasibility of retaining the delta runoff volume on site in landscaped areas is highly dependent on the site-specific infiltration rate. The second case study showed that it was possible to achieve less than 5% EIA without consideration of cost in a downtown redevelopment scenario, but LID BMPs such as green roofs and large volume cisterns were necessitated by site constraints.

The Kmart case study cost estimates showed that the proposed draft permit requirements would significantly increase the drainage costs of urban redevelopment projects. The cost to infiltrate the change in runoff in the 2-year, 24-hour storm event would challenge the feasibility of the redevelopment project, estimated to cost approximately 22% of the total project cost. On the other hand the cost to infiltrate the change in runoff from the water quality design storm is estimated to cost 3% of the total project cost. It is also clear from the Kmart case study that the ability to implement LID BMPs on the site without substantially reducing the developable area is dependent on the volumetric criterion that is selected. In the high volume scenario, a significant amount of the project area (approximately 10 percent of the site) was required for LID BMPs, while in the low volume scenario, the area requirements were much less.

Representative MS4 permits within California and other key states and LID implementation and hydromodification control metrics that have been adopted by jurisdictions via ordinance, guidance, or technical manuals were reviewed and summarized to illustrate alternative approaches to regulating low impact design and hydromodification. These example performance standards and requirements were shown to vary widely, but generally fell into two categories. Some standards relied on prescriptive site design and LID BMP requirements but included no sizing metric. Narrative site design and LID BMP performance standards were also included, with some specific BMPs required, typically to the "maximum extent practicable." Other standards and requirements incorporated sizing metrics. Sizing metrics include metrics related to site design and metrics based on volume reduction. The Ventura Countywide and Orange

Countywide draft MS4 permits currently appear to be unique in prescribing metrics based primarily on effective impervious area.

EIA as a planning goal may be a reasonable metric for watershed protection, but as an LID BMP implementation metric it has serious limitations. Effective impervious area at the watershed scale may be used at the project planning stage. An approach to establishing a reasonable, quantitative LID metric is suggested based on our case study analysis and review of alternative LID MS4 performance standards and requirements for new development and redevelopment.

## VII. Recommendations

The suggested approach begins with site design planning principles that should be implemented for each project at the applicable project planning scale (Master Planned Community/Tract Map or Project Site) unless shown to be infeasible or inappropriate given applicable goals and constraints. A LID BMP performance standard is suggested that requires priority projects to implement one or a combination of three types of LID BMPs, with priority placed on option 1 and option 2 equally:

1. BMPs that promote infiltration.
2. BMPs that store and reuse stormwater runoff.
3. BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses, and BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly.

The LID BMP(s) should be sized, at a minimum, to infiltrate, evapotranspire, beneficially use, or collect and detain the LID design runoff volume, which is defined as the excess runoff from the water quality (SUSMP) design storm event. The LID BMPs can be sized to provide treatment control and/or hydromodification control in addition to meeting the LID performance standard, as applicable and feasible. A reduction (i.e., credit) in the LID design runoff volume would be allowed to promote redevelopment, infill, and smart growth projects. Finally, projects that cannot meet the LID BMP performance standard onsite would be required to incorporate design features demonstrating compliance with the LID BMP requirements to the maximum extent practicable. Projects that infiltrate, evapotranspire, reuse, or collect and detain less than the LID design runoff volume onsite after proving infeasibility would be required to mitigate the remaining LID design runoff volume either in off-site mitigation or via payment in lieu.

The proposed hydromodification performance standard, if incorporated into the revised MS4 Permits, would ensure a reasonable level of interim LID implementation by new development and redevelopment projects until the SCCWRP studies are completed and their recommendations are considered.

**ATTACHMENT A - LID Case Studies**

**Walnut Village**

**60 California**

**Ventura Kmart Site**

ATTACHMENT A  
LID Case Studies

## Case Study: Walnut Village

### *Project Description*

Walnut Village is a proposed multi-family redevelopment project in the City of Anaheim. The site encompasses 7.6 acres at the corner of Walnut Street and Ball Road. Proposed development consists of a main building with interior courtyards and two sets of smaller structures along Walnut Street. Primary parking is provided below the grade of the large central building with some parking at the surface. The site is bordered on the west and north by a fire access road.

Landscaping is generally present as narrow strips along some building edges and around the perimeter of the sites. Except for the vegetated filter strip, the landscaping does not accept runoff from adjacent impervious area. Key project characteristics are provided in Table 1 below.

The site can be divided into three drainage areas based on the BMP that provides treatment. Stormwater runoff from the site, as proposed, is treated by a StormFilter® vault, Aqua-Guardian® catch basin inserts, and a vegetated filter strip. A site plan with proposed land cover, drainage areas, and stormwater BMPs is shown in Figure 1 below.

**Table 1: Project Characteristics**

Characteristic	Value	Source
Area, ac	7.6	Project WQMP, submitted to City of Anaheim, August, 2007
Total Imperviousness, %	84%	Delineation of project land uses
Effective Impervious Area, %	76%	Project WQMP, submitted to City of Anaheim, August, 2007
Soil Type/Description	Soils at the site are characterized as B soils	Orange County Hydrology Manual Soils Maps (1986)
Approximate slope of site and surrounding land, ft/ft	Approximately 0.005	Google Earth
Water Quality Storm Depth, in	0.7	OC DAMP, 2003
2-yr Storm Depth, in	2.05	OC Hydrology, 1986

ATTACHMENT A  
LID Case Studies

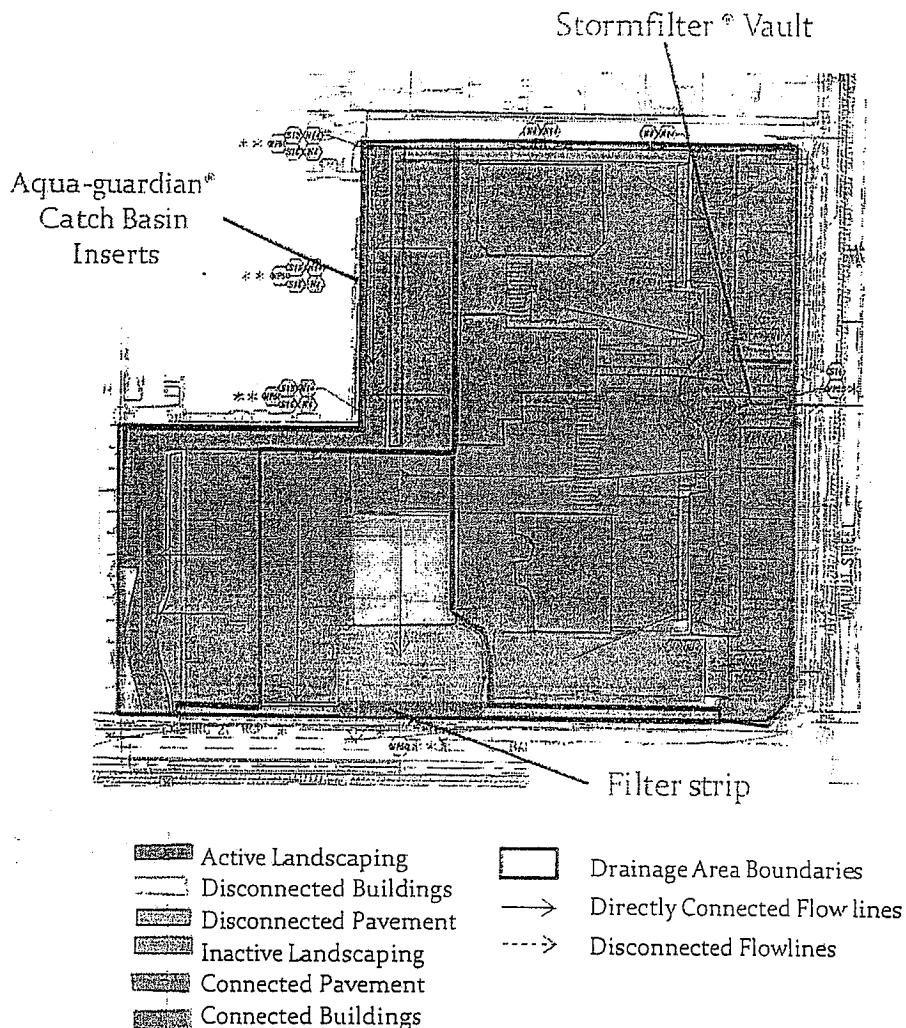


Figure 1: Site land cover and drainage areas

*Case Study Assumptions*

This case study was completed with the underlying philosophy that for the proposed LID requirements to be feasible they must not necessitate changes to the fundamental character of the project. The follow assumptions were made:

- 6) Site boundaries are fixed and LID requirements cannot be fulfilled on adjacent parcels of land.
- 7) Building and parking footprints are fixed in size.



ATTACHMENT A  
LID Case Studies

- 8) Limited modifications to site design may be considered feasible if conditions 1 and 2 are met.
- 9) Pervious pavement constitutes disconnection of that area, but cannot be used in high-traffic areas.
- 10) Proprietary BMPs do not constitute disconnection of impervious areas unless they incorporate substantial volume-reduction mechanisms.

### *Case Study Methodology*

This case study considered the feasibility and effectiveness of three design goals, as derived from the Ventura Countywide and Orange Countywide draft MS4 permit requirements described in the main body of this white paper:

- 3) Reduction of effective impervious area<sup>24</sup> to less than 5%.
- 11) Retention<sup>25</sup> of the difference between pre-development and post-development runoff volume for the water quality storm event (i.e., the "delta" WQ volume), and
- 12) Retention of the difference between pre-development and post-development runoff volume for the 2-yr storm event (i.e. the "delta" 2-year volume).

The case study effort first identified the project land cover and proposed drainage patterns. It then identified opportunities for "disconnection" of impervious area through conversion of passive landscaped areas (those that do not accept runoff from adjacent impervious areas) to active landscaped areas (those that do accept runoff from adjacent impervious areas). It also identified minor site design modifications that would allow for addition of more active landscaping or conversion of additional passive landscaping to active landscaping. The practicability of meeting the first goal (<5% EIA) was evaluated based on what could be achieved on the site in this manner without changing the fundamental character of the site. It was important to consider that since routing water through a small strip of landscaping does not fulfill water quality treatment requirements, the disconnection had to be achieved in a way such that water overflowing the active landscaping would be routed to a downstream BMP (in this case, StormFilters or Aqua-Guardian CBIs).

The second part of the case study considered the depth of runoff that must be retained over landscaped areas to achieve the retention goals (#2 and #3). While the first goal, consistent with the draft Ventura Countywide Permit, does not specify a volume of runoff that must be retained as a result of disconnection, the draft Orange Countywide Permit requires that the difference in pre-development and post-development runoff for the 2-yr storm be retained as a result of

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<sup>24</sup> As defined by the Ventura County Draft Permit, impervious surfaces may be rendered "ineffective" if the stormwater runoff is: (1) drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; (2) collected and stored for reuse such as irrigation, or other reuse purpose; or (3) discharged into an infiltration trench. The draft Ventura Permit does not include sizing criteria for these three options.

<sup>25</sup> Retention is defined as the capture and elimination of stormwater through percolation, evapotranspiration, or use.

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disconnection. This represents Goal 3, while Goal 2 represents an intermediate level of control between #1 and #3 that has been incorporated into the draft County of Los Angeles Department of Public Works Low Impact Development Standards Manual.

To determine the depth that actively landscaped areas would need to retain, the "delta" water quality and "delta" 2-year storm volumes were computed. In one case it was assumed that all of the delta volume would be stored in active landscaping. In another, it was assumed that driveways and parking areas would be mitigated by pervious pavement up to the water quality depth. The remaining volume required to be retained onsite would be spread over the actively landscaped area to determine the required depth.

### *Limitations*

Two major limitations are acknowledged:

- This case study, as is the case with most investigations of feasibility, relied on subjective assumptions and interpretations which were based on professional judgment; and
- Computational methods used to evaluate effectiveness were simplified, as incorporation of complex methods reduces transparency while increasing the required level of effort.

Thus, the investigations contained herein are not promoted as defensible against all points of view, nor are they promoted as precise. Rather, they are intended to illustrate concepts in a way that does not intentionally introduce bias, while providing planning level results that are open to the scrutiny of the reader.

### *Case Study Results and Discussion*

#### **Effective Impervious Area**

Modifications to stormwater routing and site design were identified in an attempt to meet the goal of reducing effective impervious area (EIA) to less than 5%. In this effort, it was critical to understand which areas of the site could be made available for infiltration. Based on site plans, the courtyard areas located over the underground parking structure could not be assumed to accept runoff from adjacent impervious areas because water could not be infiltrated over the parking structures. Perimeter landscaping was deemed potentially appropriate for infiltration, thus disconnection of impervious area was achieved by routing runoff through these areas. Parking areas, driveways, and fire roads were routed to drain to landscaping where possible. It was assumed that entry driveways represented high traffic areas that would not be suitable for pervious pavement.

The project as proposed has 76% EIA. Two degrees of disconnection were achieved in this study, illustrated in Figures 2 and 3 below. Figure 2 shows a reduction to 18% EIA simply by converting passive landscape to active landscape and purposefully routing rooftop drainage over this area. Figure 3 shows a reduction to 0% EIA achieved through adding active landscaping where non-essential hardscape had existed previously.

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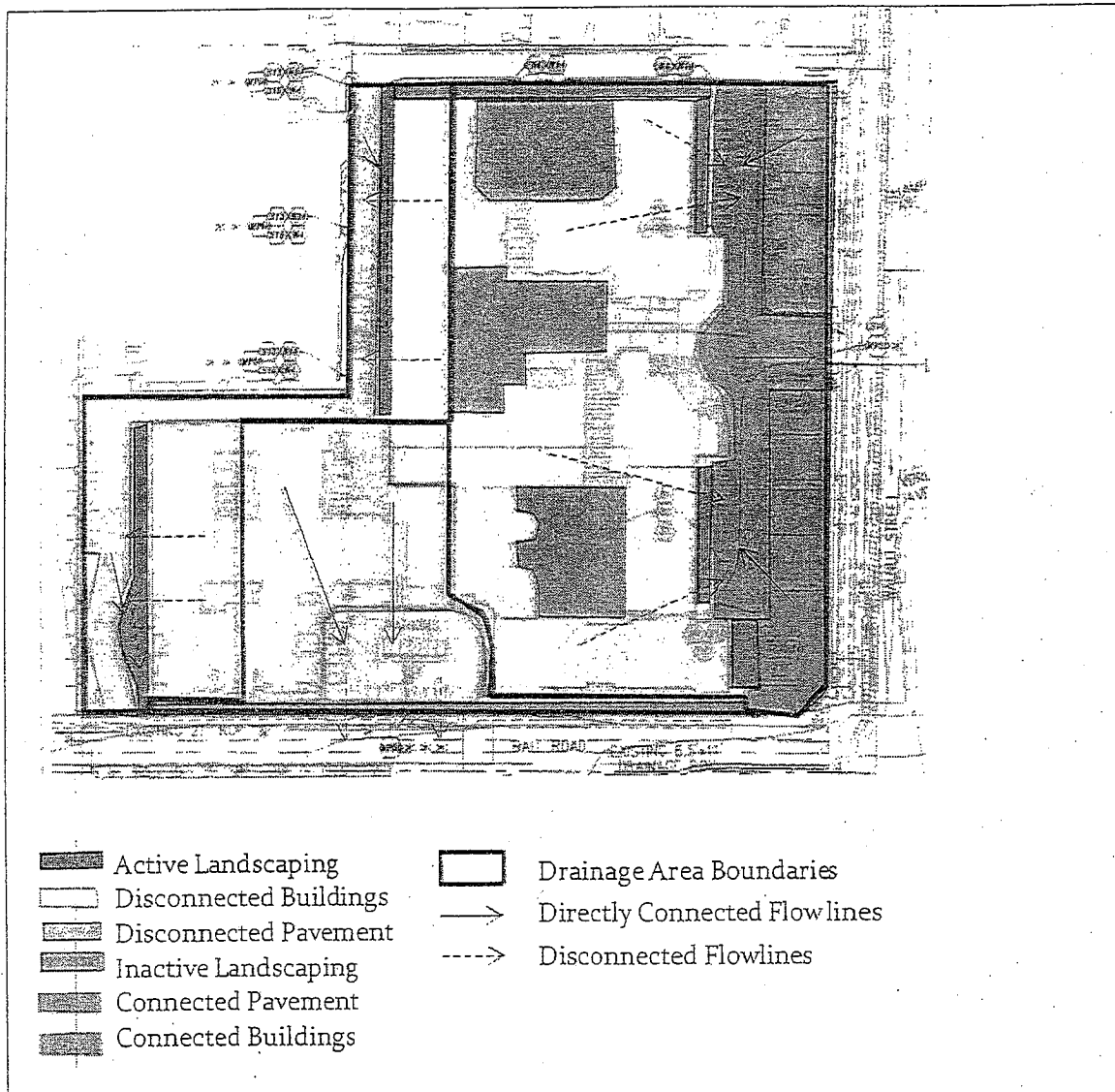


Figure 2: Disconnection scenario resulting in 18% EIA

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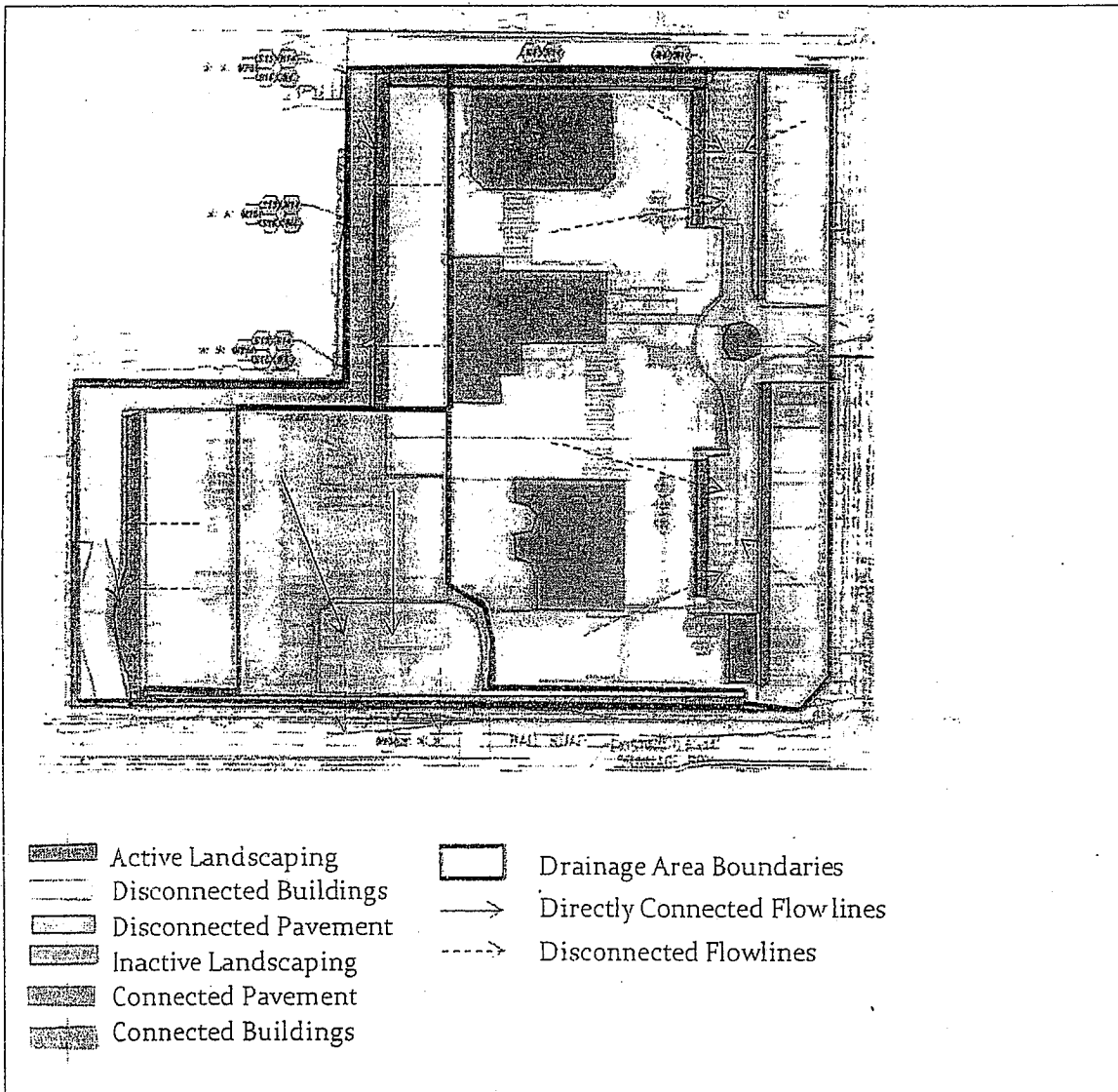


Figure 3: Disconnection scenario resulting in 0% EIA

Table 2 below summarizes the land cover of each disconnection scenario and the runoff coefficients assume for calculation of runoff volumes from each.

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**Table 2: Land Cover Distribution for Various Disconnection Scenarios**

Project Land Cover	Assumed RC	Project Scenarios (areas in acres)		
		76% EIA	18% EIA	0% EIA
<i>Disconnected</i>				
Parking, Sidewalks and Roads	0.9	0.30	1.13	1.70
Building	1.0	0.30	3.93	4.59
Inactive Landscape	0.1	1.10	0.71	0.71
Active Landscape	0.0	0.10	0.49	0.60
<i>Directly Connected</i>				
Parking, Sidewalks and Roads	0.9	1.44	0.63	0.00
Building	1.0	4.36	0.71	0.00
Total Project Area		7.60	7.60	7.60
% Impervious		84%	84%	83%
% EIA		76%	18%	0%

To estimate the approximate effectiveness of the disconnection scenarios in retaining stormwater, simple exploratory calculations were used for three levels of implementation:

- A. Baseline turf landscaping over all actively landscaped areas assumed to retain and infiltrate or evapotranspire one inch of water over its surface,
- B. Enhanced landscaping over half of the actively landscaped areas assumed to retain and infiltrate or evapotranspire six inches of water over its surface,
- C. Enhanced landscaping over all of the actively landscaped areas assumed to retain and infiltrate or evapotranspire six inches of water over its surface,

Runoff volumes were generated using the runoff coefficients and acreages shown in Table 2, and were reduced as a function of the type of disconnection implemented and the area of active landscaping in each scenario. Results are presented as the amount of runoff retained in a given storm event, expressed as watershed inches (Table 3).

**Table 3: Approximate Retention Depth for Various Disconnection Scenarios and Types of Active Landscaping Employed**

Disconnection Scenarios		Effective Retention Depth (Watershed Inches)		
		76% EIA	18% EIA	0% EIA
A	1" retention over all active landscape	0.01	0.06	0.08
B	6" retention over half of active landscape	0.04	0.19	0.24
C	6" retention over all active landscape	0.08	0.39	0.47

Reduction of effective impervious area to less than 5% of the project area appears to be feasible if the definition of EIA does not include a volumetric retention requirement to render an area ineffective. In order to achieve <5% EIA, additional active landscaping was created. It is

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important to note that this conclusion is based on limited available information of site constraints that may not have been evident from project documentation.

From Table 3, it is noted that the depth retained on the site due to LID measures was both a function of the reduction in EIA and the increase in depth retained in actively landscaped areas. It can be seen that an increase from 1 watershed-inch retained to 6 watershed-inches retained over active landscaping (moving down the columns in Table 3) had a more pronounced effect than reducing the EIA from a easily achieve value (18%) to a more difficult to achieve value (0%) (moving left to right in Table 3). Certainly this result is a function of the cases that were selected, but nonetheless illustrates that LID benefits can be achieved by both extensive implementation and more intensive design of active landscaping (i.e., greater retention depth) where opportunities exist. A fixed % EIA LID metric promotes only the former option.

**Retention Scenarios**

Storage volumes required to retain the delta water quality and delta 2-year events were calculated using methodology contained in the Orange County Drainage Area Management Plan (DAMP). The DAMP method is based on the Rational Method using a constant runoff coefficient. This method may not be the most appropriate method to use for larger storms (such as the 2-yr storm), but it was employed as a simple and easily-understood method. Assumptions and resulting volumes are provided in Table 4 below.

**Table 4: Differential Volume of Runoff in WQ and 2-year Storm Event**

Storm	Storm Depth (inches)	Imperviousness	Runoff Coefficient <sup>1</sup>	Runoff Depth (watershed inches)	ΔV (watershed inches)
WQ	0.70	0	0.15	0.11	0.45
	0.70	84	0.79	0.55	
2-year	2.05	0	0.15	0.31	1.31
	2.05	84	0.79	1.62	

<sup>1</sup> Table A-1 of OC DAMP, page 7-II-46

To help understand the nature of active landscaping or BMPs that would be required to retain the delta volumes, the following scenarios were explored:

- X. Distribution of required retention volume over all active landscaping under the 0% EIA scenario.
- Y. Assumed use of pervious pavement to mitigate up to 0.70 inches over all paved area with remaining volume retention spread over actively landscaped area in the 0% EIA scenario.

The required retention depth over all active landscaping was computed using simplified volumetric routing assumptions and is show in Table 5 for Scenarios X and Y. An infiltration rate representative of compacted B soils (0.2 inches per hour) was assumed to explore the range of drawdown times that could be expected for the required retention depths.

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**Table 5: Required Depth of Retention in Active Landscaping to Achieve Volumetric Retention Requirements and Range of Approximate Drawdown Times**

Disconnection Scenarios		Required Retention Depth in All Active Landscaping (inches)		Time to Drain at 0.2 inches per hour <sup>2</sup> (hours)
		Delta WQ (0.45 inches)	Delta 2-yr (1.31 inches)	
X	Retention over all Active Landscaping	5.7	16.6	28 – 83
Y	Retention of 0.70 inches over all pavement <sup>1</sup> , with remaining volume retained in active landscaping	3.7	14.6	18 – 73

<sup>1</sup> Based on assumption that all paved areas can be designed to be self-mitigating for entire WQ storm; however, pavement does not accept building runoff.

<sup>2</sup> 0.2 inches per hour is at the high end of typically assumed saturated hydraulic conductivity for compacted B soils under long-term operation. Actual infiltration rates must be based on site-specific testing which was not available for this site. The low end of the reported range is for the Delta WQ volume and the high end is for the Delta 2-yr volume.

The range of required retention depths over the active landscaping is not unreasonable, however, would require priority to be placed on converting all active landscaping to an LID BMP designed and maintained specifically as a retention facility. In the range of 14-17 inches of retention, as required to capture the delta 2-year volume, this would require a combination of fairly deep amended soils and significant surface storage. The drawdown time for such a depth is at or above the upper limit of what would typically be allowed for a surface storage facility to avoid vector concerns (72 hrs), which could be mitigated by the storage of some volume in soil pores but indicates that performance would be substantially reduced in sequential storm events. From this calculation, it is also apparent that feasibility is strongly dependent on site-specific infiltration rates.

The retention of the lesser delta volume (i.e., Delta WQ) appears to be more feasible, but is also dependent on the ability to make use of all active landscaping for intensive BMPs and the site-specific infiltration rates.

### **Conclusions**

The following conclusions can be drawn from this case study:

- In the case study considered, it was possible to achieve less than 5% EIA with no sizing metric.
- The lack of a sizing metric in the definition of EIA resulted in a wide range of possible effectiveness (measured as retained runoff volume).
- The same or better effectiveness in reducing runoff volume may be achieved through more intensive application of LID features where opportunities exist, compared to a scenario in which LID features are spread more extensively throughout the project site, but with less emphasis on volumetric retention. In other words, this case study showed that 6 inch retention over all the active landscape area with 76% EIA provided the same

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runoff volume retention as 1 inch retention over all the active landscape area with 0% EIA.

- An EIA criterion coupled with a volumetric retention metric is a much more difficult performance standard as it requires a focused effort to design and maintain active landscaping as retention BMPs for a large portion of the project area.
- The feasibility of retaining the delta runoff volume on site is highly dependent on the site-specific infiltration rate.
- Retention of the delta WQ storm volume appears to be more feasible than the delta 2-yr volume. To retain the delta 2-year volume would require a combination of fairly deep amended soils and significant surface storage. The drawdown time for such a depth is at or above the upper limit of what would typically be allowed for a surface storage facility to avoid vector concerns.



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## Case Study: 60 California

### *Project Description*

60 California Street is a proposed four-story, multi-use commercial/retail redevelopment project in the City of Ventura. The site occupies 0.14 acres between East Santa Clara and East Main Street on South California Street. While miscellaneous uses exist on site, nearly the entire lot is covered by the building roof, with only a negligible buffer around the edges. The site is bordered by restaurants and shops to the north and south. Parking does not appear to be provided onsite unless it is below grade. A four-story city parking lot is adjacent to the site and presumably provides parking for the site.

The surrounding area is highly urbanized and no vegetation exists directly on the site with the exception of two palm trees in planters on the sidewalk. These planters do not accept runoff from the site or the adjacent road. Key project characteristics are provided in Table 1 below. Under the proposed conditions, stormwater is conveyed from the roof in four downspouts that presumably tie directly to the off-site storm drain. These downspouts divide the site into four drainage areas. A site plan with proposed stormwater drainage system is shown in Figure 1 below.

**Table 1: Project Characteristics**

Characteristic	Value	Source
Area, ac	0.14	Project Site Plans, submitted to City of Ventura, Sep-Oct 2007
Imperviousness, %	>95%	Delineation of project land uses; primarily roof; minor planter boxes
Effective Impervious Area, %	100%	Project Site Plans, submitted to City of Ventura, Sep-Oct 2007
Soil Type/Description	Soils at the site are characterized as C soils	Ventura County Hydrology Manual (2006)
Approximate slope of site and surrounding land, ft/ft	Approximately 0.02	DesignARC Grading and Utility Plan (2007)
Water Quality Storm Depth, in	0.75	Volume-based criteria #3, p 57 of 115, in Draft Ventura Co Permit
2-yr Storm Depth, in	2.7	Ventura County Hydrology Manual, 2006. Adjusted from 50 yr depth per multipliers from 1993 manual

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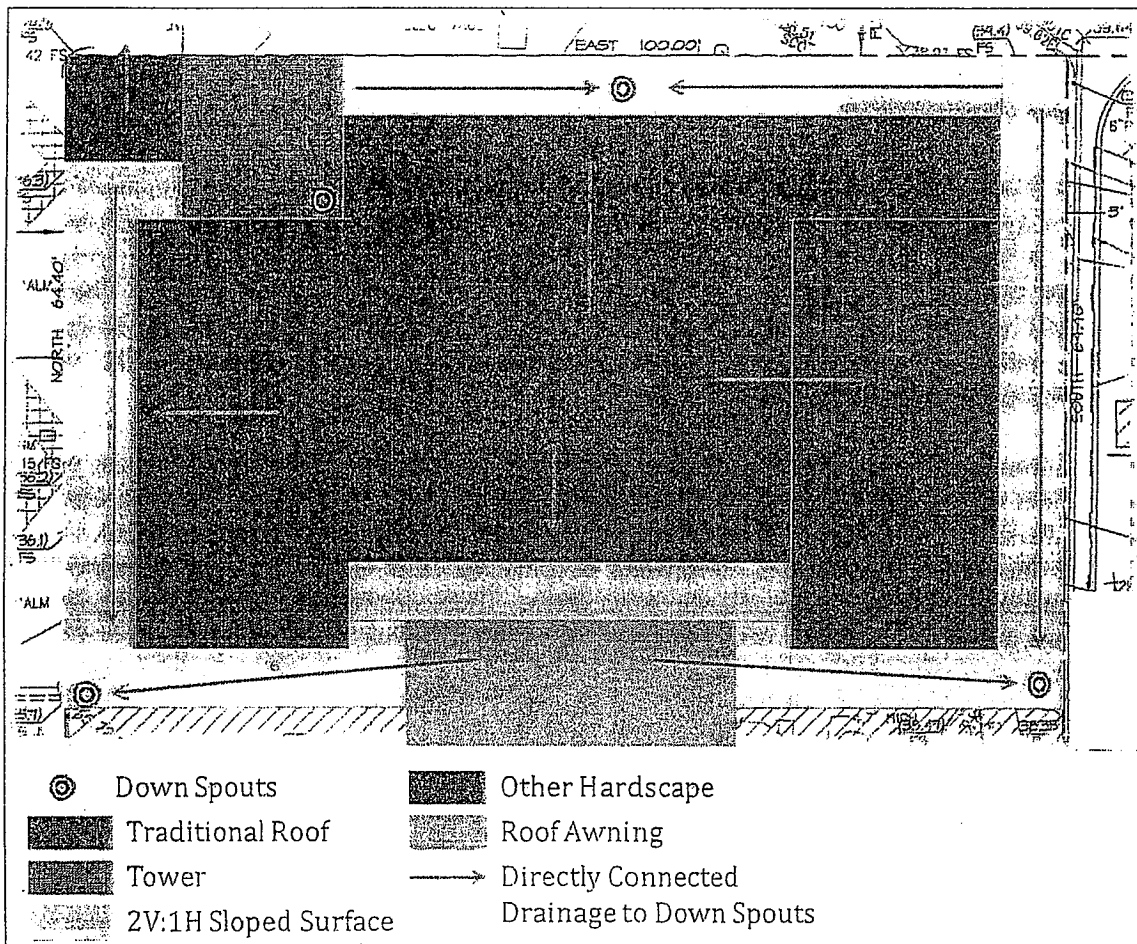


Figure 1: Site land cover and drainage areas

**Case Study Assumptions**

This case study was completed with the underlying philosophy that for the proposed LID requirements to be feasible they must not necessitate changes to the fundamental character of the project. The follow assumptions were made:

- 1) Site boundaries are fixed and LID requirements cannot be fulfilled on adjacent parcels of land.
- 2) Building and parking footprints are fixed in size.
- 3) Limited modifications to site design may be considered feasible if conditions 1 and 2 are met.
- 4) Pervious pavement and/or green roofs constitute disconnection of that area. but pervious pavement cannot be used in high-traffic areas and green roofs cannot be used on steeply sloped roofs.

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- 5) Proprietary BMPs do not constitute disconnection unless they incorporate substantial volume-reduction mechanisms.

### *Case Study Methodology*

This case study considered the feasibility and effectiveness of three design goals, as derived from the Ventura Countywide and Orange Countywide Draft MS4 permit requirements described in the main body of this white paper:

- 1) Reduction of effective impervious area<sup>26</sup> to less than 5%,
- 2) Retention<sup>27</sup> of the difference between pre-development and post-development runoff volume for the water quality storm event (i.e. the "delta" WQ volume), and
- 3) Retention of the difference between pre-development and post-development runoff volume for the 2-yr storm event (i.e. the "delta" 2-year volume).

The case study first identified the project land cover and proposed drainage patterns. It then identified opportunities for "disconnection" of impervious area through the use of green roofs and cisterns for reuse. The practicability of meeting the first goal (<5% EIA) was evaluated based on what could be achieved on the site in this manner without changing the fundamental character of the site. Because the nature of the project is that of a multi-story building built to the lot lines, there is no opportunity to create vegetated areas for infiltration.

The second part of the case study considered the infrastructure required to achieve the retention goals (#2 and #3). While the first goal, consistent with the draft Ventura Countywide Permit, does not specify a volume of runoff that must be retained as a result of disconnection, the draft Orange Countywide Permit requires that the difference in pre-development and post-development runoff for the 2-yr storm be retained as a result of disconnection. This represents Goal 3, while Goal 2 represents an intermediate level of control between #1 and #3 that has been incorporated into the draft County of Los Angeles Department of Public Works Low Impact Development Standards Manual.

The volume of cistern storage and effective retention depth of green roofs were computed and evaluated for their reasonableness and probable effectiveness.

### *Limitations*

Two important limitations are acknowledged:

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<sup>26</sup> As defined by the Ventura County Draft Permit, impervious surfaces may be rendered "ineffective" if the storm water runoff is: (1) drained into a vegetated cell, over a vegetated surface, or through a vegetated swale, having soil characteristics either as native material or amended medium using approved soil engineering techniques; (2) collected and stored for reuse such as irrigation, or other reuse purpose; or (3) discharged into an infiltration trench. The draft Ventura Permit does not include sizing criteria for these three options.

<sup>27</sup> Retention is defined as the capture and elimination of stormwater through percolation, evapotranspiration, or reuse.

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- This case study, as is the case with most investigations of feasibility, relied on subjective assumptions and interpretations which were based on professional judgment; and
- Computational methods used to evaluate effectiveness were simplified, as incorporation of complex methods reduces transparency while increasing the required level of effort.

Thus, the investigations contained herein are not promoted as defensible against all points of view, nor are they promoted as precise. Rather, they are intended to illustrate concepts in a way that does not intentionally introduce bias, while providing planning level results that are open to the scrutiny of the reader.

### *Case Study Results and Discussion*

#### **Effective Impervious Area**

Modifications to the baseline design configuration were identified in an attempt to reduce the impervious area to less than 5 percent. Due to the site's small size and highly urban setting, few options were available. Little to no space is available on the site at the ground level for retaining stormwater. The use of a green or vegetated roof was considered as a means of reducing the runoff from the primary impervious surface on the site: the roof of the building. Green roofs rely on highly porous media and moisture retention layers to store intercepted precipitation and to support vegetation that can reduce the volume of stormwater runoff via evapotranspiration. As proposed, the building's roof contains several features that limit the spatial applicability of a green roof (e.g., a tower, 2V:1H sloped perimeter). Thus, approximately 1,900 ft<sup>2</sup> of the total 6,200 ft<sup>2</sup> roof is unavailable to support vegetated cover.

Runoff from roof area that cannot be covered in green roof could be captured through the use of a cistern for reuse in flushing toilets and irrigating indoor plants in the building. Per the draft Ventura Countywide Permit requirements, the capture of runoff in cisterns constitutes disconnection of that impervious area. No minimum cistern volume is required per the draft permit.

Dry wells are also included as an acceptable means to disconnect impervious area in the draft permit, but were not considered to be feasible given the high density of development (dry wells are generally located away from building foundations) and the indication of poor soil infiltration rates (C soils) at the project site.

Based on this discussion, a reduction in EIA to less than 5% can be achieved, but only by means of a combination of green roof and cisterns for reuse of stormwater.

Figures 2 and 3 below illustrate disconnection scenarios. Table 2 below summarizes the land cover of each disconnection scenario.

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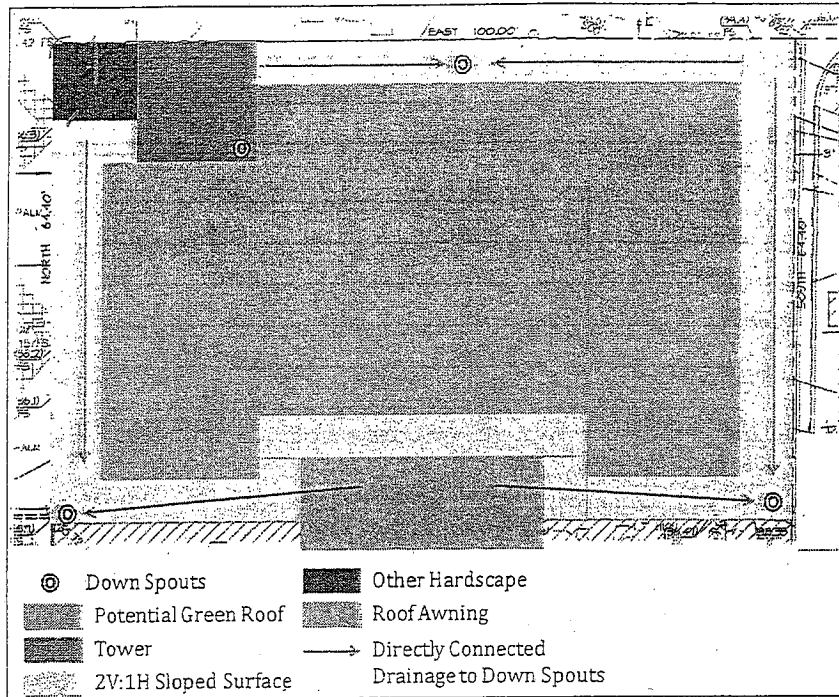


Figure 2: Disconnection scenario resulting in 31% EIA

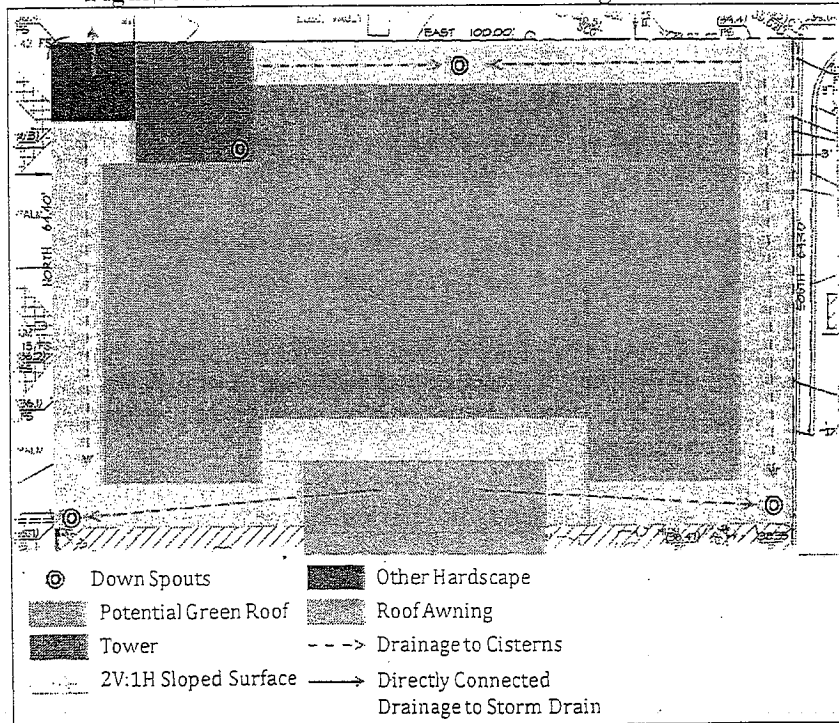


Figure 3: Disconnection scenario resulting in 3% EIA

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**Table 2: Land Cover Distribution for Various Disconnection Scenarios**

Project Land Cover	Project Scenarios (areas in-sf)		
	100% EIA	31% EIA	<5% EIA
Miscellaneous hardscape (directly connected) <sup>1</sup>	200	200	200
Building (directly connected)	6,200	1,900	0
Disconnected via green roof	0	4,300	4,300
Disconnected via cistern	0	0	1,900
Total Project Area	6,400	6,400	6,400
% EIA	100%	31%	3%

<sup>1</sup> Miscellaneous hardscape consists primarily of entryway areas that cannot feasibly be converted to vegetation.

Green roofs can be engineered to store a range of precipitation depths through the use of different design features. It is important to note that green roofs do not eliminate volume through infiltration; only through evapotranspiration. Regeneration of storage by means of ET is generally slower than by means of infiltration, indicating that antecedent conditions may be more important for performance of green roofs than for infiltration-based BMPs.

Similarly, cisterns may be designed in any volume, and also do not infiltrate water; rather water is held for reuse, the rate of which may be the limiting factor in how much water should be stored.

To estimate the approximate effectiveness of the disconnection scenarios in retaining stormwater, simple exploratory calculations were used for two arbitrary levels of implementation:

- A. 0.5" of retention over green roof and 1-1,000 gallon cistern,
- B. 2" of retention over green roof and 1-2,000 gallon cistern,

Runoff volumes were generated by assuming that all rainfall on rooftops would run off, and were reduced as a function of the type of disconnection implemented. Results are presented as the amount of runoff retained in a given storm event, expressed as watershed inches (Table 3), assuming dry antecedent conditions.

**Table 3: Approximate Retention Depth for Various Disconnection Scenarios**

Disconnection Scenarios		Effective Retention Depth (Watershed Inches)		
		100% EIA	31% EIA (no cistern)	3% EIA (Green roof and cistern)
A	0.5 in of retention over green roof and 1-500 gallon cistern	NA – No retention BMPs	0.15	0.27
B	2 in of retention over green roof and 1-2000 gallon cistern		0.58	1.08

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Reduction of effective impervious area to less than 5% of the project area appears to be feasible if the definition of EIA does not include a volumetric retention requirement to render an area ineffective. The effectiveness values shown in Table 3 are based on typical design parameters for green roofs and cisterns, which are BMPs that are generally beyond the typical level of BMP implementation in common practice at this time (although not unheard of). In order to achieve <5% EIA, rainwater collection and reuse or re-engineering of the building roof to eliminate areas of steep slope would be required. It is important to note that this conclusion is based on limited available information of site constraints that may not have been evident from project documentation.

Table 3 shows that the depth retained on the site due to LID BMPs was highly dependent on the design criteria selected for green roofs and cisterns. It was generally possible to achieve fairly high retention depths within typical ranges of design criteria for these BMPs.

**Retention Scenarios**

Storage volumes required to retain the delta water quality and delta 2-year events were calculated using methodology contained in the Orange County Drainage Area Management Plan (DAMP). The DAMP method is based on the Rational Method using a constant runoff coefficient. This method may not be the most appropriate method to use for larger storms (such as the 2-yr storm), but it was employed as a simple and easily-understood method. Assumptions and resulting volumes are provided in Table 4 below.

**Table 4: Differential volume of runoff in WQ and 2-year storm event**

Storm	Storm Depth (inches)	% Imperv	Runoff Coefficient <sup>1</sup>	Runoff Depth (watershed inches)	ΔV	
					(watershed inches)	(gallons)
WQ	0.75	0	0.15	0.11	0.64	2,550
	0.75	100	1.0	0.75		
2-year	2.7	0	0.15	0.31	2.39	9,530
	2.7	100	1.0	2.7		

<sup>1</sup> Table A-1 of OC DAMP, page 7-II-46; all rainfall on rooftops assumed to run off

To help understand the quantity of storage that would be required to retain the delta volumes, the following scenarios were explored:

- X. Green roof retaining 0.5 inches of water and remainder captured by cistern.
- Y. Green roof retaining 2 inches of water and remainder captured by cistern.

The required cistern volume is show in Table 5 for Scenarios X and Y.

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**Table 5: Required cistern storage volume to achieve volumetric retention requirements**

Disconnection Scenarios		Required Cistern Volume (gal)	
		Delta WQ (2.550 gal)	Delta 2-yr (9.530 gal)
X	Green roof retaining 0.5 in of water and remainder captured by cistern.	1,210	8,200
Y	Green roof retaining 2 in of water and remainder captured by cistern.	Cistern not required	4,170

It is noted that the range of required storage volumes is not unreasonable but would require that a viable and sufficient demand exists for the stored water and that use of stormwater as grey water within the buildings would be permissible. An exception is noted for Scenario Y, in which the volume of water stored by the green roof is sufficient to mitigate the delta of the water quality-sized storm and does not rely on storage and reuse.

It is important to note that suitability of both green roofs and storage and reuse systems for southern California is not well understood. Generally, during the rainiest times of the year in southern California, the potential evapotranspiration is the lowest, meaning that the ability to regenerate storage capacity between storms is low. During the summer, green roofs would likely need to be irrigated to sustain healthy vegetation and to reduce fire danger. Likewise, irrigation demand for stormwater stored in a cistern is generally highest over the long summer months when limited rainfall is likely to occur. This is not meant to say that the solutions would not work, but that they are possibly not the most climate-appropriate technologies. In addition, their use may conflict with existing building and health codes.

### *Conclusions*

The following conclusions can be drawn from this case study:

- In the case study considered, it was not exceedingly difficult to achieve less than 5% EIA, but innovative LID BMPs such as green roofs and cisterns were necessitated by site constraints.



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## Case Study: Kmart Site

### *Project Description*

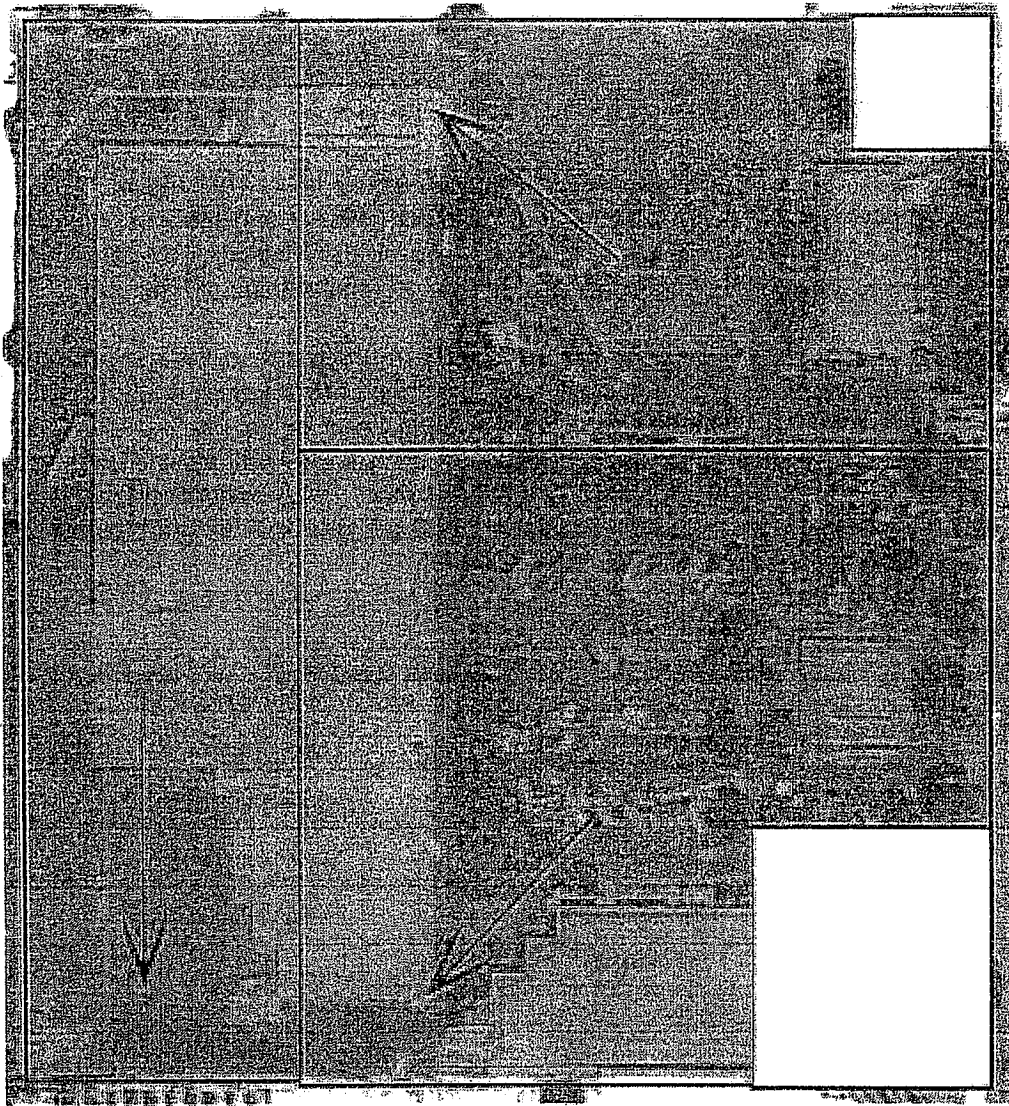
This case study site is of a former Kmart center located within the City of Ventura. The 12.4 acre site is in a highly urbanized area along South Victoria Avenue and includes a department store, a grocery store, and two restaurants. Currently, the site is covered by building roof and parking lot, with some inactive vegetation (curbed off trees) within the main parking lot.

Key project characteristics are provided in Table 1 below. In the existing condition, stormwater is conveyed from the northeast corner of the site along two main ribbon drains and discharges at the southwest corner (based on limited field data, Google Earth elevations, and previous site visits). A site plan with existing stormwater drainage system is shown in Figure 1 below. It is assumed that the general use of the site would not change with redevelopment, but that redevelopment activities would exceed thresholds triggering the draft permit requirements associated with LID, water quality, and hydromodification.

**Table 1: Kmart Site Project Characteristics**

Characteristic	Value	Source
Area, ac	12.4	Photomapper, 2005
Pre-development Impervious area, percent	0 percent	Assumed based on definition of pre-development in Draft Permit
Current Imperviousness coverage, percent	93 percent	Aerial Photography
Current Effective Impervious Area, percent	93 percent	Aerial Photography
Approximate slope of site and surrounding land, ft/ft	Approximately 0.02	Aerial Photography
Soil Type/Description	Soils characterized as NRCS Category B or Ventura County soil Type 3	Ventura County Hydrology Manual (2006)
Water Quality Storm Depth, in	0.75	Volume-based criteria #3, p 57 of 115, in Draft Ventura Co Permit
2-yr Storm Depth, in	3.1	Ventura County Hydrology Manual, 2006

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






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|  Active Landscaping     |  Drainage Area Boundaries      |
|  Disconnected Buildings |  Directly Connected Flow Lines |
|  Disconnected Pavement  |  Disconnected Flowlines        |
|  Connected Pavement     |   |
|  Connected Buildings    |   |

Figure 1: Kmart Site - Land Cover and Drainage Pattern  
(Background image from Google Earth™ 2008)

*Case Study Assumptions*

The draft Ventura County permit does not include volumetric criteria for the disconnection of impervious area nor does it define a design storm type. Because the intent of this case study was

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to evaluate the cost of complying with the draft Ventura permit requirement, and because the type of facilities requiring compliance with the draft Ventura permit would operate through capture and retention of runoff volume, it was necessary to assume a range of volumetric criteria to render impervious area "ineffective."

To facilitate this study, many possible interpretations of the draft permit requirements were considered. In one high volume interpretation, to achieve 5% EIA could mean infiltrating 95% of the volume of runoff from the site. This would be greater than what is required for hydromodification control, and would likely preclude the need for separate treatment control BMPs. This interpretation was considered possible but beyond the probable intent of the draft permit. Thus, the following two interpretations were considered for analysis:

- High volume interpretation - interim hydromodification control requires detaining the difference between pre-development<sup>28</sup> and post-development runoff for a 3.1-inch storm (2-year, 24-hour rainfall event). On top of this, to achieve 5% EIA for the site, a vegetated filter strip was added.
- Low volume interpretation - Detain the difference between pre-development and post-development runoff for a 0.75-inch storm (approximate 85<sup>th</sup> percentile (SUSMP) rainfall event). A vegetated filter strip was added to achieve 10% EIA for the site (LA County LID Manual goal).

It is recognized that the draft stormwater permit hydrologic controls are related to other drainage controls set by county or cities for the rarer, but larger runoff and flood events. For this case study, drainage/flood control and water quality BMPs were assumed to be the same for both scenarios and no cost was assigned to them. This assumption means that the cost developed for the low volume retention scenario would need to be increased to account for appropriately sized treatment BMPs, and potentially hydromodification controls, whereas the high volume retention scenario would have already fulfilled treatment requirements and potential hydromodification requirements.

The focus of this analysis was on the LID criteria and the costs associated with the range of possible interpretations in the two scenarios above.

### *Case Study Methodology*

The case study included estimating required detention volume, selecting and sizing LID BMPs, and estimating the order of magnitude lifecycle costs. These costs are also compared to a range of potential site redevelopment costs to provide prospective on the total cost of redevelopment. The BMP sizing and cost results are developed to provide a practical example to evaluate the draft permit requirements.

Estimates of runoff volume in pre-development and post-development conditions were developed using the NRCS Curve Number Method for both design storm scenarios. The differences or "delta" of these volumes are shown in Table 2.

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<sup>28</sup> Consistent with Draft Ventura County permit language, "pre-development conditions" were assumed to refer to the site condition prior to any development.

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**Table 2: Runoff Estimates from Kmart Site**

Permit Interpretation	Design Storm (inches per 24-hour)	Pre-Development Runoff (Ac-Ft)	Post-development Runoff (Ac-Ft)	Delta Volume: BMP Criteria (Ac-Ft)
High Volume	3.1	0.41	2.38	1.97
Low Volume	0.75	0.00	0.32	0.32

**Notes:**

Pre-development = native vegetation and soils that existed prior to the first development  
Ac-Ft = Acre-feet

LID BMPs were selected to treat the “delta” volume in both design storm scenarios assuming the LID BMP would control the draft permit hydromodification volume in a treatment train approach: vegetated filter strips followed by aggregate-filled infiltration trenches.

Filter strips operate by collecting runoff into shallow sheet flow through dense vegetation, slowing the velocity of runoff and promoting filtering, sediment deposition, and some volume reduction due to infiltration. The CASQA BMP Handbook (2003) recommends that filter strips be sized at a 1:1 ratio with contributing impervious area in order to provide full water quality treatment; however, because filter strips were assumed to be followed by downstream infiltration trenches, they were only intended to provide pre-treatment and this requirement was reduced. It is clear that providing an area of filter strip equivalent to the tributary pervious area would constitute a very large impact to other uses on this case study site. For the low volume interpretation, it was assumed that a 1-foot wide filter strip would be provided prior to water entering the ribbon drains. This is quite small for filter strips by typical standards, but is not outside of the potential interpretation of LID requirements contained in the draft permit. For the high volume interpretation of LID requirements, it was assumed that filter strips would be sized to 5 percent of the tributary impervious area, yielding filter strips approximately 25 feet wide, collecting runoff prior to flowing into the infiltration trenches. This width is more consistent with typical guidance for water quality treatment.

Infiltration trenches are designed to capture runoff, filling during a storm event and emptying slowly via infiltration following the event. It was assumed for this case study that infiltration trenches would be designed to drain in 72 hours into Ventura County Soil Type 3 (NRCS Category C) soils with a Ventura County standard infiltration rate of 0.5 inches per hour. This infiltration rate is the minimum for infiltration trenches. Assuming an aggregate porosity of 0.35, a trench depth of 8 feet, for the high volume interpretation, two basins were sized, one 600 feet long and 42 feet wide, the other 290 feet long and 18.5 feet wide. The low volume interpretation required an 8 foot deep basin 900 feet long and 5.5 feet wide.

The project could also comply with LID criteria by using a variety of BMPs such as tree boxes, bioretention, pervious pavement, and other LID BMPs, however, the typical treatment train described above was assumed for its simplicity and based on its suitability for a constrained commercial site.

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### Costs

Anticipated capital and operation/maintenance costs were developed using information from the California Stormwater Quality Association data (CASQA, 2003) along with supplemental information from the Environmental Protection Agency data (EPA, 2007) for infiltration trenches and vegetated filter strips.

Capital cost estimates for vegetated filter strips included the removal of impervious surface at \$0.30 per square foot and revegetation at about \$0.70 per square foot for a total of \$1 per square foot. Operation and maintenance costs for the vegetated filter strips were assumed to be \$350 per acre per year. Capital costs estimates for infiltration trenches were developed by assuming that the rock matrix would have a porosity of 35 percent and cost \$5 per cubic foot of volume. Operation and maintenance costs for the infiltration trench option were assumed to be 10 percent of construction costs per year. These simple cost assumptions for the selected BMPs could be further developed, but were used herein to show the magnitude of potential costs. It is important to note that impacts to usable land area resulting from LID implementation were not factored into this analysis.

Plans to redevelop the site could range from simply remodeling the interior of the Kmart building to demolishing the Kmart building and constructing a new shopping mall or business park. The footprint of the Kmart building is approximately 130,000 ft<sup>2</sup>. Order-of-magnitude costs for the redevelopment plans can range from about \$50/ft<sup>2</sup> for remodeling to \$250/ft<sup>2</sup> for new commercial construction, which result in a total cost estimate for this site of \$6 million to \$32 million.

### Limitations

Two major limitations are acknowledged:

- This case study analysis was based on professional judgment and limited field data;
- Simplified BMP selection and computational methods were used for this order-of-magnitude cost evaluation of the scenarios. Incorporation of complex analytical methods would reduce transparency while increasing the required level of effort.

Thus, the investigations contained herein are not promoted as being an ideal case study that evaluates all the issues of the draft permit. Rather, they are intended to illustrate concepts in a way that does not intentionally introduce bias, while providing planning level results and order-of-magnitude cost estimates that are open to the scrutiny of the reader.

### Case Study Results and Discussion

The two scenarios produced vastly different cost estimates.

For the high volume interpretation of the draft permit language, 1.9 watershed inches or 85,800 cubic feet (1.97 Ac-Ft) of water would need to be infiltrated. The LID BMPs for this scenario

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used 10 percent of the site for LID BMPs included filter strips covering approximately 5 percent of the site, and infiltration trenches covering approximately 5 percent of the site. (See Figure 2). The capital and O&M costs for this interpretation of the permit requirements are provided in Table 3.

Under the low volume interpretation of LID requirements, the delta (or difference) in volume from the pre-development condition to the proposed condition would need to be infiltrated making up 0.3 watershed inches or 13,900 cubic feet (0.32 Ac-Ft). LID BMPs for this scenario would include an approximately one-foot wide vegetated filter strip placed along the drainage collection features of the facility and infiltration trenches covering approximately 1.0 percent of the project site (Figure 3). The capital and O&M costs associated with this scenario are provided in Table 3.

The cost results of the case studies presented in Table 3 are approximate and should be considered as an order-of-magnitude, relative comparison based on engineering experience and limited field data.

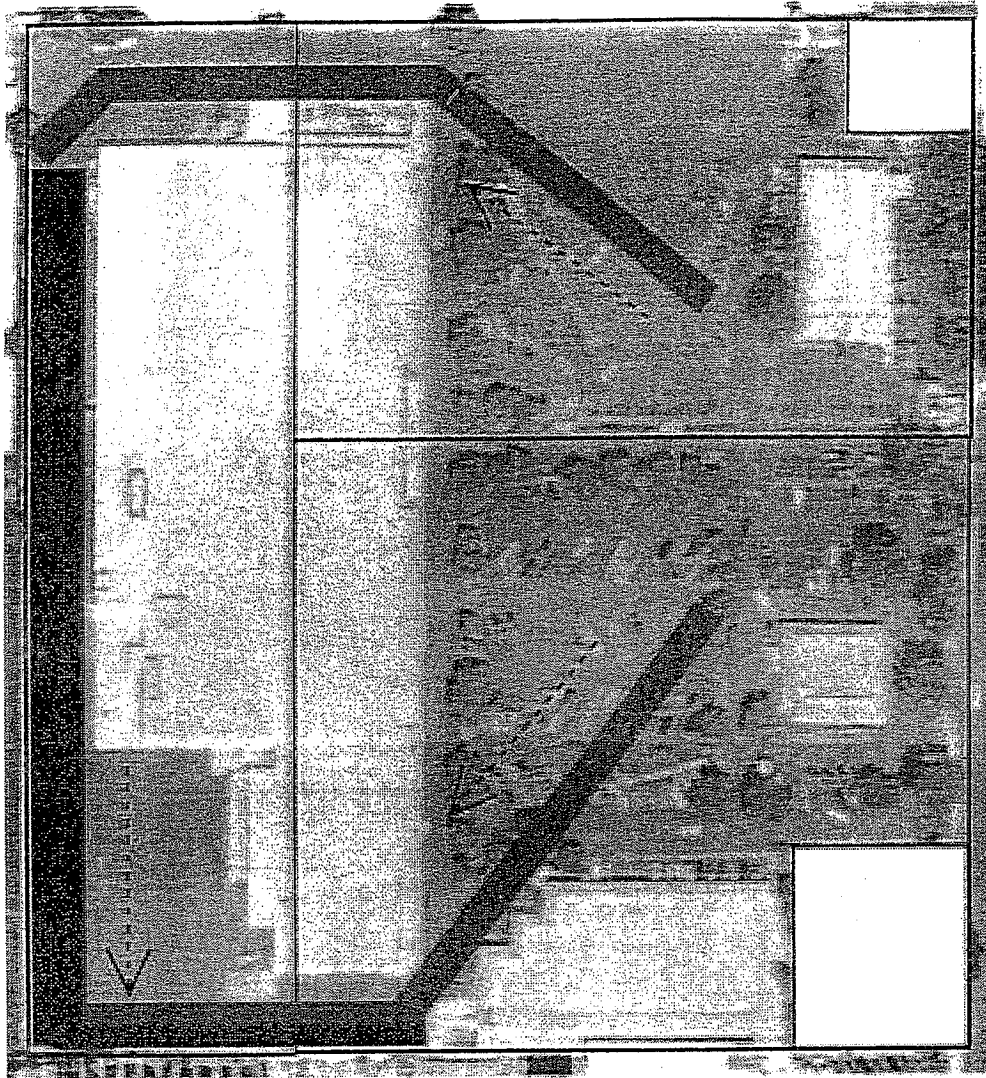
**Table 3: Present Worth Cost Comparison of Kmart Case Study**

Case Study	Proposed Permit Costs <sup>1</sup>	% of Total Redevelopment Cost <sup>2</sup>
High volume interpretation (2-year storm)	\$1,290,000	4 – 22%
Low volume interpretation (0.75-inch storm)	\$208,000	1 – 3%

<sup>1</sup> LID BMP Costs are developed as 20-year present worth (lifecycle) costs using a 4 percent interest rate.

<sup>2</sup> Assuming other present worth costs of redevelopment range from \$6 million to \$32 million

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







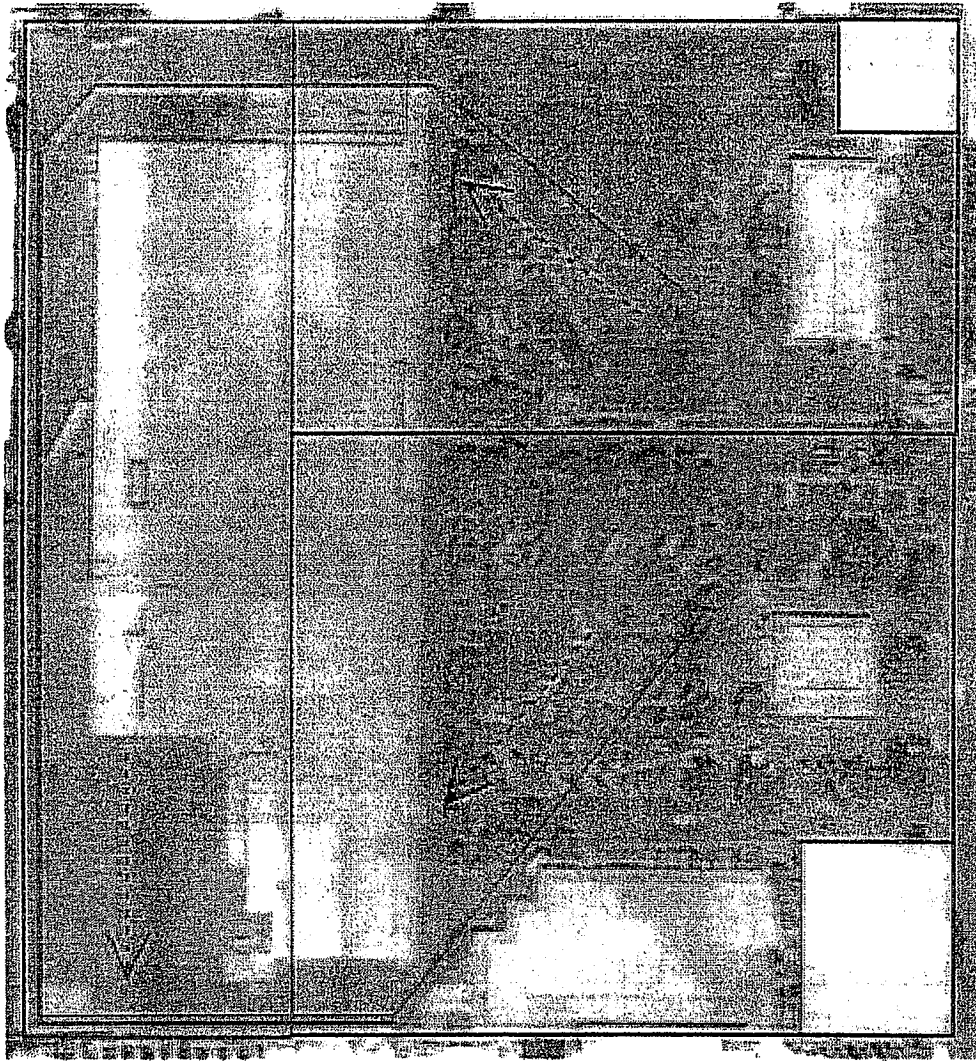
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|---|------------------------|---|-------------------------------|
|  | Active Landscaping     |  | Drainage Area Boundaries      |
|  | Disconnected Buildings |  | Directly Connected Flow Lines |
|  | Disconnected Pavement  |  | Disconnected Flowlines        |
|  | Connected Pavement     |   |                               |
|  | Connected Buildings    |   |                               |
|  | Infiltration Trench    |   |                               |










Figure 2: Illustration of LID BMPs to meet the high volume interpretation of draft permit requirements  
(Background image from Google Earth™ 2008)

From Figure 2, it can be seen that substantial impacts to the site may result from the implementation of LID BMPs if the high volume interpretation is used.



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- |   |                        |   |                               |
|---|------------------------|---|-------------------------------|
|  | Active Landscaping     |  | Drainage Area Boundaries      |
|  | Disconnected Buildings |  | Directly Connected Flow Lines |
|  | Disconnected Pavement  |  | Disconnected Flowlines        |
|  | Connected Pavement     |   |                               |
|  | Connected Buildings    |   |                               |
|  | Infiltration Trench    |   |                               |

**Figure 3: Illustration of LID BMPs to meet the low volume interpretation of draft permit requirements**

*(Background image from Google Earth™ 2008)*

From Figure 3. it can be seen that much less impact results from implementing LID BMPs commensurate with the low volume interpretation of the draft permit requirements.



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*Conclusions*

It is clear from the cost estimates in Table 3, that the proposed permit will significantly increase the drainage costs of urban redevelopment projects. These costs will vary widely, from approximately \$0.2 million to \$1.3 million in this case, based on interpretation of draft permit requirements.

The LID BMP costs of the high volume interpretation would challenge the feasibility of the total redevelopment, being as much as 22% of the total cost. The low volume interpretation can also be significant, being as much as 3% of the total cost.

It is also clear from Figure 2 and 3 that the ability to implement LID BMPs on the site without substantially reducing the developable area is dependent on the volumetric criterion that is selected. In the high volume scenario, the amount of area (approximately 10 percent of the site) is required for LID BMPs, while in the low volume scenario the area requirements are much less (approximately 1 percent of the site).

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**ATTACHMENT B - Example LID and Hydromodification  
Metrics**

ATTACHMENT B  
Example LID and Hydromodification Metrics

***Stormwater Management Manual for Western Washington***

The Stormwater Management Manual for Western Washington establishes minimum requirements for new development and redevelopment projects of all sizes and provides guidance concerning how to prepare and implement stormwater site plans. The Department of Ecology updated the 2001 Stormwater Management Manual for Western Washington in 2005 to correct errors, clarify statements, update design criteria and procedures, and apply recent research. The Manual is intended to provide project proponents, regulatory agencies, and others with technically sound stormwater management practices which are presumed to protect water quality and instream habitat and to meet the stated environmental objectives of the applicable regulations. The following minimum requirements establish LID and hydromodification control performance standards:

Minimum Requirement #5: On-site Stormwater Management. Projects shall employ On-site Stormwater Management BMPs to infiltrate, disperse, and retain stormwater runoff onsite to the maximum extent feasible without causing flooding or erosion impacts. Roof Downspout Control BMPs, functionally equivalent to those described in Chapter 3 of Volume III, and Dispersion and Soil Quality BMPs, functionally equivalent to those in Chapter 5 of Volume V, shall be required to reduce the hydrologic disruption of developed sites.

The objective of this requirement is to use inexpensive LID practices on individual properties to reduce the amount of disruption of the natural hydrologic characteristics of the site. "Flooding and erosion impacts" include impacts such as flooding of septic systems, crawl spaces, living areas, outbuildings, etc.; increased ice or algal growth on sidewalks and roadways; earth movement/settlement, increased landslide potential; erosion, and other potential damage. Based upon gross level applications of continuous runoff modeling and assumptions concerning minimum flows needed to maintain beneficial uses, watersheds must retain the majority of their natural vegetation cover and soils, and development projects must meet the Flow Control Minimum Requirement (see Minimum Requirement #7 summarized below), in order to avoid significant natural resource degradation in lowland streams. The Roof Downspout Control BMPs and the Dispersion and Soil Quality BMPs are insufficient to prevent significant hydrologic disruptions and impacts to streams and their natural resources. Therefore, local governments should look for opportunities to encourage and require additional LID BMPs through updates to their site development standards, critical areas ordinances, and land use plans.

Minimum Requirement #7: Flow Control. Projects must provide flow control to reduce the impacts of stormwater runoff from impervious surfaces and land cover conversions. This requirement applies to projects that discharge stormwater directly, or indirectly through a conveyance system, into a river or stream, except for projects that discharge to a large river (Flow Control-Exempt Receiving Waters named in an appendix) in accordance with the following restrictions:

- Direct discharge to the exempt receiving water does not result in the diversion of drainage from any perennial stream classified as Types 1, 2, 3, or 4 in the State of Washington Interim Water Typing System, or Types "S", "F", or "Np" in the Permanent Water Typing System, or from any category I, II, or III wetland; and

- Flow splitting devices or drainage BMPs are applied to route natural runoff volumes from the project site to any downstream Type 5 stream or category IV wetland:
  - Design of flow splitting devices or drainage BMPs will be based on continuous hydrologic modeling analysis. The design will assure that flows delivered to Type 5 stream reaches will approximate, but in no case exceed, durations ranging from 50% of the 2-year to the 50-year peak flow.
  - Flow splitting devices or drainage BMP's that deliver flow to category IV wetlands will also be designed using continuous hydrologic modeling to preserve pre-project wetland hydrologic conditions unless specifically waived or exempted by regulatory agencies with permitting jurisdiction; and
- The project site must be drained by a conveyance system that is comprised entirely of manmade conveyance elements (e.g., pipes, ditches, outfall protection, etc.) and extends to the ordinary high water line of the exempt receiving water; and
- The conveyance system between the project site and the exempt receiving water shall have sufficient hydraulic capacity to convey discharges from future build-out conditions (under current zoning) of the site, and the existing condition from non-project areas from which runoff is or will be collected; and
- Any erodible elements of the manmade conveyance system must be adequately stabilized to prevent erosion under the conditions noted above.

The following require construction of flow control facilities and/or land use management BMPs that will achieve the standard requirement for western Washington:

- Projects in which the total of effective impervious surfaces is 10,000 square feet or more in a threshold discharge area, or
- Projects that convert  $\frac{3}{4}$  acres or more of native vegetation to lawn or landscape, or convert 2.5 acres or more of native vegetation to pasture in a threshold discharge area, and from which there is a surface discharge in a natural or man-made conveyance system from the site, or
- Projects that through a combination of effective impervious surfaces and converted pervious surfaces cause a 0.1 cubic feet per second increase in the 100-year flow frequency from a threshold discharge area as estimated using the Western Washington Hydrology Model or other approved model.

That portion of any development project in which the above thresholds are not exceeded in a threshold discharge area shall apply Onsite Stormwater Management BMPs in accordance with Minimum Requirement #5.

### *State Water Board Construction General Permit*

The State Water Resource Control Board's most recent draft of the Construction General Permit (CGP), released in March 2008, contains new development and redevelopment stormwater performance standards for regulated<sup>29</sup> construction projects located outside of a Phase I or Phase II jurisdiction that address water quality and hydromodification control.<sup>30</sup>

The CGP's performance standard related to water quality protection requires regulated projects to replicate the pre-project runoff volume for the 85<sup>th</sup> percentile storm event (or the smallest storm event that generates runoff, whichever is larger). The CGP emphasizes runoff reduction through onsite storm water reuse, interception, evapotranspiration, and infiltration through non-structural controls and conservation design measures. Dischargers are given the option of using an excel spreadsheet (provided in an appendix) to calculate the required runoff volume or a watershed process-based, continuous simulation model such as the EPA's Storm Water Management Model (SWMM) or Hydrologic Simulation Program Fortran (HSPF).

The CGP's performance standard related to hydromodification control requires regulated projects to maintain predevelopment drainage densities and times of concentration in order to protect channels and encourages projects to implement setbacks to reduce channel slope and velocity changes that can lead to aquatic habitat degradation. The CGP also requires regulated projects to predict post-construction average annual soil loss using the RUSLE. Rather than prescribe a specific one-size-fits all modeling method in the CGP, the State Water Board staff intend to develop a stream power and channel evolution model-based framework to assess channels and to develop a hierarchy of suitable analysis methods and management strategies.

### *West Virginia Draft Phase II Permit*

The draft West Virginia Phase II permit incorporates watershed protection elements and site and neighborhood design elements. The purpose of watershed protection elements is to manage the impacts of stormwater on receiving waters that occur because of regional or watershed-scale management decisions. The primary purpose of site and neighborhood design elements is to manage the impacts of stormwater on receiving waters that occur because of site and neighborhood design management decisions. The technical principles of these management practices have many complementary similarities, and must be implemented in tandem.

**Watershed Protection Elements.** The watershed protection elements must be incorporated into the subdivision ordinance or an equivalent document and into all relevant policy documents as they come up for regular review. Planning documents include comprehensive or master plans,

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<sup>29</sup> Construction activity subject to the General Permit includes any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance if more than one acre is disturbed, is part of a larger plan, if the activity is part of more activities in a municipality's Capital Improvement Project Plan.

<sup>30</sup> Fact Sheet for Water Quality Order 2008-XX-DWQ State Water Resources Control Board (State Water Board) National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit).

subdivision ordinances, general land use plans, zoning codes, transportation master plans, specific area plans, or unified development ordinances. The permit does not stipulate specific baselines or standards for these elements in order that the permittees may develop criteria that meet the characteristics of their watershed(s).

The permittees must develop quantifiable objectives, with a time frame for achieving them, for the following eight watershed elements:

- (1) Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each watershed, by minimizing the creation, extension and widening of parking lots, roads, and associated development.
- (2) Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- (3) Implement management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- (4) Prevent disturbances of natural water bodies and natural drainage systems caused by development, including roads, highways, and bridges.
- (5) Avoid development in areas that are particularly susceptible to erosion and sediment loss.
- (6) Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- (7) Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- (8) Implement water conservation policies that will reduce both stormwater and non- stormwater discharges via storm sewer systems.

Site and Neighborhood Design. The permittees must develop a program to protect water resources by requiring all new and redevelopment projects to control stormwater discharge rates, volumes, velocities, durations and temperatures. The permittee must implement and enforce via ordinance and/or other enforceable mechanism(s) the following requirements for new and redevelopment:

1. Site design standards for all new and redevelopment that require, in combination or alone, management measures that infiltrate, evapotranspirate, and reuse of, at a minimum, the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation. This first one inch of rainfall must be 100% managed with no discharge to surface waters. An Underground Injection Control permit may be required when certain conditions are met.
2. The following additional water quality requirements, as applicable:
  - a) A project with reasonable potential for pollutant loading(s) must provide water quality treatment for pollutants of concern (e.g., petroleum hydrocarbons at a vehicle fueling facility) before infiltration.

- b) A project that cannot implement adequate preventive or treatment measures to ensure compliance with groundwater and/or surface water quality standards, must properly convey stormwater to a NPDES-permitted wastewater treatment facility or via a licensed waste hauler to a permitted treatment and disposal facility.
  - c) A project that discharges or proposes to discharge to any surface water or ground water that is used as a source of drinking water must comply with all applicable source water protection policies and plans.
3. When considered at the watershed scale, certain types of development can either reduce existing impervious surfaces, or at least create less 'accessory' impervious. Incentive standards may be applied to these types of projects. A reduction of 0.1 inches from the one inch infiltration/evapotranspiration/reuse standard may be applied to any of the following types of development. Reductions are additive such that a maximum reduction of 0.5 inch is possible for a project that meets all five criteria.
- a) Redevelopment
  - b) Brownfield redevelopment
  - c) High density (>7 units per acre)
  - d) Vertical Density, (Floor to Area Ratio (FAR) of 2 or >1.8 units per acre)
  - e) Mixed use and Transit Oriented Development (within ½ mile of transit)
4. For projects that cannot meet 100% of the infiltration/evapotranspiration/reuse requirement on-site, two alternatives are available: off-site mitigation and payment in lieu. The permittee must develop and fairly apply criteria for determining the circumstances under which these alternatives will be available. A determination that standards cannot be met on site may not be based solely on the difficulty or cost of implementing measures, but must include multiple criteria that would rule out an adequate combination of infiltration, evapotranspiration and reuse such as: too small a lot outside of the building footprint to create the necessary infiltrative capacity even with amended soils; a site use that is inconsistent with capture and reuse of stormwater; too much shade or other physical conditions that preclude adequate use of plants.

These alternatives are only available, in combination or alone, for up to 0.4 inches of the original obligation at a 1:1.5 ratio, i.e., mitigation or payment in lieu must be for 1.5 times the amount of stormwater not managed on site. For either of these options to be available, the permittee must create an inventory of appropriate mitigation projects, and develop appropriate institutional standards and management systems to value, evaluate and track transactions.

*Off-site mitigation.* Infiltration/evapotranspiration/reuse measures may be implemented at another location in the same sewershed/watershed as the original project, approved by the permittee. The permittee shall identify priority areas within the sewershed/watershed in which mitigation projects can be completed. Mitigation must be for retrofit or redevelopment projects, and cannot be applied to new development.

*Payment in lieu.* Payment in lieu may be made to the permittee, who will apply the funds to a public stormwater project.

- 5. When public streets or parking lots are repaired, modified or reconstructed opportunities to improve stormwater management using infiltration and evapotranspiration measures shall be



included in the design work. During the next permit term formal design standards for streets and parking lots will be required per the street and parking design assessment undertaken this permit term.

### ***Draft Etowah Aquatic Habitat Conservation Plan***

The draft Habitat Conservation Plan (HCP) for the issuance of an Endangered Species Act Section 10(a)(1)(B) permit for Incidental Take in the Etowah watershed was prepared by a group of jurisdictions to mitigate take of the amber darter (*Percina antesella*), Etowah darter (*Etheostoma etowahae*) and Cherokee darter (*Etheostoma scotti*) and to assure their survival and recovery.<sup>31</sup> The Etowah River is a major headwater tributary of the Coosa River system in northern Georgia. The basin is exceptional for its aquatic biodiversity, with 76 extant native fish species, including three species listed under the Endangered Species Act (ESA) and six others that are considered imperiled but not currently listed. Five Federally listed mussel species were once found in the Etowah, though all but one are now considered extirpated. A species of brachycentrid caddisfly also is considered imperiled because it is believed to exist only in the Etowah and Hiawassee Rivers.

The Etowah Aquatic HCP Stormwater Management Policy was developed by a technical committee of professionals and local government staff from the Etowah watershed through several meetings from 2004 to 2006. It was the intent of the HCP Steering Committee that the Stormwater Management Policy be adopted by all jurisdictions participating in the HCP prior to receiving an Incidental Take Permit from US Fish and Wildlife Service and that, once implemented, the policy would help minimize and mitigate the take of imperiled aquatic species in the Etowah Watershed.

The stormwater management policy of the Etowah Aquatic HCP is centered around a stormwater ordinance adapted from the Metropolitan North Georgia Water Planning District ("Metro District") ordinance. The two ordinances are identical in many important respects so that jurisdictions within the Metro District can meet both requirements in a single set of regulations. Both ordinances include performance standards for water quality protection, stream channel protection, and flood protection. In addition, the Etowah Aquatic HCP stormwater ordinance includes a performance standard that limits the volume of runoff in areas most critical to the survival of fish species covered under the Etowah Aquatic HCP. This "Runoff Limit" standard is critical to protecting imperiled species of the Etowah.

The areas where the Runoff Limits apply are known as Priority Area 1 and Priority Area 2. Priority Area 1 is home to the most sensitive species protected by the HCP and so has the most restrictive standard. Priority Area 2 supports species that are less sensitive and has a less restrictive standard. Parts of the Upper Etowah that do not currently provide essential habitat to any imperiled fish are classified as Priority Area 3 and are not subject to the Runoff Limits. The Runoff Limit for a site in a Priority 1 area is equal to that of an undeveloped, forested site for the two-year design storm. That is, the volume of runoff for the site must not exceed the volume of

<sup>31</sup> Draft Etowah Aquatic Habitat Conservation Plan, December 14, 2007.  
[http://www.etowahhpc.org/background/documents/2007\\_12\\_14\\_draft\\_etowah\\_hcp\\_sections\\_1\\_9.pdf](http://www.etowahhpc.org/background/documents/2007_12_14_draft_etowah_hcp_sections_1_9.pdf).

runoff that would occur under a forested condition, for small storms, given the soils present. The Runoff Limit for a site in a Priority 2 area is set at the equivalent of 5% impervious cover. Therefore, new development and major redevelopment must employ stormwater management practices that make the site act as if it had no more than 5% impervious cover (and the remainder forested). In both Priority Areas 1 and 2, local governments can designate some locations as "development nodes," where Runoff Limits are significantly relaxed. The Runoff Limit for a development node is set at 50% of the actual impervious cover for the site. For example, a site with 60% impervious cover must reduce the runoff to the amount expected from the site if it had only 30% impervious cover (and the remainder forested).

To meet the Runoff Limits, developers can use "Better Site Design" techniques to reduce the amount of impervious cover, as well as various stormwater infiltration best management practices to return runoff to the soil. Use of these practices is supported by an engineering manual and by a training program. An optional Better Site Design checklist has been developed to assist local governments in working with developers in pre-construction meetings to use these practices. Jurisdictions are also encouraged to amend regulations to allow the use of all Better Site Design techniques, although this is not required.

### *County of Los Angeles Department of Public Works Low Impact Development Standards Manual*

All new development and redevelopment under the jurisdiction of the County of Los Angeles is required to meet LID requirements. The goals of LID are to increase groundwater recharge, enhance water quality, and prevent degradation to downstream natural drainage courses.

#### Requirements for Small Scale Residential Projects

Residential development and redevelopment of 4 units or less, or remodels affecting more than 50 percent of the original home footprint are not required to complete hydrologic analysis for the project site, but must include at least 2 of the following items into the site design:

- Porous pavement: Install porous pavement that allows rainwater to infiltrate through it. Porous pavement includes, but is not limited to: porous asphalt, porous concrete, ungrouted paving blocks, and gravel. At least 50% of the pavement on the lot shall be porous.
- Downspout routing: Each roof downspout shall be directed to one of the following BMPs. The sum of the capacity of the downspout BMPs shall be at least 200 gallons.
  - a. Cistern/rain barrel. Direct roof downspouts to a rain barrels or cisterns. The stored stormwater can then be used for irrigation or other nonpotable uses.
  - b. Rain garden/planter box. Direct roof downspouts to rain gardens or planter boxes that provide retention and treatment of stormwater.

- Disconnect impervious surfaces. Slope driveways and other impervious surfaces to drain toward pervious surfaces. If possible, runoff should be directed toward vegetated areas or water quality BMPs. Limit the total area not directed toward vegetated areas or water quality BMPs to 10% or less of the area of the lot.
- Dry well. Install a dry well to infiltrate stormwater. The dry well shall be sized to hold at least 200 gallons of stormwater.
- Landscaping and landscape irrigation. Plant trees near impervious surfaces to intercept rainfall in their leaves. Trees planted adjacent to impervious surfaces can intercept water that otherwise would have become runoff. Two trees shall be planted on each parcel so that they overhang impervious surfaces. Install irrigation systems that minimize water usage and eliminate dry-weather urban runoff.
- Green roof. Install a green roof to retain and treat stormwater on the rooftop. A green roof shall cover at least 50% of the total rooftop area.

#### Requirements For Large Scale Development

All residential developments of 5 units or greater and all nonresidential developments shall follow the LID Hydrologic Analysis techniques outlined in the Hydrologic Analysis Section of this manual.

#### *LID Requirements*

Large scale residential and nonresidential development projects shall prioritize the selection of BMPs to treat stormwater pollutants, reduce stormwater runoff volume, and promote groundwater infiltration and stormwater reuse in an integrated approach to protecting water quality and managing water resources.

BMPs shall be implemented in the following order of preference:

1. BMPs that promote infiltration,
2. BMPs that store and beneficially use stormwater runoff,
3. BMPs that utilize the runoff for other water conservation uses including but not limited to BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses, and BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly.

If the Director of Public Works determines that compliance with the above 3 LID requirements is technically infeasible, in whole or in part, in response to an applicant's submittal, the Director shall require the applicant to submit a proposal for approval by the Director that incorporates design features demonstrating compliance with the LID requirements to the maximum extent practicable.

The LID goals of increasing groundwater recharge, enhancing water quality, and preventing degradation to downstream natural drainage courses shall be used in the evaluation, approval, and implementation of LID BMPs, as well as any determination of infeasibility.

#### *Onsite Infiltration Requirements*

The excess volume ( $\Delta V$ ) determined by the hydrologic analysis in Chapter 4 shall be infiltrated throughout the project site whenever possible. This can be accomplished on a lot-by-lot or on a sub-regional scale provided that equivalent benefit can be demonstrated. The following requirements apply:

- Infiltrate the  $\Delta V$  from each lot at the lot level, or
- Infiltrate the  $\Delta V$  from the entire project site, including streets and public right-of-way, in sub-regional facilities. The tributary area of a sub-regional facility shall generally be limited to 5 acres, but may be exceeded per the Director of Public Works.

Infiltration may not be possible in all development scenarios. Exceptions may include but are not limited to the following technical feasibility and implementation parameters:

- Locations where seasonal high groundwater is within 10 feet of the surface.
- Within 100 feet of a groundwater well used for drinking water.
- Brownfield development sites or other locations where pollutant mobilization is a documented concern.
- Locations with potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer.
- Locations with natural, undisturbed soil infiltration rates of less than 0.5 inches per hour that do not support infiltration-based BMPs.
- Locations where infiltration could cause adverse impacts to biological resources.
- Development projects in which the use of infiltration BMPs would conflict with local, state or federal ordinances or building codes.
- Health and Safety concerns

#### *Onsite Storage and Reuse Requirements*

When infiltration is not possible, on-site storage and reuse of the  $\Delta V$  is the next preferred LID BMP option. Storage and reuse of the  $\Delta V$  may not be possible in all development scenarios. Exceptions may include but are not limited to the following technical feasibility and implementation parameters:

- Projects that would not provide sufficient irrigation or (where permitted) domestic grey water demand for use of stored runoff due to limited landscaping or extensive use of low water use plant palettes in landscaped areas.

- Projects that are required to use reclaimed water for irrigation of landscaping.
- Development projects in which the storage and reuse of stormwater runoff would conflict with local, state or federal ordinances or building codes.
- Locations where storage facilities would cause potential geotechnical hazards as outlined in a report prepared and stamped by a licensed geotechnical engineer
- Health and Safety concerns

#### *Water Conservation Requirements*

When infiltration or storage and reuse of the  $\Delta V$  is not possible, LID BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction, integrate multiple uses and/or BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly shall be implemented. These LID BMPs shall be sized to detain and treat the  $\Delta V$ .

#### *Infeasibility*

Compliance with the LID requirements in this manual in whole or in part may not be feasible in all development scenarios. In these situations, the applicant shall demonstrate the infeasibility of compliance with the LID requirements and submit a proposal for approval by the Director that incorporates design features demonstrating compliance with the LID requirements to the maximum extent practicable.

#### *Water Quality Treatment Requirements*

The runoff from the water quality design storm event associated with the developed site hydrology described in Chapter 4 must be treated before discharge in compliance with the National Pollutant Discharge Elimination System Municipal Stormwater Permit for the County of Los Angeles.

#### *Hydromodification Requirements*

California Drainage Law is a complicated and complex area with respect to the rights of upper and lower landowners. Therefore, it is in everyone's best interest to require developments to analyze all the factors that may contribute to changed drainage characteristics, which may contribute to downstream drainage impacts (increased flooding and erosion). Below is an outline of the procedure required to analyze drainage impacts on off-site property.

1. All projects are required to conduct hydrology and hydraulic analysis for SUSMP, LID, 2, 5, 10, 25, and 50-year storm events per the LACDPW Hydraulic and Hydrology manuals.

2. HEC-RAS is required as the standard for analyzing changes in flow velocity, flow volume, and depth/width of flow for all natural drainage courses.
3. Sediment transport analysis using HEC-RAS, SAMS, and HEC-6 is required to determine long-term impacts of streambed accretion and degradation for major drainage courses with Capital Storm flow rates (Q) greater than 5,000 cubic feet per second.
3. All projects are required to fully mitigate off-site drainage impacts caused by hydromodification and changes in water quality, flow velocity, flow volume, and depth/width of flow under all 7 hydrologic scenarios above.
4. If not fully mitigated, the developer is required to obtain Drainage Acceptance letters from impacted downstream property owners. If Drainage Acceptance letters cannot be obtained and mitigation is not feasible, the developer must recommend to Regional Planning that a Statement of Overriding Consideration be included in the California Environmental Quality Act document to disclose that there will be significant unmitigated downstream drainage impacts.

#### *Hydromodification Exemptions*

All projects which comply with one or more of the following conditions are exempt from conducting a full analysis for hydromodification impacts. Applicants must still demonstrate that the project mitigates for hydromodification impacts to the satisfaction of the Director of Public Works.

- Projects that disturb less than one acre and add less than 10,000 square feet of new impervious area.
- Projects that do not increase impervious area or decrease the infiltration capacity of pervious areas compared to pre-project conditions.
- Projects that are replacement, maintenance, or repair of an existing permitted flood control facility.
- Projects within a watershed or sub-watershed where a geomorphically-based watershed study has been prepared that establishes that the potential for hydromodification impacts is not present based on appropriate assessment and evaluation of relevant factors, including: runoff characteristics, soils conditions, watershed size and conditions, channel conditions, and proposed levels of development within the watershed.
- Projects that discharge directly or via a storm drain into concrete or significantly hardened channels, which, in turn, discharge into a sump area under tidal influence, or other receiving water that is not susceptible to hydromodification impacts.
- Projects for which have hydrologic control measures that include sufficient sub-regional, regional, in-stream control measures, or a combination thereof such that hydromodification will not occur.



## Memorandum

Date: 9 April 2009  
To: Mary Anne Skorpanich, Director, OC Watersheds Program  
cc: Jeff Pratt, Public Works Director, County of Ventura  
From: Eric Strecker, P.E. and Aaron Poresky, E.I.T. Geosyntec Consultants  
Malcolm Walker, P.E. Larry Walker and Associates  
Subject: Response to Critical Comments on "Low Impact Development Metrics  
in Stormwater Permitting"

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This document contains Geosyntec response to elements of "Critique of Certain Elements of 'Low Impact Development Metrics in Stormwater Permitting'" (Dr. Richard Horner, February 2009 (paper not dated))

Dr. Horner's paper is referenced in a subsequent memorandum from the Natural Resources Defense Council (NRDC) to Ms. Carolyn Beswick and Members of the Santa Ana RWQCB titled: *Draft NPDES Stormwater Permit for the County of Orange, Tentative Order R8-2008-0030*. Comments on Dr. Horner's critique expressed herein apply to the NRDC memorandum by extension.

### 1 Overview

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- 1.1 Dr. Horner's paper critiques elements of "Low Impact Development Metrics in Stormwater Permitting" prepared by Geosyntec Consultants and Larry Walker Associates (Geosyntec and LWA, 2009). The critique questions several assumptions and assertions made in the case studies contained therein, disagrees with the recommendations of the study, and selects elements from the study that support the assertion that a 5% effective impervious area (EIA) standard is both widely feasible and effective.

## 2 General Responses

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- 2.1 It appears that all parties are in agreement that an appropriate LID standard must be linked to a volumetric standard. One of the objectives of the Metric paper was to determine the practicality and environmental outcomes of the LID metrics proposed in the draft April 2008 Ventura Countywide permit and the November 2008 Orange Countywide permit. The Metrics paper addressed the lack of such a volumetric standard in the Draft Ventura County permit. Without a volumetric standard the EIA metric may be abused. It is acknowledged that a volumetric standard is included in the Draft Orange County permit.
- 2.2 Geosyntec and LWA do not agree with, nor does the Metrics paper support, the validity or effectiveness of a 5% EIA limit. While values in the range of 5% EIA have been found to correspond to a "threshold" for channel degradation in some studies, the use of these findings to support a 5% EIA standard for new development and redevelopment projects relies on two tenuous links. First, the definition of EIA contained in the two draft permits does not necessarily correspond to the definition employed by studies of the impacts of EIA. Second, the studies finding approximate thresholds of 5% EIA were based on watershed averages, not individual projects or parcels. The Metrics paper states that a volumetric criterion for LID implementation does not need to be linked to a specific spatial extent of disconnection and/or compliance on a lot-by-lot basis to be protective, and that establishing a lot-by-lot criterion could inadvertently cause adverse impacts to receiving water quality (e.g., could lead to sprawl or preclude infill/redevelopment projects from occurring).
- 2.3 From the arguments provided in the critique, it appears that Dr. Horner misinterpreted the context in which the LID provisions of the draft MS4 permits are proposed. The critique argues against a "delta volume" approach and for a "full volume approach" to LID sizing. We fully support the component of the draft permits that require treatment of the entire "water quality volume." The critique's apparent misunderstanding is to confuse the LID design standard with the water quality design standard. The bulk of the argument against a delta-volume as a LID sizing metric is based on this apparent misunderstanding and the resulting assumption that any volume above the delta volume would be allowed to discharge without treatment or hydrologic control. This is not the case for either the Ventura or Orange Countywide draft permits. Both the water quality treatment and hydromodification elements of the draft permits would prohibit this from occurring. This item is discussed further in Section 3.1 below.
- 2.4 Geosyntec and LWA do not agree with, nor does the Metrics paper support, the critique's assertion that infiltration and reuse are feasible in all densities and types of development. A variety of limitations can prevent infiltration on a project site which are typical in



southern California. Dr. Horner's study "Investigation of the Feasibility and Benefits for Low-Impact Site Design Practices ("LID") for Ventura County" (Horner, 2007) does not consider site specific infiltration rates and other limitations on infiltration; rather, it relies on a modeling study that assumed rather high infiltration rates based on San Fernando Valley soil types and applied those results in a rather simplified way to different case studies for example projects from San Diego County. Geosyntec has previously prepared a critique of this study (Geosyntec, 2008) that found various misrepresentations of findings and problematic assumptions that tended to result in uncertainty about claims of feasibility and effectiveness of an EIA standard at all project densities.

- 2.5 Horner (2007) relies on capture and reuse as a fall-back strategy where infiltration is not feasible. Stormwater reuse for the purpose of stormwater management requires a sufficient demand during the wet season to replenish the capacity of storage units to be effective as a stormwater management device. Horner (2007) does not attempt to demonstrate the effectiveness of capture and reuse. It is well understood that if sufficient water demand does not exist during the rainy season, the volume of storage that can be made available for subsequent storms is minimized. This would result in overall poor performance of capture and reuse to achieve stormwater management goals. Furthermore the Metric paper would be remised if it did not acknowledge the "practicality" challenges that are associated with the implementation of capture and reuse options, such as building and health code compliance.
- 2.6 We appreciate the detailed comments the critique offers on the case studies contained in the Metrics paper. Several were well-founded and could be used to make the case studies more robust. However, it is apparent that several others were made without consideration for the stated purposed of the case studies and thus unfairly misrepresent the findings of these studies. The findings of the Metrics paper do not support a lot-by-lot EIA criterion. In fact, the case studies demonstrate that lot-by-lot EIA limits are not the only, nor necessarily the best, way to realize the benefits of LID. The scope of the studies is not broad enough to dismiss the feasibility of this criterion nor did it attempt to do so. The critique takes this lack of dismissal as support for a lot-by-lot EIA limit and labels important constraints identified by the case studies as simply "negative". The critique's detailed comments on specific assumptions are tangential to the underlying discussion of whether a lot-by-lot EIA limit is superior to more appropriate watershed-scale metrics that may be better linked to the resources they are attempting to protect, as well as supported by the research on the impacts of impervious area on riparian ecology.

### 3 Specific Responses to the Critique

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- 3.1 **Selection of an LID Design Storm.** On pages 1 through 3, the critique references a variety of studies that have found that the "full water quality volume" (calculated in a variety of ways across the country) represents the "point of diminishing returns" for water quality improvement. While we believe that this assumption should always be confirmed through analysis of site-specific rainfall patterns, we are in general agreement. The recommendations of the Metrics paper are not to replace the established water quality treatment criteria with the LID criteria. Rather, the Metrics paper recommends that the LID criteria should be less than the full water quality criteria and allow for natural condition runoff potential to be factored into calculations.

It appears that Dr. Horner erroneously treats the LID and water quality provisions of the draft permits interchangeably. Among the various regulatory standards that the critique cites (Georgia, Washington, Maine, Pennsylvania, North Carolina), only one standard appears to require retention of a specific design storm (Pennsylvania). This standard requires treatment of the first 2" of runoff from all impervious surfaces and permanent removal (i.e., infiltration, ET, or reuse) of 1" of runoff from new impervious surfaces. This does not seem to represent a "full volume" standard, nor does it seem to be consistent with the logic that the critique uses to support a full retention standard. Note that this "standard" is in a guidance document that is a draft form and has not been adopted to date. The other standards that were mentioned only require treatment of the design storm. It is not clear how these example regulations support a standard that would require capture and infiltration or reuse of the entire water quality volume.

- 3.2 **Performance of LID vs. WQ Design Storm.** The critique relies on an event-based methodology to illustrate the difference between a "delta volume" and "full volume" approach, which inherently over-states the difference between these two standards. The critique claims that a "delta volume" design storm would result in significant impacts while a full volume design storm would result in none. (P 2)

*"When managing water quality, in contrast, any untreated volume (in the delta volume scenario, this would be the amount that originally flowed from the undeveloped land) would deliver to the receiving water the many pollutants characteristic of urban runoff. There, these pollutants would create negative physical, chemical, and biological effects. On the other hand, if the appropriate water quality volume is used (i.e. no less than the 85th percentile event) the LID-based stormwater management BMPs should deliver no pollutants to the receiving water, since the retention and reuse or infiltration of that volume is practicable and achievable, as I have demonstrated separately by analyzing a range of development scenarios in southern California." [Emphasis added]*

This excerpt shows an apparent misunderstanding of BMP performance factors. BMPs are not designed to capture all of the runoff volume from every storm, but only that volume up to the design storm volume (e.g., 0.75 inches). Thus, the argument above applies only to a specific storm depth for which the difference in performance for "full volume" BMPs and for "delta volume" BMP would be greatest. Long term performance of a BMP depends on the patterns of rainfall and the drawdown rate of the BMP in addition to the storage volume provided. All other factors equal, the use of a "delta volume" approach (i.e., a smaller storage volume) would indeed infiltrate a lower portion of the overall runoff than a "full volume" approach, but the difference may be something on the order of capturing 70% versus 80% of the average annual runoff volume, not an "all or nothing" outcome. As the critique points out, the difference between the "delta volume" and the "full volume" is small for the cases considered. The runoff that is between the difference of the "delta volume" and the "full volume" would still require treatment to remove pollutants before discharge, which is not considered in the critique.

3.3 **Use of Horner, 2007 as a Basis for Assumption of Feasibility.** Dr. Horner's critique refers to his study entitled "Investigation of the Feasibility and Benefits for Low-Impact Site Design Practices ("LID") for Ventura County" as evidence of the benefits and feasibility of LID implementation at all densities. Geosyntec has already provided a critique of this study (Geosyntec, 2008) in which we found:

- Three of the six case studies assumed a lower imperviousness than typical of their land use category. For example, the restaurant case study assumed an imperviousness of 49%, although the Ventura County Hydrology Manual lists an average imperviousness of 85% for this land use. Lower imperviousness yields less runoff-generating surface and more area available for infiltration.
- The study assumed that all of the pervious area would be available for infiltration; no reduction was made to account for necessary building setbacks or to account for scenarios in which some pervious area is upgradient of impervious area or otherwise not suitable for infiltration.
- Dr. Horner's study made questionable use of a study of the benefit of infiltration basins in the San Fernando Valley. Geosyntec's critique identifies issues with this study as well as issues in the applicability of this study to Dr. Horner's findings for Ventura County. For example, the San Fernando Valley study assumed infiltration rates of 0.5 to 2 inches per hour and made use of daily rainfall totals from a San Fernando gage. The 2007 study did not attempt to validate or adjust these assumptions for the range of rainfall and soil conditions present in Ventura County.

- In higher density development and in areas of Ventura County that experience larger rainfall events, the conclusions of Dr. Horner's study were not supported by his calculations. The 2007 study relied on a fall-back strategy of capture and reuse where infiltration would not be sufficient to mitigate stormwater runoff; however, the study did not evaluate the effectiveness or feasibility of this concept.

Overall, the findings of the Horner (2007) study do not appear to fully support the stated conclusions related to volume reduction and feasibility of meeting an EIA standard. Considering the simplifications that the study relied upon, we believe that there should be more qualifications of, or limitations on, the findings.

**3.4 Benefits of LID in Case Studies.** Dr. Horner's critique asserts that the case studies contained in the Metrics paper do not address the benefits of LID. First, the stated intent of the studies was to evaluate the feasibility of implementation of a variety of interpretations of an EIA standard for LID implementation. It was not to perform a cost-benefit analysis. The primary benefits of LID lie in the volume reduction it can achieve on suitable sites. In fact, each scenario was linked to the volume retained on-site, thereby implicitly describing the benefits of implementation. The studies identified different ways in which equivalent benefit could be achieved.

**3.5 Walnut Village assumption of infiltration rate.** The critique contends that an assumption of 0.2 inches per hour for B soils is too low, and that the study ignores a basic tenant of LID: that soils should not be compacted during development. This case study was of an actual redevelopment project in Anaheim that included underground parking under the majority of the site and landscaped areas typically measuring 4-8 feet in width between the adjacent roadways and building foundations. We would like to make several comments related to this contention:

- In redevelopment projects, the condition of underlying soils may be out of the control of the site design engineer. While it is considered a "best practice" to recondition soil through soil amendments, this practice can only be feasibly implemented to a certain depth. If a low permeability soil layer lies below this depth, whether due to prior site compaction or natural site conditions, then reconditioning the surface, while increasing moisture storage capacity, would not necessarily increase the rate at which moisture storage capacity can be regenerated by infiltration.
- Both roadways and building foundations require compaction of underlying soils for structural stability. In an ideal scenario, the soil underlying the thin strips of landscaping would not be compacted, however it may very well be within the practical influence area of adjacent compacted areas.

- In cases where the landscaped area is proximate to the foundation of the underlying garage, compaction may be required for structural purposes, and in fact, infiltration may be prohibited for structural reasons.
- Typical guidance in the design of infiltrative BMPs suggests a factor of safety to account for long-term degradation of infiltration rates. For example, the Stormwater Management Manual of Western Washington (WADOE, 2005) recommends a factor of safety of 4 for BMPs relying primarily on infiltration in soils with unadjusted infiltration rates from 0.5 to 8.0 inches per hour. Such guidance seems prudent where the result of failure is the discharge of greater volumes of runoff to receiving waters and/or long durations of standing water potentially leading to public health concerns. The critique cites a range from 0.57 in/hr to 1.4 in/hr for B soils from the NRCS soil survey, a source which generally considers soils in their natural state (NRCS, 2007). Quoting from this source (Section 630.0702):

*"As a result of construction or other disturbances, the soil profile can be altered from its natural state and the listed group assignments generally no longer apply, nor can any supposition based on natural soils be made that will accurately describe the hydrologic properties of the disturbed soil. In these circumstances, an onsite investigation should be made to determine the hydrologic soil group."*

Factoring the effects of incidental compaction in the urban environment and a prudent factor of safety, the assumption of 0.2 inches per hour as a design infiltration rate for B soils is consistent with the critique's citations. While the critique accurately points out that a slightly higher assumption would indeed reduce the drawdown time to less than 72 hours, this does not negate the fact that with relatively deep BMPs over soils with low infiltration rates, limited storage capacity would be regenerated for sequential storms. Such sequential storm sets are responsible for a large fraction of total precipitation in Southern California.

3.6 **Walnut Village – "non-essential hardscape"**. Geosyntec and LWA agree that in some cases more hardscape is used in development than necessary. However, it should not be taken as a given that landscaping is less expensive. The statement in the case study should have been "apparently non-essential hardscape". The case studies explicitly state that not all site-specific constraints could be evaluated. It is likely that some of the hardscape that was removed for the 0% EIA case could have been needed for ADA access or to meet parking standards, if the case study were to be evaluated more closely.

3.7 **60 California – appropriateness of greenroofs and cisterns**. We appreciate the critiques's perspective on the trend of BMPs towards greenroofs and reuse. We fully

embrace these technologies in places where they can be demonstrated to have a good chance of success. However, the critique does not demonstrate that the use of greenroofs and stormwater reuse are commonplace. Currently, greenroofs have been implemented primarily in a few large cities and primarily on public buildings.

The critique refers to an established program of rainwater harvesting and reuse in Texas. While eastern Texas receives greater rainfall than Southern California, the critique states that western Texas "has rainfall conditions very much like southern California's". A detailed review of the Texas Rainwater Harvesting Guidelines (TWDB, 2005) showed that this program is primarily targeted toward using harvesting to meet water demands, not to control stormwater. It should also be noted that large parts of Texas receive summer rainfall in the form of thunderstorms which rarely, if ever, occur during the summer in Southern California. Figure 1 provides a summary comparison between precipitation and evapotranspiration patterns in western Texas versus southern California.

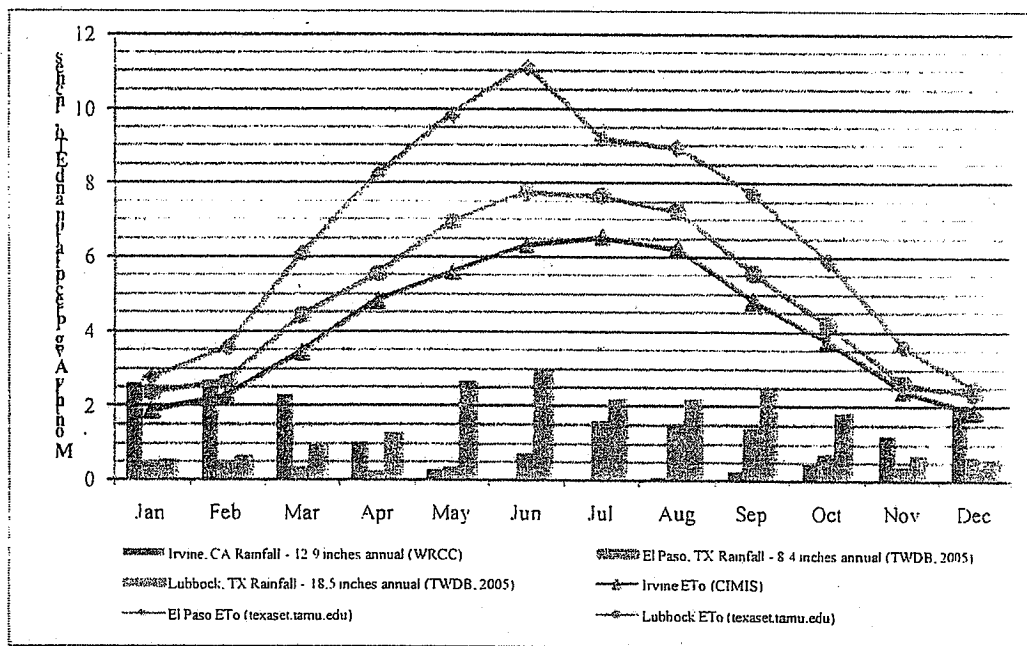


Figure 1: Comparison of precipitation and ET patterns between western Texas and southern California

Based on this preliminary comparison, western Texas appears to be a more favorable location than southern California for rainwater harvesting to manage stormwater impacts and meeting water demands. First, periods of higher rainfall are coincident with periods of higher ETo in west Texas, while the opposite is true in southern California. Second,

rainfall occurs more steadily throughout the year in west Texas compared to the normally dry spring, summer and fall months of southern California.

3.8 60 California – anticipated performance of greenroofs and cisterns. The critique provides a somewhat vague defense for the performance of greenroofs in Southern California. One cited study found that a greenroof in Pennsylvania could reduce average annual runoff volumes by 50 percent. This study was compared to Southern California by saying that pan evaporation rates are between 3.3 and 4.2 inches per month in Pennsylvania from June to September (presumably a wet season in that locale) while November – February pan evaporation ranges from 3.5 to 4.0 in Los Angeles. A review of local ET data in Los Angeles County showed that this comparison is not valid. Monthly ET rates in Southern California range from about 1.5 to 2.5 from November through February. Also, rainfall is more seasonally concentrated in Southern California than in the mid-Atlantic region. Figures 2 and 3 below provide a comparison between Irvine, CA and the Washington, DC vicinity, for example.

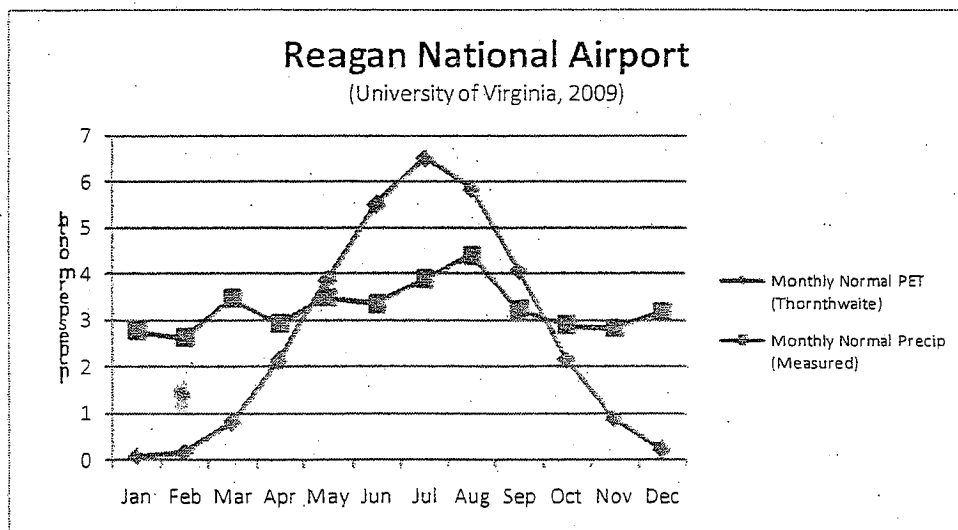


Figure 2: Monthly normal patterns of ET and precipitation at Reagan National Airport

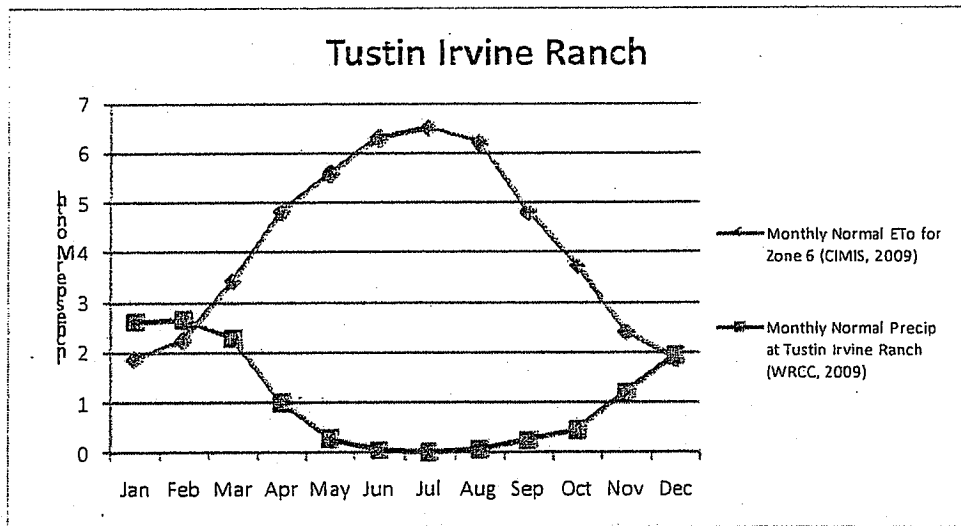


Figure 3: Monthly normal patterns of ET and precipitation in Irvine, CA

Dr. Horner states: "Therefore, Los Angeles has as much evaporation potential in the months when it most needs that potential as locations with successful green roofs elsewhere." Figure 2 shows that ET rates in December, January, and February are lower than the average precipitation. As precipitation is rarely average, on frequent occasions rainfall rates will significantly exceed ET rates. Thus Dr. Horner's conclusion does not seem to be supported by the examples provided.

Dr. Horner's critique does not address anticipated performance and feasibility of capture and reuse systems.

3.9 **60 California – regulatory barriers to indoor reuse.** We agree that codes should not be regarded as unbending. However, we feel it would not be responsible to discuss indoor reuse and its current feasibility without mentioning the current limitations and considering the time that may be needed to get code changes in place. We do not state that this should be basis for dismissing this approach.

3.10 **Ventura K-mart – scope of study.** We agree that the scope of this case study was too narrow to draw wide-ranging conclusions about cost. Likewise, the study did not "reject" tree boxes, bioretention, pervious pavement, green roofs, or water harvesting as the critique indicates. The study simply stated that two typical BMPs were chosen for evaluation. This is an issue of scope, not logic.

Dr. Horner himself took a simplified approach to costs by relying on the EPA report entitled: *Reducing Stormwater Costs through LID Strategies and Practices* (EPA 841-F-07-006, December 2007 - available for download at [www.epa.gov/nps/lid](http://www.epa.gov/nps/lid)). This



report generally found that LID could result in cost savings. It is well understood that design criteria play a large factor in the cost of BMPs, however only two of 17 case studies contained in the EPA 2007 reported design criteria. Likewise, only three of 17 estimated performance. It is not clear whether these sites were designed to similar standards. It is also unclear whether these sites represent opportunistic examples (i.e., sites that had a natural fit for LID-type BMPs) or whether they are a true cross-section of development sites with the various inherent constraints.

Some of the studies contained in EPA (2007) relied on BMPs, such as narrowing street width and downspout disconnection, which would not be widely applicable to many high-density redevelopment projects. Of the BMPs contained in the case studies that would likely be used for higher-density projects (bioretention, permeable pavement, green roofs, and cisterns), permeable pavement was considered in only two of 17 case studies, and green roofs were considered in only one of the 17 studies (cost-benefit analysis showed substantially greater costs than benefits for this study). Cisterns with reuse were not considered in any of the 17 studies. Considering these factors, this source should not be relied upon solely in evaluating the costs of implementing the proposed permit requirements.

**3.11 Ventura K-mart – method of runoff estimation.** We agree that the NRCS curve number is not the best method to use for small storms, however the critique of this method is tangential to overall results, and use of the NRCS curve number method would actually tend to under-predict infrastructure requirements (i.e., cost). We appreciate this comment. It is noted that in Dr. Horner's previous evaluation of feasibility and effectiveness (Horner, 2007), the curve number method was used to establish the volume that would need to be infiltrated on-site.

**3.12 Ventura K-mart – assumption of infiltration rate.** We appreciate this correction. It appears that an adjustment factor was not applied as described in Section 3.5 to account for long-term decline in infiltration rate. Correction of this error would result in substantially increased infrastructure requirements (i.e., cost).

## 4 References

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ATTACHMENT C  
LEGAL AND POLICY COMMENTS  
FEBRUARY 24, 2009 TENTATIVE ORDER  
VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER  
SYSTEM PERMIT (NPDES NO. CAS004002)  
FOR THE VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA, AND INCORPORATED CITIES

I. Findings E.7 and E.25 – E.28 Exert Many Conclusions Of Law That Are Not Appropriate

In general, findings are required to “bridge the analytical gap between the raw evidence and ultimate decision or order.” (*Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515 (*Topanga*); see also *In Re Petition of the City and County of San Francisco, et al.*, SWRCB Order 95-4 (Sept. 21, 1995) 1995 WL 576920 (*San Francisco Petition*) at pp. 4-5.) The findings at issue here fail to meet this essential test as they read more like a legal brief than regulatory finding that bridge the Los Angeles Regional Water Quality Control Board’s (Regional Water Board) evidence to the permit provisions contained within the Tentative Order.

Under federal law, municipal storm water discharges must comply with section 402(p) of the Clean Water Act (CWA), which requires that cities reduce storm water to the maximum extent practicable (MEP). (33 U.S.C. § 1342(p)(3)(B)(iii).) “Congress did not require municipal storm-sewer discharges to comply strictly with [water quality standards].” (*Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1166.) Whenever a Regional Water Board imposes pollutant restrictions in a wastewater discharge permit *more stringent* than what federal law requires, California law requires the Regional Water Board to take into account the public interest factors of Water Code section 13241, which includes economic factors and the cost of compliance. (*City of Burbank v. State Water Resources Control Bd.* (2005) 35 Cal.4<sup>th</sup> 613, 627.) Thus, if the Regional Water Board seeks to impose any requirements that go beyond those set forth in section 402(p), the Regional Water Board must evaluate the public interest factors in Water Code section 13241 prior to permit adoption.

The Tentative Order attempts to disregard this important legal requirement by making findings that all provisions contained in the Tentative Order are part of a federal mandate. (Tentative Order at pp. 11, 21.) Through these findings, the Tentative Order tries to conclude that because the requirements are federally mandated, the Tentative Order does not require consideration of section 13241 factors, or constitute an unfunded local government mandate. As indicated above, findings are required to “bridge the analytical gap between the raw evidence and ultimate decision or order.” (*Topanga, supra*, 11 Cal.3d at p. 515; see also *San Francisco Petition*, SWRCB Order 95-4, *supra*, at pp. 4-5.) The blanket statements made in the Tentative Order’s findings fail to rise to a level necessary to serve as a bridge between evidence and the conclusion.

In general, municipal storm water programs are typically a combination of source controls and management practices that address targeted sources within a municipality’s jurisdictional area.

(See National Pollutant Discharge Elimination System (NPDES) Permit Writers' Manual at p. 164.) Also, permit writers are instructed to rely on application requirements and management programs as proposed by the applicants when developing appropriate permit conditions. (See *id.* at p. 165.) Recent court decisions have also declared that the Regional Water Board may adopt water pollution controls in addition to those that come from MEP in order to meet water quality standards. (See *Building Industry Assn. of San Diego v. State Water Resources Control Bd.* (2004) 124 Cal.App.4<sup>th</sup> 866, 883.) Notwithstanding the recent court decisions that allow for additional discretion, many of the provisions contained in the Tentative Order may in fact exceed requirements associated with implementation of MEP and exceed requirements necessary to meet water quality standards. At the very least, the Tentative Order fails to properly connect the provisions as contained in the Tentative Order to federal requirements from the CWA through its findings. Our specific comments on the various elements of the findings in question are provided here.

**A. Because Many Provisions In The Tentative Order May Exceed MS4 Storm Water Provisions As Mandated By Federal Law, Some Of The Provisions May Be Considered An Unfunded State Mandate**

Finding E.7, in conjunction with Findings E.26 - E.27, assert that the Tentative Order "does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution" because the Tentative Order implements "federally mandated requirements" under section 402 of the CWA. (Tentative Order at p. 11.) The Permittees object to these assertions on several grounds.

First, the Regional Water Board's jurisdiction does not include decisions or determinations regarding what is, or what is not an unfunded mandate subject to subvention under the California Constitution. The Regional Water Board's jurisdiction is limited to water quality and related functions. Decisions regarding what constitutes, or does not constitute, an unfunded mandate is for the Commission on State Mandates. (Gov. Code, §§ 17551 and 17552; see also *Lucia Mar Unified School Dist. v. Honig* (1988) 44 Cal.3d 830, 837 [the question must be decided by the Commission on State Mandates "in the first instance"].) "Whether a particular cost incurred by a local government arises from carrying out a state mandate for which subvention is required under article XIII B, section 6, is a matter for the Commission to determine in the first instance." (*County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4<sup>th</sup> 898, 907 (*County of Los Angeles*), emphasis added.)

Second, the Permittees question the purpose and intent of this finding. As discussed above, findings are required to "bridge the analytical gap between the raw evidence and ultimate decision or order." (*Topanga, supra*, 11 Cal.3d at p. 515.) The Regional Water Board staff's purpose for including this finding is suspect as it raises an issue that has recently been unsuccessfully litigated in the recent *County of Los Angeles* case. (*County of Los Angeles, supra*, 150 Cal.App.4<sup>th</sup> 898.) In that case, the Court held that whether the permit obligation(s) in question constitutes a state or federal mandate is a question of fact which must be first addressed by the Commission on State Mandates. (*Id.* at pp. 917-918.) Thus, it is not appropriate for the Regional Water Board staff to propose a finding that attempts to make a conclusion of fact for the Commission on State Mandates.

Furthermore, even if a program is required in response to a federal mandate, a subvention of state funds may be in order. Government Code section 17556(c) provides that if a requirement was mandated by federal law or regulation, but the state "statute or executive order mandates costs that exceed the mandate in that federal law or regulation," a subvention of funds is authorized. Also, even if the costs were mandated to implement a federal program, if the "state freely chose to impose the costs upon the local agency as a means of implementing" that federal program, "the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government." (*Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4<sup>th</sup> 1564, 1594.) For example, the Tentative Order proposes to shift to the Permittees the state's responsibility to inspect and enforce its general industrial and construction storm water permits. Although municipal stormwater programs are required to include industrial and construction programs, the provisions in the Tentative Order relate to the state's general permits and are arguably an unfunded state mandate. (See Tentative Order at pp. 49-52, 71-73.)

Finally, the findings in question assert that provisions in the Tentative Order to implement total maximum daily loads (TMDLs) are also federal mandates. While it is true that waste load allocations (WLAs) in TMDLs must be reflected in NPDES permits as applicable, the manner in which the TMDL is implemented in the NPDES permit is not a federal mandate, but is left up to the state. (See *Pronsolino v. Nastri* (2002) 291 F.3d 1123, 1140.) Thus, as with the other aspects of the Tentative Order, implementation of applicable TMDL WLAs is not necessarily a federal mandate, immune from subvention of state funds. In summary, because this language is inappropriate for inclusion in the Tentative Order, we recommend that all findings and language related to this issue be removed from the Tentative Order.

**B. Finding 7 Inappropriately Asserts That "Costs Incurred By Local Agencies To Protect Water Quality Reflect An Overarching Regulatory Scheme That Places Similar Requirements On Governmental And Nongovernmental Dischargers" (Tentative Order at p. 12)**

The purpose of this language appears to be to hinder future test claims to the Commission on State Mandates regarding specific provisions contained in the Tentative Order. Under the logic contained in this paragraph, the Regional Water Board would find that as long as the requirements are placed on both government and nongovernmental dischargers, regardless of their legality, there is an over-arching regulatory scheme, and therefore no cost subject to state subvention. However, this is an overbroad view regarding the over-arching regulatory scheme. In this case, the regulatory scheme is the application of municipal storm water permit requirements, which are not equally applicable to governmental and nongovernmental dischargers. Thus, the assertion as contained in the finding is misplaced and should be removed.

**C. Finding 7 Inappropriately Characterizes The Regulation Of Municipal Storm Water As Being More Lenient Than The Discharge Of Waste From Nongovernmental Sources (Tentative Order at p. 12)**

The paragraph that characterizes the regulation of municipal storm water as being more lenient (i.e., "less stringent") than the regulation of discharges from nongovernmental sources is

inappropriate. Municipal storm water is regulated pursuant to different standards, but simply because the standards are different does not necessarily mean that they are more lenient. Furthermore, the purpose for including this finding is vague and again fails to bridge the gap between evidence and provisions in the Order. Thus, this paragraph should be removed in its entirety.

**D. Finding 7 Inappropriately Asserts That “Local Agency Permittees Have The Authority To Levy Service Charges, Fees, Or Assessments Sufficient To Pay For Compliance With This Order,” And That “[L]ocal Agencies Can Levy Service Charges, Fees, Or Assessments On These Activities, Independent Of Real Property Ownership” (Tentative Order at p. 12)**

The language contained in this finding is misleading as it fails to completely explain or characterize the overlay of Proposition 218 to assessments related to storm water drainage fees. First of all, storm water drainage fees are typically applicable to developed parcels of land within a municipality’s jurisdiction and are not usually assessed based on business ownership. Thus, reliance on the California Supreme Court’s decision in *Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* is misplaced as that case hinges on the Court’s finding that the relationship between the inspection fee at issue and property ownership was indirect. (*Apartment Assn. of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4<sup>th</sup> 830, 843.)

Furthermore, it has subsequently been determined that storm water drainage fees are not subject to the exceptions for “sewer” and “water” service provided in article XIII D, section 6(c) of Proposition 218, and thus, such fees are subject to vote by either property owners in the affected area or voting residents. (See *Howard Jarvis Taxpayers Assn. v. City of Salinas* (2002) 98 Cal.App.4<sup>th</sup> 1351, 1358-1359 [“We conclude that article XIII D required the City to subject the proposed storm drainage fee to a vote by the property owners or the voting residents of the affected area.”].) Thus, it goes without saying that a local agency’s ability to levy storm drainage fees on its residents is restricted by the overlay of Proposition 218, which would require the agency to propose the assessment for approval by its voters before it could be assessed. The likelihood of success on such an assessment is unknown.

Because of the uncertainty associated with the Permittees’ ability to levy new or increased fees for storm water, this paragraph should be deleted from the permit. At a minimum, Paragraph 5 of this finding should be revised to read as follows:

Third, the ability of a local agency to defray the cost of a program without raising taxes is relevant to the question of whether a particular cost is subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.) The local agency permittees have limited authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order. The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass’n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4<sup>th</sup> 830, 842 [upholding inspection fees associated with renting property].) These fees may not exceed the reasonable cost of

providing service to the paver. (Sinclair Paint Co. v. State Bd. of Equalization (1997) 15 Cal.4<sup>th</sup> 866.) However, Proposition 218 prohibits a local government from imposing or increasing a fee for storm water related services without a vote of the electorate. (Cal. Const. Art. XIID, § 6.c: Howard Jarvis Taxpayers Assn. v. City of Salinas (2002) 98 Cal.App.4<sup>th</sup> 1351.)

**E. Finding 7 Inappropriately Asserts That Because The Permittees Have Requested BMPs In Lieu Of A Discharge Prohibition Or Numeric Restrictions It Has Voluntarily Availed Itself Of The Tentative Order And That The Program Is Not A State Mandate (Tentative Order at pp. 12-13)**

The Tentative Order attempts to argue that because the Permittees “voluntarily” chose the type of permit that is being proposed, implementation of the provisions therein are not subject to state subvention. This logic is flawed. First, as discussed above, determinations regarding state subventions are properly made by the Commission on State Mandates, not the Regional Water Board. Second, the application of state subventions is a question of fact for the Commission on State Mandates. The Regional Water Board cannot pre-determine the Commission’s findings under a proper test claim by claiming that the Permittees voluntarily chose the permit in question. Thus, the assertion contained in this paragraph should be deleted.

**F. Finding 7 Inappropriately Asserts That The Permittees’ Responsibility For Preventing Discharges Predates The Enactment Of Article XIII B, Section (6) Of The California Constitution (Tentative Order at p. 13)**

This assertion attempts to put forward an argument that permit provisions as contained in this Tentative Order, and any other Order that may be issued to the Permittees in the future, are not subject to the state’s constitutional provisions regarding state subvention because the Permittees had a responsibility to control discharges under state law before the constitutional provisions were adopted. We disagree with this conclusion; the Regional Water Board’s adoption of each and every permit is a discrete action that may or may not include provisions that are appropriately subject to state subventions. Furthermore, such an argument is better left in a legal brief before a court. The Order is supposed to contain provisions related to the regulation of municipal storm water, not the state’s legal arguments to challenges that may or may not occur on the provisions as contained in the Order. Thus, this paragraph should be removed in its entirety.

**II. Total Maximum Daily Loads**

The Tentative Order’s approach to implement the WLAs in the TMDLs<sup>1</sup> is lawful and otherwise appropriate. Specifically, the use of BMPs in lieu of numeric effluent limits is consistent with the CWA, federal regulations and guidance, and case law. Further, the TMDLs call for the use of BMPs to implement the WLAs in permits issued under the NPDES program. Finally, the approach avoids potentially unreasonable and unintended policy-based consequences.

<sup>1</sup> The Tentative Order lists the relevant TMDLs adopted for water bodies in Ventura County at pages 15 to 17.

A. The Tentative Order's Use Of BMPs To Implement The WLAs In The TMDLs Is Consistent With Federal And State Law And Guidance

An NPDES permit typically must include water quality based effluent limits (WQBELs) where a discharge will cause, have the reasonable potential to cause or contribute to an excursion above a water quality standard. (40 C.F.R. § 122.44(d)(1).) When a TMDL is at issue, the WQBELs must be consistent with the assumptions and requirements of the WLAs for the discharge. (40 C.F.R. § 122.44(d)(1)(vii)(b).) Under federal and state law and guidance, WQBELs in NPDES municipal storm water permits may be—and generally should be—BMPs instead of numeric effluent limits.

Section 402(p) of the CWA authorizes the use of BMPs as WQBELs to control storm water discharges from MS4s. (33 U.S.C. § 1342(p)(3)(B)(iii); *Divers' Environmental Conservation Organization v. State Water Resources Control Bd.* (2006) 145 Cal.App.4<sup>th</sup> 246, 260 (*Divers'*).) In particular, NPDES storm water permits must “require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”<sup>2</sup> (33 U.S.C. § 1342(p)(3)(B)(iii), emphasis added.) Accordingly, Congress intended to provide permitting authorities such as the Regional Water Board broad discretion to regulate storm water discharges—including the use of BMPs. (*Divers'* at p. 261.)

Moreover, the federal regulations direct NPDES permits to include BMPs as WQBELs to control pollutants in storm water discharges authorized under CWA section 402(p). (40 C.F.R. § 122.44(k)(2); *Divers'*, *supra*, 145 Cal.App.4<sup>th</sup> at pp. 256-58.) Federal NPDES permitting guidance also expresses a preference to regulate storm water discharges by way of BMPs instead of numeric effluent limits. For example, the United States Environmental Protection Agency (USEPA) issued a policy in 1996 that recognized BMPs as the effluent limits typically most appropriate for NPDES storm water permits. (61 Fed.Reg. 43761 (Aug. 26, 1996).) USEPA confirmed this policy in 2002:

EPA's policy recognizes that because storm water discharges are due to storm events that are highly variable in frequency and duration and are not easily characterized, only in rare cases will it be feasible or appropriate to establish numeric limits for municipal and small construction storm water discharges. The variability in the system and minimal data generally available make it difficult to determine with precision or certainty actual and projected loadings for individual dischargers or groups of dischargers. *Therefore, EPA believes that in these situations, permit limits typically can be expressed as BMPs, and that numeric limits will be used only in rare instances.* (Memorandum from R.H. Wayland, III,

<sup>2</sup> While this CWA provision expressly mentions management practices, it does not expressly mention “numeric” effluent limits. “Numeric” also does not appear in the CWA or federal regulations that broadly define “effluent limitation” to include BMPs as WQBELs. (33 U.S.C. § 1362(11); 40 C.F.R. § 122.2.) This further evinces that WQBELs may be BMPs instead of numeric. (See *Divers'*, *supra*, 145 Cal.App.4<sup>th</sup> at p. 259; *Communities for a Better Environment v. State Water Resources Control Bd.* (2003) 109 Cal.App.4<sup>th</sup> 1089, 1104.)



and J.A. Hanlon to Water Division Directors (Nov. 22, 2002) re: *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on those WLAs* at p. 4.)

Accordingly, neither federal law nor USEPA's long-standing policy supports the use of numeric effluent limits rather than BMPs.

**B. The TMDLs Direct The Regional Water Board To Implement The WLAs In NPDES Permits By Way Of BMPs**

The Tentative Order's BMP-based approach is also consistent with the applicable TMDLs. The TMDLs call for WQBELs in the form of BMPs instead of numeric effluent limits to implement the WLAs in NPDES permits. For example, the Calleguas Creek TMDLs for Toxicity, Organochlorine Pesticides and PCB and Metals and Selenium include similar language that states that NPDES should express storm water WLAs as BMPs:

Storm water WLAs will be incorporated into the NPDES permit as receiving water limits measured at the downstream points of each subwatershed and will be achieved through the implementation of BMPs as outlined in the implementation plan. (Calleguas Creek TMDL for Toxicity at p. 7; Calleguas Creek TMDL for Organochlorine Pesticides & PCB at p. 10; Calleguas Creek TMDL for Metals and Selenium at p. 17.)

In addition, the Santa Clara River Nitrogen TMDL requires holders of MS4 permits to achieve reductions through BMPs. "Ammonia, nitrite, and nitrate reductions will be regulated through effluent limits prescribed in POTW and minor point source NPDES Permits, *Best Management Practices required in NPDES MS4 Permits ...*" (Santa Clara River Nitrogen TMDL at p. 8, emphasis added.)

Further, each TMDL implementation plan discusses BMPs appropriate to meet the MS4 allocation requirements. The purpose of each TMDL is to achieve the applicable receiving water objectives. The TMDL analyses indicate the assimilative capacity of the streams and loads each source may discharge to meet the objectives. The analyses recognize that discharges from a single storm water outfall could exceed water quality objectives but not cause the receiving water to exceed the objectives. As a result, the TMDLs assign WLAs to MS4 dischargers as a group and do not require WLAs or numeric WQBELs for individual outfall discharges. "In accordance with current practice, a group concentration-based WLA has been developed for all permitted storm water discharges, including municipal separate storm sewer systems (MS4s)." (Calleguas Creek Metals and Selenium TMDL at p. 17.) Accordingly, the intent of the TMDLs is to assign receiving water limits implemented through BMPs in the NPDES permit. The intent is not to assign the WLAs at the end of each major outfall and require whatever controls are necessary to achieve the limits.

**C. The Use Of Numeric Effluent Limits In Lieu Of BMPs May Unreasonably Subject The Permittees To Certain Enforcement Provisions**

The Tentative Order's use of BMPs instead of numeric effluent limits is a sound policy approach that avoids potentially unreasonable and unintended consequences. The use of numeric effluents to implement the TMDL WLAs may subject the Permittees to mandatory minimum penalties where deemed a "serious violation" under the Water Code or where there are four or more violations in any six-month period. Further, the violation of numeric effluent limits could subject the Permittees to additional enforcement through administrative civil liability and/or third party lawsuits. The threat or potential jeopardy of such liability is unreasonable particularly since the TMDL implementation plans and applicable law provide for BMP-based effluent limits to implement the WLAs.

Comments From U.S. Environmental Protection Agency  
Region IX

Tentative Ventura County  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

April 9, 2009

Tracy Woods  
Los Angeles Regional Water Quality Control Board  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Re: Draft Ventura County MS4 Permit (NPDES Permit Number CAS004002)

Dear Ms. Woods:

Following below are EPA Region 9's comments on the February 24, 2009 Tentative Draft Permit for the Ventura County Municipal Separate Storm Sewer System (MS4).

EPA appreciates the efforts made by Regional Board staff, and is generally supportive of the approach taken in this draft permit. Our comments concern two aspects of the draft permit, Low Impact Development (LID) requirements and requirements related to Total Maximum Daily Loads (TMDLs). The permit should be improved to ensure it contains clear, measurable, and enforceable requirements in these two areas.

*A. Implementation of LID Requirements*

EPA generally agrees with the draft permit's approach for incorporating LID requirements, and appreciates that the draft permit (in section 5.E.III.1.) makes reference to EPA's January 2008 "Action Strategy for Managing Wet Weather with Green Infrastructure."

1. We recommend that the permit's fact sheet explain the permit's intentions for implementation of LID in section 5.E.III ("New Development/Redevelopment Performance Criteria"). At the time of our review of the permit, the draft fact sheet's discussion of section 5.E of the permit was unfinished, and does not describe the intentions of the LID provisions. For example, it would be useful for the fact sheet to describe the permit's intentions for allowing for alternatives to achieving the 5% Effective Impervious Area (EIA) requirement, and how these alternatives would be implemented. Similarly, the fact sheet provides an opportunity to discuss the permit's intentions for the mitigation of "excess surface discharge."
2. We have several concerns with the text in section 5.E.III.1.b. First, this section notes that compliance may be achieved via "payment of an in-lieu fee, or use of stormwater credits as described in this section." However, there is not a description of in-lieu fees or

stormwater credits in this section. Section 5.E.IV.4 discusses Mitigation Funding, but does not include the framework necessary to be an effective means for compliance with the permit.

We recognize that there may be situations where site constraints make the achievement of 5% EIA impractical. If there is an intention of providing alternatives to achieving 5% EIA other than preparation of a Redevelopment Project Area Master Plan (RPAMP), the permit should provide clear requirements for these alternatives. We would suggest consideration of two specific options. First, page 6 of the February 23, 2009 letter from NRDC and San Diego Coastkeeper to the Executive Officer of the San Diego Regional Board (enclosed) suggests text entitled "Alternative Compliance and Offsite Mitigation." Following this approach, the permit could require the retention of stormwater at an offsite location corresponding to 1.5 times the volume which cannot be practically managed via LID at a New Development or Redevelopment project. Second, as provided in section XII.E of the Santa Ana Regional Board's March 25, 2009 draft Orange County MS4 permit, the permit could include an Alternatives and In-Lieu Programs section which provides opportunities for the Executive Officer to approve key aspects of programs such as the collection of mitigation fees and use of these fees for watershed improvement projects. If it is the permit's intent to include alternatives to 5% EIA or a RPAMP, the permit should be revised to include clear provisions, including appropriate oversight, which describe the circumstances under which the permittees may utilize alternatives.

Additionally, it's unclear what is intended by the last two sentences in this section, which separately refer to "development projects in undeveloped areas," and "redevelopment projects or development projects that can be demonstrated that the 5% EIA requirement is infeasible." It is unclear whether there is an intent to distinguish between these types of projects; the permit provisions in this section, however, do not appear to result in differing compliance options.

Lastly, it's unclear why this section refers to the requirement to comply with section 5.E.III.3 (corrected typographical error). Section 5.E.III.3 must be complied with by all New Development and Redevelopment projects regardless of whether it's referred to here.

We would suggest the following as replacement text for section 5.E.III.1.b:

All New Development and Redevelopment Projects identified in section 5.E.II must limit their effective impervious area (EIA) to 5% or less. This requirement may be implemented through use of site features or Alternative Stormwater Mitigation Programs such as a Redevelopment Project Area Master Plan (RPAMP) or offsite mitigation as described in section XX. [reference to section "XX" if there is a new section on alternative compliance]

3. Note that there is a word processing error in section 5.E.III.1.c - "All features structured constructed..."

4. It appears that the intent of section 5.E.III.1.e is that all stormwater discharges not managed via LID tools must be mitigated using conventional stormwater controls (e.g. vault-based treatment). However, as drafted it appears that this section would only require control of the stormwater volume specified in section 5.E.III.3, which is required without the inclusion of section 5.E.III.1.e. If our understanding of the intent is correct, we would suggest modifying this section to make it clear that all stormwater volume not addressed by LID tools must be mitigated by conventional stormwater controls.
5. The reference at the top of page 57 ("5.E.III.3(a)(2)") is to the wrong section. It appears that this should be a reference to section 5.E.III.2.(a)(3).
6. Note that there are two apparent formatting/numbering errors on page 58 ((4) and (5)).
7. As noted in comment #1 above, section 5.E.IV.4 should be revised. The permit should include clear provisions describing the circumstances under which the permittees may utilize alternatives to achieving 5% EIA. If mitigation funding is to be part of an alternative compliance option, there should be specific provisions for how fees will be collected and used, along with appropriate oversight.

***B. Total Maximum Daily Loads (TMDLs)***

In comments provided to the Regional Board on May 29, 2008, EPA pointed out the need to improve the language in the April 29, 2008 draft permit to make it clear how compliance with TMDL Waste Load Allocations (WLAs) will be determined. These comments were not addressed in the February 24, 2009 revision to the draft permit. We continue to believe that improved permit language is needed to clarify the permit's requirements with respect to WLAs. It is our understanding that adding the following sentence to section 6.I. of the permit would appropriately clarify the permit's intent:

In order to achieve compliance with this Part of the permit, data collected pursuant to the "Compliance Monitoring" provisions of this Part must demonstrate attainment of WLAs.

We appreciate the opportunity to provide input on this draft permit. If you would like to discuss these comments, please contact John Tinger at (415) 972-3518, or Eugene Bromley at 415-972-3510.

Sincerely,



Douglas E. Eberhardt, Chief  
NPDES Permits Office

Enclosure



February 23, 2009

Mr. John Robertus  
Executive Officer  
San Diego Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123-4340

**Re: Incorporating a Numeric Performance Standard into the Model SUSMP  
for San Diego County**

Dear Mr. Robertus:

The Natural Resources Defense Council and San Diego Coastkeeper have participated extensively in the 2006-2007 San Diego MS4 permitting process. Thereafter, we have commented on, and sponsored expert technical review of, subsequent proceedings required by the Permit to revise the Model SUSMP. Both before and after Permit adoption, NRDC and Coastkeeper have consistently raised concerns about the lack of clear standards for the implementation of post-construction stormwater management BMPs in general and low impact development ("LID") practices in particular. Unfortunately, we remain extremely concerned that the Model SUSMP, while overall a useful guidance document, fails to specify the necessary performance criteria to ensure that stormwater pollution is, in fact, reduced to the Clean Water Act's "maximum extent practicable" ("MEP") standard.

In January 2007, we submitted comments on the second revised Tentative Order and noted its problematic failure to include specific, numeric performance requirements. In February 2007, we petitioned the State Board to overturn the approval of the San Diego MS4 Permit ("Permit") in large part because of the aforementioned problem. We held our petition in abeyance, however, with the understanding that the Model SUSMP revision process would address our concerns. In April and September 2008, during the drafting of the Model SUSMP, we submitted letters to the County of San Diego and to the Regional Board reiterating the need for specific, numeric performance requirements. We believe, though, that the most recent draft of the Model SUSMP does not adequately set forth such requirements but that, with a few small revisions, it could be brought into line with the MEP standard and with other stormwater regulations around the country. We have detailed these revisions below and urge you to require the County to revise the Model SUSMP accordingly.



I. **The Model SUSMP Must Compensate for the Lack of Clear Performance Standards in the Permit and Implement Its Mandate to Maximize LID by Requiring a Robust Numeric Performance Standard for Low Impact Development.**

There is an emergent consensus nationwide that LID practices are the most effective stormwater management techniques, besides providing many other benefits, such as reducing the need for imported water, increasing property values, mitigating the urban heat island effect, and creating aesthetically pleasing landscapes. In California, the Ocean Protection Council, for instance, strongly endorsed LID last year by “resolv[ing] to promote the policy that new developments and redevelopments should be designed consistent with LID principles” because “LID is a practicable and superior approach ... to minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities.”<sup>1</sup> EPA has also called upon Regional Boards across California to prioritize the implementation of LID, even “recommend[ing] that the [South Orange County draft] permit be revised to put more emphasis on LID [and to] require that LID be woven into the design of specified new development and redevelopment projects.”<sup>2</sup> In other MS4 permit contexts, EPA has also specifically endorsed the use of metrics, particularly the EIA approach that NRDC advocated for the San Diego Permit.

It is becoming clear that without requiring the implementation of LID practices designed to satisfy feasible and clear metrics, stormwater permits cannot meet the Clean Water Act’s “maximum extent practicable” (“MEP”) standard for pollution reduction. Critically, the prioritization of LID practices is insufficient by itself to meet the MEP standard and *must* be paired with a measurable requirement for the implementation of LID. We outlined very similar concerns during the approval process for the South Orange County MS4 Permit, which was rejected by the Regional Board in part because it contained much of the same vague language as the San Diego Permit and Model SUSMP. We have attached our January 24, 2008, letter to reiterate the legal problems that arise from such language (these concerns are also summarized in Section II below).

Since its inception, the MS4 permitting program has been seriously hampered by a pervasive absence of numeric performance standards for the implementation of BMPs such as LID. For this reason, in December 2007, the State Water Resources Control Board commissioned a report which found that “[t]he important concept across all of [the] approaches [described in the report] is that the regulations established a

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<sup>1</sup> California Ocean Protection Council, *Resolution of the California Ocean Protection Council Regarding Low Impact Development* (May 15, 2008). We have enclosed a CD that includes all of the documents referenced in our letter.

<sup>2</sup> Environmental Protection Agency, Comments re Draft MS4 Permit for Southern Orange County (email from Eugene Bromley) (Jan. 24, 2008) (hereinafter “EPA South OC Comments”).



*performance requirement* to limit the volume of stormwater discharges.”<sup>3</sup> The report also noted that “[m]unicipal permits have the standard of Maximum Extent Practicable (MEP) which lends itself more naturally to specifying and enforcing a level of compliance for low impact development.”<sup>4</sup> EPA has highlighted similar but more specific concerns, remarking that subjective and imprecise language (such as requiring “a portion” of a site to address LID, as in the Permit at D.1(d)(4)) is “vague” and that EPA recommends “more precise requirements.”<sup>5</sup>

Various jurisdictions nationwide have begun adopting numeric performance standards for stormwater management, frequently pairing these with requirements to implement LID practices:

- **Pennsylvania:** Capture at least the first two inches of rainfall from all impervious surfaces and retain onsite (through reuse, evaporation, transpiration, and/or infiltration) at least the first one inch of runoff;<sup>6</sup>
- **Anacostia, Washington, D.C.:** Retain onsite the first one inch of rainfall and provide water quality treatment for rainfall up to the two-year storm volume;<sup>7</sup>
- **West Virginia:** Retain onsite the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation;<sup>8</sup>
- **Georgia:** Treat the runoff from 85% of the storms that occur in an average year (*i.e.*, provide treatment for the runoff that results from a rainfall depth of 1.2 inches);<sup>9</sup>
- **Central Coast, California (RWQCB, Phase II):** Limit effective impervious area (“ELA”) at development projects to no more than 5% of total project area (interim criteria); establish an ELA limitation between 3% and 10% in local stormwater management plans (permanent criteria);<sup>10</sup>

<sup>3</sup> State Water Resources Control Board, *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption* at 23 (Dec. 2007) (emphasis added) (hereinafter “SWRCB LID Report”).

<sup>4</sup> *Id.* at 4.

<sup>5</sup> EPA South OC Comments.

<sup>6</sup> Pennsylvania Stormwater Best Management Practices Manual, Chapter 3 at 7 (Dec. 30, 2006).

<sup>7</sup> See SWRCB LID Report at 20-21.

<sup>8</sup> State of West Virginia, NPDES Permit No. WV0116025 at 13-14.

<sup>9</sup> Georgia Stormwater Management Manual, Unified Stormwater Sizing Criteria at 1.3-1.

<sup>10</sup> Central Coast Regional Water Quality Control Board, Letter from Roger Briggs re Notification to Traditional, Small MS4s on Process for Enrolling under the State’s General NPDES Permit for Storm Water Discharges (Feb. 15, 2008) (hereinafter “Central Coast Phase II Letter”).

- **All Federal Buildings over 5,000 square feet** (under EPA's draft guidance for implementation of the Energy Independence and Security Act of 2007): Manage onsite (*i.e.*, prevent the offsite discharge of) the 95<sup>th</sup> percentile storm through infiltration, harvesting, and/or evapotranspiration.

For the reasons outlined above, it is imperative that the Model SUSMP require new development and redevelopment projects to implement LID practices designed in accordance with a clear performance requirement. As detailed below, we recommend that the Model SUSMP include a standard which requires onsite retention, with no surface discharge, of the rainfall from the 85<sup>th</sup> percentile storm. This approach is not only consistent with practice nationally and in California, but Dr. Richard Horner demonstrated its practicability in the San Diego region in technical analyses prepared prior to adoption of the Permit in 2007 (all of which are part of the administrative record).

This critical element, lacking in the Permit, has not been sufficiently addressed in the Model SUSMP, as we believe the Executive Officer and the Regional Board intended. Such clear regulatory requirements must be included and must be consistent with MEP and related requirements, as well as the mainstream of stormwater control across the country. Indeed, the Permit's requirements for such vague actions as "drain[ing] a portion of impervious areas ... into pervious areas" and "minimiz[ing] the impervious footprint of the project" with no specific numeric performance requirement beyond the SUSMP treatment control sizing criteria are not adequate or consistent with standard practice in the field, nor do they implement the Permit's fundamental requirement—added at the adoption hearing—to *maximize* LID. (Permit at D.1(d)(8).)

Unfortunately, the Model SUSMP does not clearly and unambiguously set forth a performance standard for LID, therefore failing to cure the problem with the Permit and failing to comply with the Regional Board's expectation and direction in 2007. As it stands, the Model SUSMP merely outlines a process for choosing and designing LID features and describes the SUSMP treatment control sizing criteria that function as a minimum requirement for stormwater treatment in California. While meeting the minimum SUSMP criteria would be a seriously deficient performance standard because stormwater requirements have advanced significantly since the establishment of these criteria, the Model SUSMP nonetheless allows waivers of these minimum sizing criteria for nebulously defined demonstrations of infeasibility. Requiring that projects simply meet the minimum requirements of the State Board's nine-year-old Order WQ 2000-11, and then allowing waivers of these minimum requirements, is a far cry from *maximizing* the implementation of LID, especially given the numerous more recent and more stringent examples (listed above) from elsewhere in the country. Currently, the Permit and the Model SUSMP stand as examples of the approach that EPA and others have criticized as inadequate. (Permit at D.1(d)(4)-(6).) In order to comply with the State Board's prescription that "[t]he important concept across all of [the] approaches [studied by the State Board] is that the regulations established a *performance requirement* to

limit the volume of stormwater discharges,” the changes described in Section III are required.<sup>11</sup>

**II. The Permit and the Model SUSMP Are Inconsistent with the Clean Water Act Because They Collectively Do Not Set Forth Legally Adequate BMPs to Implement LID.**

The lack of clarity and specific requirements noted above is not only inconsistent with state and national practice, and therefore fails to comply with the MEP requirement, but it also violates the Clean Water Act because the vagueness of the LID provisions prevents them from constituting legally adequate BMPs and from allowing the Regional Board to understand what actions are required by the Permit. NRDC has previously addressed these and related issues in comments in 2008 on the proposed MS4 permit for South Orange County. We attach for your reference these comments and incorporate them herein, since they apply with equal force to this issue. By way of summary, however, BMPs that do not require a reasonably clear and specific performance standard fail to meet the legal definition, and practical function, of a “Best Management Practice.” Particularly where, as here, BMPs are intended to serve in part or whole as effluent limits, this vagueness is unlawful and deeply undercuts the effectiveness of the Permit. Among other things, neither staff nor the Regional Board members themselves can understand the level of water quality control required by the Permit and the Model SUSMP now, since neither document contains clear and reasonably specific requirements for LID implementation.

Twenty years after the first adoption of MS4 permits—with water quality problems associated with urban runoff still a serious problem in San Diego—it is far past time for staff or the Regional Board to essentially guess about what the Permit requires or what actions will be taken in order to comply with its terms. We respectfully submit that the edits set forth below are required to cure these key problems and bring the Permit into line with standard practice in the field and applicable legal requirements.

**III. The Model SUSMP Can Be Easily Revised to Include the Necessary Numeric Performance Standard and Accompanying Alternative Compliance Requirements.**

The Model SUSMP already contains a useful outline of the process of designing stormwater management BMPs to incorporate LID features—it simply needs to establish a clear numeric performance standard that will require the implementation of LID practices to the MEP standard and also allow for alternative compliance where onsite compliance is technically infeasible. The approach that we recommend is consistent with other stormwater management programs across the country, as discussed above. To clarify the primacy of LID implementation and to establish a robust performance

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<sup>11</sup> State Water Resources Control Board, *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption* at 23 (Dec. 2007) (emphasis added).

standard, we recommend that the following text be inserted in Chapter 2 after the introductory section on page 14.

*Design Standards for Priority Development Projects*

*To implement the general requirements of Permit Provision D.1.d, the Copermittees have developed the following design standards and alternative compliance criteria for Priority Development Projects. These requirements shall be implemented and constitute requirements of the Permit.*

- *Onsite Volumetric Retention Requirement: All Priority Development Projects must be designed to retain onsite, with no runoff, the volume of water that results from a 24-hour 85<sup>th</sup> percentile storm event (the "onsite retention volume") as determined from the County of San Diego's 85<sup>th</sup> Percentile Precipitation Isopluvial Map (rainfall depths vary from 0.55" to 1.55").*
- *Prioritization of LID: In designing stormwater management BMPs to accommodate the onsite retention volume, project applicants must first utilize LID features to meet the onsite volumetric retention requirement. If the implementation of all technically feasible LID features does not allow a project to retain the full onsite retention volume, project applicants may utilize other stormwater management BMPs to retain the remaining required volume onsite.*
- *Alternative Compliance and Offsite Mitigation: If exceptional site constraints render compliance with the onsite volumetric retention requirement technically infeasible, project applicants must implement all technically feasible retention features and treat any remaining surface discharge (up to the onsite retention volume) through the practices outlined in this Model SUSMP. When a Copermittee allows a project applicant to exercise this alternative compliance option, the project applicant must either*

*(1) construct an offsite mitigation project or*

*(2) provide sufficient funds to the Copermittee for a public project*

*that will retain a volume of stormwater (the "offsite retention volume") equivalent to the portion of the onsite retention volume that was not retained onsite times 1.5.<sup>12</sup>*

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<sup>12</sup> We recommend a ratio of 1:1.5 for the offsite retention volume. This is consistent with the other stormwater regulations mentioned above and with numerous other environmental mitigation programs around the country.

- *Timing of Offsite Mitigation Projects: Projects addressing the offsite mitigation volume, whether performed by the project applicant or by the Copermittee after collecting in-lieu funds, must be constructed and fully operational within 36 months of the final discretionary approval of the applicant's project by the Copermittee. Funding sufficient to address the offsite mitigation volume must be transferred to the Copermittee (for public offsite mitigation projects) or to an escrow account (for private offsite mitigation projects) within one month of final discretionary approval by the Copermittee. In addition, a specific offsite mitigation project must be identified, and funding allocated to that project, within 18 months of final discretionary approval by the Copermittee.*

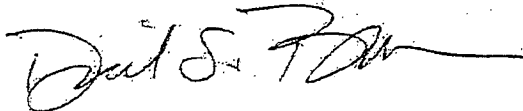
To clarify the applicability of this section, the Model SUSMP's section discussing "Waivers from Numeric Sizing Criteria" on page 12 should be revised to reflect the requirement that all projects receiving waivers can only receive a "waiver" from the onsite retention requirement (and thus the section should be renamed "Waivers from the Onsite Volumetric Retention Requirement"), must still treat all surface discharge up to the design volume, and must construct—or provide funds for the construction of—an offsite project that will mitigate the deleterious effects of allowing onsite non-compliance by the project. These recommendations should rectify the shortcomings of the Permit itself and make the Model SUSMP and its requirements consistent with the MEP standard and with stormwater regulations in other locations around the U.S.

#### IV. Conclusion.

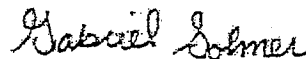
We appreciate the opportunity to comment on the Model SUSMP and the Copermittees' willingness to involve us in this process. We strongly urge you to require the revisions that we have recommended above, as they are necessary to address the legal inadequacies of the Permit by establishing a clear, numeric performance standard that requires the implementation of LID and allows for alternative compliance in situations of technical infeasibility.

Please feel free to contact us with any questions.

Sincerely,



David Beckman  
Bart Lounsbury  
Natural Resources Defense Council



Gabriel Sohmer  
San Diego Coastkeeper

Comments Received From  
LA County and Cities Within LA County

Tentative Ventura County MS4 Permit  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002



GAIL FARBER, Director

**COUNTY OF LOS ANGELES**  
**DEPARTMENT OF PUBLIC WORKS**

*"To Enrich Lives Through Effective and Caring Service"*

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ADDRESS ALL CORRESPONDENCE TO:  
P.O. BOX 1460  
ALHAMBRA, CALIFORNIA 91802-1460

April 9, 2009

IN REPLY PLEASE  
REFER TO FILE: WM-9

Ms. Tracy Egoscue  
Executive Officer  
California Regional Water Quality  
Control Board – Los Angeles Region  
320 West 4th Street, Suite 200  
Los Angeles, CA 90013-2343

Attention Ms. Tracy Woods

Dear Ms. Egoscue:


**TENTATIVE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT**

On behalf of the Los Angeles County Flood Control District and the County of Los Angeles, the Department of Public Works has reviewed the proposed Tentative Order Ventura County Municipal Stormwater National Pollutant Discharge Elimination System Permit made available for public comments by the Regional Board. Our comments are enclosed.

If you have any questions, please call me or your staff may contact Mr. Frank Wu at (626) 458-4358 or [fwu@dpw.lacounty.gov](mailto:fwu@dpw.lacounty.gov).

Very truly yours,

GAIL FARBER  
Director of Public Works

  
MARK PESTRELLA  
Assistant Deputy Director  
Watershed Management Division

ACL:jtz

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Enc.

**E001105**

**8-751**

**County of Los Angeles Department of Public Works  
Comments in Response to the  
Tentative Order Ventura County Municipal Stormwater  
National Pollutant Discharge Elimination System Permit, No. CAS004002  
Dated February 24, 2009**

The County of Los Angeles (County) and the Los Angeles County Flood Control District (LACFCD) submit the following comments in response to the Tentative Order Ventura County Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Tentative Order). The County and the LACFCD share the California Regional Water Quality Control Board – Los Angeles Region's (Regional Board's) goal of improving receiving water quality in the County of Los Angeles and look forward to working with your staff to develop the next Los Angeles County Municipal Stormwater NPDES Permit that will address the challenges unique to the Los Angeles area. The County's and the LACFCD's comments on the Ventura Tentative Order should not be construed as a waiver of the right to address any aspect of the Los Angeles Permit when it is proposed or a waiver of the right to a full hearing on and full consideration of all aspects of the Los Angeles Permit, especially given the significantly different circumstances posed by the Los Angeles basin.

The County and the LACFCD previously submitted comments on the Ventura County draft permits in letters dated March 7, 2007, October 15, 2007, and May 29, 2008. We appreciate the Regional Board revising the Tentative Order language to reflect some concerns from our previous comment letters. To the extent that the Regional Board has not modified the Tentative Order in response to prior comments, they are incorporated by reference and are not being waived. Also, as a California Stormwater Quality Association (CASQA) member agency, the LACFCD has reviewed and is in full support of CASQA's comment letter in response to the Tentative Order.

The county and the District recognize that the Tentative Order pertains to Ventura County. However, we are providing the following comments relative to the overall direction of the permit and the potential effect on the upcoming Los Angeles Permit.

**I. Municipal Action Levels  
(Tentative Order Part 2, Page 33)**

The County and the LACFCD fully support the changes made to the derivation and application of MALs; the modified approach is consistent with the U.S. Environmental Protection Agency (EPA) guidance and with the recommendations of the State's Blue Ribbon Panel's report on the *Feasibility of Numeric Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities*. However, we caution the application of MAL and corresponding monitoring in drainage systems with comingling of jurisdiction stormwater discharges.



The Tentative Order significantly changes the derivation and application of MALs from a numeric metric to assess compliance with the technology-based MEP standard to one of assessing the performance of the program. The County and the LACFCD fully support this change as the modified approach is consistent with EPA guidance and with the recommendations of the State's Blue Ribbon Panel's report on the *Feasibility of Numeric Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial, and Construction Activities*. As recommended by the panel, the use of MALs in the Tentative Order appears to be directed at identifying "bad actors" or "problematic catchments". Exceedances of the MALs will require responsible parties to develop an MAL Action Plan to address potential sources of the pollutant and identify remedies.

Furthermore, the County and the LACFCD concur that MALs, if employed in arid regions, should be developed from datasets of similar climatic zones. The Tentative Order uses the dataset for EPA climate zone 6 (arid southwest), which is more relevant to the Ventura communities that will be using the MALs to assess the performance of their stormwater programs.

The Tentative Order also requires an assessment of compliance with the MALs by monitoring a representative major outfall within each of the permittees' jurisdictions. Although this approach may be appropriate to Ventura County, we would note that such an approach for Los Angeles County is problematic given our extensive drainage shed and the comingling of jurisdiction stormwater discharges. Monitoring programs need to reflect field and drainage system logistics. Watersheds into which several jurisdictions discharge may not lend themselves to discrete monitoring to evaluate the individual contributions from each jurisdiction. With this in mind, the County and the LACFCD would suggest that there are other assessment tools<sup>1</sup> available to the Regional Board and areawide permittees that may be used in lieu of or in combination with MALs for assessing the performance of a stormwater program.

## **II. Treatment Performance Best Management Practices (BMPs) Standards (Tentative Order Part 4.A.3, Page 35)**

The County and the LACFCD have strong reservations that the design performance standards for treatment control BMPs may be misinterpreted and used as effluent limitations and possible enforcement actions.

The Tentative Order establishes the design performance standards for treatment control BMPs. The County and the LACFCD would suggest a few modifications to provide additional information for the permittees in selecting appropriate BMPs and help assure that the performance standards are used as recommended.

The County and the LACFCD have strong reservations that the performance standards may be misinterpreted and used as effluent limitations and possible enforcement actions. Such instances might arise in a case where a field sample that exceeds the

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<sup>1</sup> See CASQA *Municipal Stormwater Program Effectiveness Assessment Guidance*, May 2007.

median design concentration is collected. Given that the treatment performance standard concentrations expressed in Attachment C are medians, there is an implied variability of the actual measured performance and any single sample would not provide a statistically valid assessment of median performance. A table footnote to the effect of explaining the intended use of the concentrations as design standards as well as referring to the concentrations within the Tentative Order as *Treatment BMP Design Performance Standards* will help prevent the misinterpretation or misuse of the design performance standards.

### III. Prescriptive Nature of BMP Requirements and BMP Substitution Language (Tentative Order Part 5.A.2, Page 40)

The prescriptive lists of BMPs in the Tentative Order need to be paired with a reasonable level of flexibility to allow BMPs to be adapted for individual sites and provide protection of water quality. The County and the District recommend two different approaches for BMP substitution, one for program substitution and one for site-specific BMP handbooks and allow substitution of the revised documents and revised BMPs that may be contained within them, without triggering the substitution clauses.

The Tentative Order creates several prescriptive lists of BMPs for various program elements including construction sites (Part 5.F.1 1-4), commercial facilities (Part 5.D.2.a), municipal roadway maintenance and repair (Part 5.F.1 -6), and municipal maintenance activities (Part 5.G.2.a). This specificity, however, needs to be paired with a reasonable level of flexibility to allow BMPs to be adapted for the needs of individual sites and activities and provide protection of water quality.

The BMP substitution language contained in Part 5.A.2 (quoted below) provides for a limited degree of flexibility but does not allow for the reasonable level of substitution flexibility that will be required during the course of implementing a stormwater management program.

#### 2. Best Management Practice Substitution

(a) *The Regional Water Board Executive Officer may approve any site-specific BMP substitution upon written request by a Permittee(s) and after public notice, if the Permittee can document that:*

(1) *The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants.*

(2) *The fiscal burden of the original BMP or program is greater than the proposed alternative and does not achieve a greater improvement in storm water quality.*

(3) *The proposed alternative BMP or program will be implemented within a similar period of time.*

(4) *BMP substitution will be in accordance with the public review provisions of the Order (Part 8C.1 and Part 8C.2).*

As written, the substitution language allows for site-specific BMP substitution when appropriately justified, reviewed by the public, and approved by the Executive Officer. This process requires a minimum of 30 days (public review) before Executive Officer approval can be granted. It is not sufficiently flexible to allow for site-specific BMPs substitutions that are needed for individual projects or activities encountered during the day-by-day implementation of the stormwater management program.

The County and the LACFCD recommend two different approaches for BMP substitution, one for program substitution and one for site-specific BMPs. The approach for program substitution would follow the process outlined in Part 5.A.2. These substitutions would substitute programmatic BMPs for the ones specified in the Tentative Order; an example would be substituting the Erosion Potential approach for hydromodification assessment with one determined to be more appropriate for the region or individual watershed. This type of change appropriately warrants justification of the equivalency to the current practice, public review, and Executive Officer approval.

The approach for site-specific BMP substitution would be a more streamlined process for BMPs implemented at individual commercial/industrial sites, construction sites, or municipal maintenance projects. BMPs of this nature may need to be substituted on much shorter time scale than would be allowed by the language in Part 5.A.2. The process for substitution of BMPs at this level should follow the process identified in Part 5.D.3.a, Industrial/Commercial Business Program.

*In the event that a Permittee determines that a BMP is infeasible at any site, the Permittee shall require implementation of similar BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not protective of water quality standards, Permittees may require additional site-specific controls.*

The County and the LACFCD recommend that this language be incorporated into the BMP substitution section so this type of substitution is allowed for all program elements where BMPs are prescribed, and not just in the Industrial/Commercial Business Program Element.

Finally, the County and the LACFCD note that the prescribed BMPs are taken from documents authored by CASQA and California Department of Transportation. These organizations periodically update their BMP handbooks and guidance manuals. The Tentative Order should anticipate these updates and allow the substitution of the revised documents and revised BMPs that may be contained within them without triggering the substitution clauses of the Tentative Order.

#### IV. Low-Impact Development (LID) Requirements (Tentative Order Part 5.E.III.1, Page 55)

The County and the LACFCD have strong reservations about the use of effective impervious area (EIA) as a performance standard for LID and recommend it be eliminated in the Tentative Order. In its place, the County and the LACFCD recommends that a volume reduction criterion be used to promote LID strategies, which is to *design a hydrologically functional site that mimics predevelopment conditions*. The Tentative Order also severely limits the choices of BMPs and the County and the LACFCD recommend that the prioritized list of BMPs be expanded to be consistent with the definition of LID. Finally, the County and the LACFCD recommend that Regional Board should conduct a thorough evaluation of the capture/reuse BMPs.

In November 2008, the Los Angeles County Stormwater Ordinance was revised to incorporate LID practices and requirements. New development and redevelopment projects within unincorporated County areas are now required to comply with our recently developed LID Standards Manual, effective January 1, 2009. In addition, the County is also developing a LID standards manual for infrastructure.

The Tentative Order establishes a performance standard for low-impact development using the concept of Effective Impervious Area (EIA). The Tentative Order requires that new development comply with an EIA of 5 percent or less in undeveloped areas. Impervious area may be rendered ineffective by addressing the water quality storm volume with infiltration, capture and reuse, or vegetated surfaces. The Tentative Order essentially has two standards, one is the 5 percent EIA and the other is the full retention of the water quality storm (e.g. 85th percentile, 24-hour storm event). We note that the approach used in the Tentative Order is not consistent with the methods used in our adopted LID Standards Manual. The County and the District have a number of comments and concerns regarding the approach in the Tentative Order.

First, the County and the LACFCD question the use of EIA as a performance standard. In the Building Industry Association's (BIA's) March 7, 2008, comment letter to the Regional Board regarding this performance standard, BIA identified a number of issues associated with the blanket application of an EIA performance standard. Some of these points noted in their comment letter include:

- o Five percent is an arbitrary value that has little basis in the scientific literature and could be increased to as much as 10 percent to 15 percent given local conditions.
- o Achieving this standard will require a great deal of land and appropriate groundwater conditions for infiltration, which in turn, based on land values in Ventura County, create tremendous costs and economic feasibility issues, particularly for very small projects, and infill and redevelopment projects.

The BIA comment letter also included a technical analysis of the EIA standard which substantiated the above points. These concerns along with the fact the EIA standard is redundant with the requirement to render ineffective impervious area by infiltrating or reusing the water quality volume make the EIA standard unnecessary. The Tentative Order could obtain the same result by just requiring the implementation of LID BMPs to address the water quality storm without the additional EIA requirement.

Next, we would submit that the Tentative Order has missed the fundamental concept of low-impact development strategies. EPA defines LID as follows:

*A comprehensive stormwater management and site-design technique. Within the LID framework, the goal of any construction project is to design a hydrologically functional site that mimics predevelopment conditions. This is achieved by using design techniques that infiltrate, filter, evaporate, and store runoff close to its source. (EPA web site: accessed on 3/24/09): <http://cfpub1.epa.gov/npdes/greeninfrastructure/information.cfm#glossary>*

The operative words in the above definition are "mimics predevelopment conditions." The County and the LACFCD submit that this definition means that postdevelopment runoff should strive to reflect the predevelopment runoff (i.e., the pre- and postdevelopment water balances are equal). In this context, the volume of water from a storm event is accommodated by infiltration, evapotranspiration, or runoff. Thus, the postdevelopment volume from a site is the same as the predevelopment volume. The "delta v"<sup>2</sup> would be retained on site according to the site's natural conditions including, but not limited to, soil type, slope, etc. This approach is reflected in our LID Standards Manual. The full retention of the water quality volume as implied in the Tentative Order does not reflect this broader and more environmentally sound approach of "delta v." That is not to say that a site could not be engineered in many situations to retain the full volume but rather acknowledges the logic of the water balance and goal of LID. Full retention will, on one hand, create a new water source for the site but will also have the unintended consequence of disrupting the watershed water balance. It is also fair to say that regulatory agencies throughout the region have not identified a single approach but rather have used both approaches (i.e., full and "delta v" retentions).<sup>3</sup>

Our third comment on LID pertains to Part 5.E.III.1.(c)-(d). In this provision, the Tentative Order stipulates how impervious surfaces are rendered "ineffective" through either infiltration or store-and-reuse BMPs. As currently drafted, the Tentative Order severely limits the choices of BMPs thereby creating challenges to the municipalities and developers in complying with this provision. The County and the LACFCD submit that this list of BMPs should be expanded to be consistent with the definition of LID. We suggest that the Tentative Order be modified to reflect the following approach:

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<sup>2</sup> Delta volume = volume of postdevelopment runoff minus predevelopment runoff for the 85th percentile storm event (or equivalent water quality design event).

<sup>3</sup> *Low Impact Development Metrics in Stormwater Permitting*, prepared for the Ventura and Orange County Stormwater Programs, Geosyntec, et al., January 2009.

- o LID BMPs shall be designed to retain the "delta v" for the 85th percentile, 24-hour storm event.
- o The goal is to retain the full "delta v" by using the following hierarchy of BMPs:
  - o Infiltration-based BMPs
  - o Capture/reuse BMPs
  - o Evapotranspiration BMPs
- o Any water quality volume that is not retained by the LID BMP shall be treated using treatment control BMPs, including biofilters, wetlands, and proprietary BMPs. A rigorous feasibility and performance criteria should be established to support implementation of the BMP hierarchy.

To support the effort described above, the County and the LACFCD believe the Regional Board should conduct a thorough evaluation of the capture/reuse BMPs by conducting a comprehensive water balance for a variety of case studies (including offsets to potable water use and vegetation water demands in arid climates), identifying health code requirements and obstacles, and providing typical construction cost for capture/reuse systems. This evaluation would greatly assist the municipalities as they evaluate the feasibility of capture/reuse BMPs.

**V. Total Maximum Daily Loads (TMDLs)**  
**(Tentative Order Part 6, Page 85)**

The County and the LACFCD support the approach to only include the applicable implementation requirements of TMDLs that have been fully approved and that specifically identify Municipal Separate Storm Sewer System (MS4) responsibilities in the Basin Plan amendment. However, we remain concerned that there is no indication in the Tentative Order that the Regional Board staff has undertaken an analysis to determine whether the WLAs can be met using controls to the Maximum Extent Practicable. Finally the County and the LACFCD recommend that the word enforcement be eliminated from the TMDL compliance monitoring discussion, where it is stated that the "Regional Water Board staff will evaluate the need for further enforcement action."

The Tentative Order incorporates Total Maximum Daily Loads (TMDLs) that are in effect as of the date of the current Tentative Order. TMDLs in effect (i.e., Effective TMDLs) are those that have been adopted by the Regional Board as Basin Plan amendments (and approved by the State Water Board, Office of Administrative Law [OAL], and EPA).

The County and the LACFCD support the approach to only include applicable implementation requirements of Effective TMDLs that specifically identify Municipal Separate Storm Sewer System (MS4) responsibilities in the Basin Plan Amendment (BPA). Applicable implementation requirements are those that have been approved by the Regional Board and are specifically identified as MS4 responsibilities in the BPA and include, but are not limited to, allocations, compliance monitoring programs, special studies, and other specific implementation actions.

The County and the LACFCD have previously objected to the inclusion of TMDL numeric Waste Load Allocations (WLAs) into the Los Angeles County Municipal Stormwater NPDES Permit on the basis of improper incorporation of numeric limits. Consistent with EPA guidance, the WLAs should be expressed in the form of BMPs as nonnumeric limits. Also, as previously expressed, the Tentative Order does not indicate whether Regional Board staff has undertaken any analysis to determine whether the WLAs can be met using controls to the Maximum Extent Practicable (MEP). Thus, it is unknown whether attainment of the WLAs would require efforts that go beyond that standard. To the extent, this requirement imposes an obligation beyond the MEP standard there has to be complied with Water Code §13241.

Under the compliance monitoring portion of the TMDL section, the Tentative Order states that if any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL technical reports. The Tentative Order then says that, following these actions, the "Regional Water Board staff will evaluate the need for *further* enforcement action." (Tentative Order Part 6.V.1-8(c), Pages 87-95). This implies that there was a violation of the permit and enforcement actions were taken. The word "enforcement" should be eliminated.

**VI. Pyrethroid Insecticides Study**  
(Tentative Order Attachment F, Tentative Monitoring Program, Section E,  
Page F-13)

The County and the LACFCD suggest that in lieu of the required Pyrethroid Insecticide Study by the Ventura permittees, that a Southern California regional study be conducted to build upon the current and proposed bioassessment monitoring and use a multiple lines of evidence approach.

The Tentative Order requires the Principal Permittee to perform a Pyrethroid Insecticides Study to establish baselines, evaluate toxicity, identify trends, and determine the contribution of urban sources to pyrethroid pollution in the three major Ventura County Watersheds. Such a study should be conducted in a broader Southern California context. Specifically, we suggest the following approach:

- Utilize a regional approach to this effort, and start by identifying regions in southern California that are most likely to have elevated levels of pyrethroids. This process can be built upon previous monitoring efforts in California.
- Build upon current and proposed bioassessment monitoring to evaluate the health of sediment dwelling aquatic species. Evaluation of potential impacts of pyrethroids could tie into the existing bioassessment monitoring effort to provide multiple lines of evidence to further evaluate the impacts of urbanized land areas.

### **VII. Non-Stormwater vs. Dry-Weather Discharges**

(Tentative Order, (a) front page; (b) Finding B.10, Page 4; (c) Finding D.6, Page 9; and (d) Finding E.6, Page 11)

The Tentative Order erroneously mixes up the concept of stormwater with wet-weather discharges and the concept of nonstormwater with dry-weather discharges. This causes unnecessary confusion and ambiguity. To avoid this confusion and ambiguity, the Order should eliminate all references to "wet weather" and "dry weather," except where those terms are in the title of a TMDL (see Tentative Order, Part 6, VI.1, Page 86.)

The Clean Water Act distinguishes between stormwater and nonstormwater. The Federal regulations, 40 C.F.R. 122.26(b)(13), define stormwater to mean "stormwater runoff, snow melt runoff, and surface runoff and drainage." The Tentative Order adopts this definition as the definition of stormwater in the permit. We support the Tentative Order's adoption of this definition.

The Clean Water Act does not distinguish between "wet weather" and "dry weather," nor does it distinguish between "wet weather discharges" and "dry weather discharges." The distinction between wet weather and dry weather is solely a creation of the Regional Board's TMDL program. This distinction is meant to address the different circumstances created during rain events as opposed to nonrain events based on the recognition that different strategies might be needed during rain events.

"Stormwater," as defined by the Clean Water Act, is not necessarily the equivalent of wet weather, and "non-stormwater" is not necessarily the equivalent of "dry weather." There is no reason or need to use the terms "wet weather" or "dry weather," and by using the terms interchangeably the Tentative Order creates confusion. One does not know whether the Order is referring to stormwater discharges within the meaning of the Clean Water Act or any discharge that occurs during wet weather. Likewise, one does not know whether the permit is referring to nonstormwater discharges as used by the Clean Water Act or any discharge that occurs during dry weather. The Tentative Order should limit itself to the terms used by the Clean Water Act; *i.e.*, stormwater and nonstormwater. Reference to wet weather or dry weather is appropriate only where the Order is referring to the title of a TMDL.

The permit should eliminate all references to the terms "wet weather" and "dry weather" except where those terms are in the title of a TMDL (see Page 86, Tentative Permit, Part 6, VI.1). These references include those found on the front page, in Finding B.10 on Page 4, in Finding D.6 on Page 9, and in Finding E.6 on Page 11.

### **VIII. Non-Stormwater Discharges to Watercourses**

(Tentative Order, Part 1.A.1, Page 29, Part III, Pages 55-59)

Part 1.A.1 of the Tentative Order proposes to prohibit "non-storm discharges into the MS4 and watercourses." The reference to "watercourses" should be deleted because



no authority exists for this provision. Whereas a stormwater permit regulates MS4s, it does not regulate watercourses.

The NPDES Permit program regulates the discharge of pollutants from point sources to navigable waters of the United States. 33 U.S.C. § 1342(a)(1). Under the NPDES Permit program, the authority is to regulate is based on the nature of the activity; *i.e.*, it must be a discharge from a point source, and the nature of the water body receiving the discharge must be a navigable water of the United States, 33 U.S.C. § 1362(12).

MS4s are subject to the NPDES Permit program when they constitute point sources that discharge into navigable waters of the United States. The MS4 Permit, however, applies to the MS4 and discharges from it, 33 U.S.C. § 1342(p)(3)(B). It does not apply to discharges wholly independent of the MS4, including discharges into watercourses, 33 U.S.C. § 1342(p)(3)(B). (A discharge into a watercourse might be the subject of a separate NPDES Permit if the watercourse is a navigable water of the United States, 33 U.S.C. § 1342(a), but that discharge is not part of the MS4 Permit program.)

In the response to our comments, your staff states that the definition of an MS4 includes any conveyance of stormwater, natural or manmade. This is not correct. A municipal separate storm sewer is defined to include only those conveyances designed or used to convey stormwater that is owned or operated by the permittee, 40 C.F.R. 122.26(b)(8). The permittees own or operate the MS4, not the watercourses. (To the extent that your staff intends to limit the term "watercourses" to those MS4s-owned by the permittees, the addition of the term then becomes superfluous). The regulatory definition of an MS4 does not include any reference to watercourses or, for that matter, "natural conveyances," 40 C.F.R. 122.26(b)(8) and (18). If the definition of an MS4 included watercourses, every river in the country would be considered part of an MS4 because every river conveys rainfall or other stormwater contained in it.

Any doubt that the inclusion of the reference to "watercourses" in Part 1.A.1 is without authority and beyond the reach of an NPDES MS4 Permit is put to rest by the terms of 33 U.S.C. § 1342(p)(3)(B) itself. This statute provides that "*permits for discharges from municipal storm sewers . . . shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers,*" 33 U.S.C. § 1342(p)(3)(B)(ii). There is no reference to discharges into watercourses. Accordingly, a MS4 Permit applies only to discharges *from municipal storm sewers*, not to discharges into watercourses and the prohibition applies only to non-stormwater discharges "*into the storm sewers.*"

This same principle applies with respect to the Tentative Order's Hydromodification Provisions, Part III, Sections 2 and 3, Pages 55 through 59. The Tentative Order can only regulate discharges from the MS4, not discharges into streams, watercourses, and natural drainage areas.

**IX. Unfunded State Mandates**  
(Proposed Finding E.7, Pages 11-12)

The Tentative Order contains a finding that nothing in the permit constitutes an unfunded State mandate (Tentative Order, Finding E.7, pages 11-12,). This finding is both superfluous and erroneous.

The finding is superfluous because it carries no weight. The Commission on State Mandates has exclusive authority to determine, in the first instance, whether a requirement constitutes an unfunded State mandate. The Regional Board has neither the authority nor the expertise to make this finding. Government Code §§ 17551 and 17552; *Lucia Mar Unified School District v. Honig* (1988) 44 Cal.3d 830, 83; *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1546, 1596-97. The findings of an agency that has no jurisdiction to make those findings are entitled to no weight.

The finding is also erroneous. NPDES Permits can contain both Federal and State requirements. *City of Burbank v. State Water Resources Control Board* (2005) 35 Cal. 4th 613, 618, 628. Where those non-Federal requirements constitute a new program or higher level of service ordered by the State or exceed the Federal requirements, those requirements can qualify as a State mandate requiring a subvention of funds. See *Long Beach Unified School District v State of California* (1990) 225 Cal.App.3d 155, 172-173. Even if the requirement derives from the Federal law, the requirement can still constitute an unfunded State mandate where the Regional Board has a choice whether to impose the requirement on the permittees. *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4th 1546, 1593-94.

Accordingly, permit requirements which are imposed as an exercise of the Regional Board's discretion, which go beyond those required by a Clean Water Act, or which otherwise are more stringent than the Clean Water Act, are unfunded State mandates. The Tentative Order contains such requirements in portions of Parts 1 through 6. Moreover, the statements in Finding E.7 that the provisions of the Order implement the TMDLs, that all obligations are similar or less stringent than the obligations of nongovernmental dischargers, that there has been a "relaxation" of permit requirements, that the permittees have the authority to levy service charges, fees, or assessments to pay for compliance with all portions of the permit, and that the permittees had a choice in requesting issuance of the Order, are all incorrect and are not supported by substantial evidence in the record.

Proposed Finding E.7 should be deleted.

**X. Insufficient Time to Meet Requirements**

The County and the LACFCD are concerned that the Tentative order does not provide for a sufficient amount of time following the Order adoption to complete the required elements and recommends that the deadlines of these requirements be reviewed for

feasibility. Several requirements are labor intensive in nature or require a significant amount of data processing. Consideration should be given to increase the specified time to complete those requirements listed in Table 1 below.

**Table. 1 Requirements with Insufficient Time Allotted for Completion**

<b>Permit Section</b>	<b>Requirement</b>	<b>Allotted Time</b>
Part 5.G.5.(a)(1)	Submittal of a map/list and GPS coordinates of all Catch Basins	Within one year of Order Adoption
Part 5.G.5.(b)(1)(C)	Clean out of catch basins, trash receptacles, and grounds	Within 24 hours subsequently to an event
Part 5.G.5.(c)(1)	Installation of trash receptacles or equivalent in areas subject to high trash generation	No later than one year after Order adoption
Part 5.G.5.(d)(2)	Re-stenciling or re-labeling of catch basins	Within 15 days of inspection
Part 5.G.7.(a)(1)	Submittal of a statement of the occurrence of the emergency, an explanation of the circumstance, and the measures that were implemented	Within 30 business days after the situation of emergency has passed
Part 5.G.8.(a),(b),(c)	Train all employees and contractors in targeted positions on the requirements of the overall storm water management program	Annually before June 30
Part 5.H.1.(b)	Mapping all known connections to the storm drain system	No later than three years after Order adoption
Part 5.H.3.(b)(1)	Illicit connection investigations to be completed	Within 21 days.
Attachment F, Section A.14	Submittals to the Regional Board of nonperformance of monitoring requirements.	Within two working days
Attachment F, Section F.4	Submittal of a letter to the Regional Board stating how the Principal Permittee will satisfy the requirements for the Hydromodification Control Study.	No later than two months after Order adoption
Attachment F, Section G.3; and Attachment H, Part 1.B.3.(a) and Part 1.B.5.(a)	Submittal of a letter to the Regional Board stating how they are satisfying the requirement for the Low-Impact Development Special Study	Within two months
Attachment H, Part 1:C.1.(a)-4(a)	Electronic submittal to the Regional Board of monitoring results	No later than 45 days from the sample collection date

## XI. Costly Requirements

The County and the LACFCD recommend that several of the more costly permit requirements be reviewed and that the Tentative Order language allow for flexibility to use alternative methods to achieve the objective of the requirements listed in Table 2 below.

Table 2. Requirements That Appear to be Cost Prohibitive

Permit Section	Requirement
Part 5.E.III.1.(b)	Use 5 percent Effective Impervious Area for redevelopment areas
Part 5.E.IV.2.(a)(1)	Implement GIS or other electronic system for tracking projects for postconstruction BMPs
Attachment F, Section A.8	Flow-weighted composite sampling
Attachment F, Section E.1.(d)	Establishing at least two stations along the mainstems of each major watershed river for the Pyrethroid Insecticides Study.

## XII. Miscellaneous Detail Comments

During our review of the Tentative Order, we noted several inconsistencies in the language between the various subparts and reference corrections. The ones we identified are listed in Table 3 below.

Table 3. Minor Edit Comments

Permit Section	Permit Language	Comment
Part 5.E.III.1.(b)	...the project shall comply with the surface discharge requirements of 5.E.III.4	Subpart 5.E.III.4 does not appear in the permit.
Part 5.E.III.2.(a)(3)(A)	...until Permittees complete Hydromodification Control Plans (HCPs), described in subpart 5.E.III.3(a)(3)	Subpart 5.E.III.3(a)(3) does not appear in the permit.
Part 5.G.2.(a), Finding 17	Each Permittee shall implement the activity specific BMPs listed in Table 9...	This part and finding should refer to Table 10.
Part 5.G.7	vii. Public Industrial Activities Management	This part does not appear in the permit. Is this intended to be operations as reference in Pat 5.G.5?

Permit Section	Permit Language	Comment
Part 5.G.10	x. Infrastructure Maintenance	This part does not appear in the permit. It appears to be redundant with Part 5.G.5 Storm Drain Operation and Management.
Part 7	Industrial Activities Storm Water General Permit (IASGP)...	Previous permits utilize GIASP as an acronym. The definition of GIASP on Page 101 should indicate that IASGP was formerly known as GIASP and that they are interchangeable.
Attachment F Section E.1.(s)	The study shall be repeated in the fifth year of the permit term.	This contradicts Section E.I.iv. where it states "trends shall be assessed over the permit term."
Attachment H Part 1.C. 1(a) through 4(a)	Monitoring results no later than 45 days from sample collection date.	The 45 days monitoring results submittal is inconsistent with what is specified in Attachment F, which states 90 days (Page F-12, Item 17)



City Council  
Stephen A. Del Guercio Mayor  
Laura Oltrasso Mayor Pro Tem  
Gregory C. Brown  
David A. Spence  
Donato F. Voss

April 5, 2009

Ms. Tracy J. Egoscue  
Executive Officer  
Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Attention: Tracy Woods

Subject: Comments on the Draft Ventura County NPDES permit

Dear Ms. Egoscue:

I have been following the development of the Ventura County NPDES permit for several reasons. First, it is likely that this document will form the basis for the overdue Los Angeles County NPDES permit. Second, each new permit contains added requirements that impact the Local Agencies significantly. In these hard economic times, while water quality is important, it seems that the permits are designed for one thing, to keep lawyers in courts arguing about details that are at best marginally effective.

The following comments are broken up into two categories. First, I will list a series of editorial corrections that need to be made so that the document makes sense to the lawyers who will spend hours pouring over the document. Second, I will provide suggestions or criticisms of the permit content. I hope that the first comments do not have to be brought up at the Public Hearing. While I hope that the second group causes a reevaluation of the whole permit process.

I had the occasion to review the San Francisco Bay area NPDES permit. I was pleasantly surprised by its attempt to acknowledge the Maximum Extent Practicable (MEP) requirements in the Federal Regulations, unlike the Region 4 draft permits that are heavily weighted toward the Numeric limit side of the equation. As a person involved with Municipal Governance I will here state a preference to the San Francisco Bay area approach over the Los Angeles Regional Board approach.

### Editorial Comments

I believe that the following comments are purely editorial and are not presented to change the intent or the requirements of the draft permit.

1. I am well aware that this is a complex document and it is likely that it was written by several individuals. For consistency purposes I would like to suggest that the format for the paragraphs and subparagraphs be made consistent throughout the permit. For example Part 1 is a relative short section and is organized with A.1.(a).(1).(A) While Part 5 is more complicated and is longer and is organized with A.1.(a).(1).(A) or A.I.1.(a).(1).(A) with the second level in the later organization the Roman Numeral character. I do not care which way you choose to write and organize the document but I would encourage that one and only one system be used to establish subsection levels.
2. Part 4.C on page 38 of the draft permit highlights another organization issue. There is (a) but no other subparagraphs at this level. Should there be an (a) or should the wording following the (a) be included in the paragraph 1 above? In a similar manner there is a subparagraph (1) but no other subparagraphs at that level. Should this language be included with the language in paragraph 1 above?
3. On page 46 the Table 3 label is separated from the actual table. This can be corrected by forcing a page break that will place the label with the Table. On page 47 the same thing happens to the label for Table 4.
4. Reference is made to a USEPA guidance document entitled "Managing Wet Weather with Green Infrastructure: Green Streets" in Part 4.II.1.(a).(7). I have spent time on the USEPA website and could not locate the document. Can you provide a link to the document if the Board wants the information available for the Permittees?
5. In Part 5.E.III.1.(b) (page 55) the paragraph ends with the phrase "...surface discharge requirements of 5.E.III.4". In reviewing the permit I cannot find a subparagraph 4 under the "III. New Development/Redevelopment Performance Criteria" of the "E. Planning and Land Development Program" of "Part 5 Special Provisions". I will freely admit that I may be misinterpreting the reference but I think I have it correct.
6. In Part 5.E.III.1.(c) the wording is not literate. I believe that it should read "All features constructed to render..." with the word 'structured' deleted to make the requirement read correctly.
7. Part 5.E.III is one of those sections of the permit that needs to be reviewed closely to make sure that the subparagraphs are properly organized. Specifically "2. Hydromodification (Flow/Volume/Duration) control Criteria" needs to be verified.

8. On page 68 the 9 in "Table 9" appears to be struck through. This is likely a format error because this is Table 9 and putting a different number would not make sense.
9. Within Table 9 and several other of the Construction BMP tables the titles of the BMP (i.e. scheduling) are underlined. Is this a formatting error or does the underlining mean something? If it has no purpose it should be deleted otherwise the meaning of the underlining should be explained.
10. On page 74 in Part 5.G.I.1.(c) public projects are required to comply with the BMPs as identified in Tables 5, 9, 10. Since Table 5 is the requirements for Nursery Businesses I believe that the reference should be to Tables 6, 9, and 10. Table 6 being the BMPs for construction that disturbs less than one acre.
11. This final item could be considered an editorial correction, though it will be argued that it is changing the nature of the requirement, but I am going to present it as an editorial change. Part 5.G.I.5.(e) appears to impose an unreasonable deadline on permittees in the Ventura County area. It requires that trash excluders or another equivalent device be installed on all catch basins to prevent trash from entering the catch basin. Having just written the Implementation plans for several Los Angeles River Watershed Cities I know that these Cities have eight years to complete the installation of full capture devices on all catch basins. How can it be justified to require Ventura County Cities to do in two years what the LA River Trash TMDL will allow eight years to complete?

#### Permit Provisions

1. Table 1 that has been added to Part 1 of the permit raises more questions than it solves. I strongly recommend deletion of Table 1. For example, the table, in its attempt to clarify the intent of the exempt discharges, has introduced limit issues that are problematic. Natural springs and rising ground water is one of the discharges listed. The table adds a condition under which the discharge is allowed that states "Segregate flow to prevent introduction of pollutants". It is a simple condition until you try to determine what the condition means.

Segregation of the flow means simply keeping it separate from other flows. Springs generally have existed for centuries and as cities need a source of water, they are generally built near the spring so that the water can be delivered with minimum effort to the consumer.

As the Public Agency covered by this permit I need to implement this requirement. How do I segregate the spring flow from flows that it has been commingling with for centuries? How far do I have to segregate the flow? If I put the runoff from the spring in a pipe and release it at the city limit have I complied



with the segregation requirement of the permit? Am I guilty of taking water rights from a neighbor that has enjoyed the use of the water for years?

The segregation is a simple requirement that probably has not been thought out as well as it should. Several other recognized flows contain the same requirement to "segregate". They are air conditioner condensate and reclaimed and potable landscape irrigation runoff.

2. Part 2 of the draft permit "Municipal Action Levels" is a difficult section that will have many comments, so I will only comment on one provision that I see as unreasonable.

These NPDES permits are intended to be implemented to the "Maximum Extent Practicable" for several reasons. First and foremost is the economic cost of treating rain water runoff during a capital event. Second, we are dealing with non-point sources and the ability to solve the problems beyond practicable limits is unrealistic.

Part 2.7 states that "As additional data becomes available through the MRP or from the Regional Subset of the National Dataset, MALs may be revised annually by the Executive Officer in accordance with an equivalent statistical method as that used to establish the MALs in attachment C of this order with a 90 day notification to the Permittees." Recognizing the intent of the Board for the inclusion of this section the Regional Board should recognize the objections that the Permittees have to this provision.

This provision allows the EO to lower or raise the MALs each year during the term of the permit, while it is likely that the implementation of any plan to address the MALs will take the Permittees several years to complete. So, in year one the Permittees begin installing BMPs based on the original MAL. By year two the EO evaluates current data and revises the MAL to 75% of the initial values. To comply the implementation plan must be revised to lower levels to meet the MAL, which may include amending those BMPs installed during year one. If the review process is repeated in each of the following years it is apparent that Permittees will be facing a moving target with BMPs being adjusted each year to meet the new MAL.

Gentlemen, as you well know in these economic conditions, installing and reinstalling BMPs is a waste of tax monies. Let the MAL stand for the term of the permit.

3. Part 4.A.3 establishes a numeric limit for the performance of BMPs as contained in Attachment C, Table 3. Permittees have reviewed the design of these BMPs against standards for the various systems, but never to meet Numeric limits for

the effluent. This table does not consider the design storm or the weather conditions to which the BMP is being exposed. This design standard should be deleted or state as a performance goal rather than a performance limit.

4. Part 4.B.1.(b).(12) needs clarification. It simply states that Permittees shall possess the legal authority to prohibit the discharge of "Trash Container Leachate" to the MS4. There are two questions that need to be clarified. First, on private property, such as a retail center, does the trash area need to be roofed and drained to the sanitary sewer? This is the only way that I know to address all "Leachate" from the trash area. Secondly, must the Permittees have the ability to stop a trash truck on the City streets when there is a flow of liquid from the truck? This problem is one that is better addressed by the Health Department or whatever agency regulates the operation of trash trucks. Certainly the Permittees are not able to regulate the operation of trash trucks and still provide its citizens with reliable and cost effective service.
5. Part 4.B.2.(a) requires the Permittees to possess the legal authority through interagency agreement to control the transfer of pollutants from one agency to another through the MS4. Since these interagency agreements do not exist at this time and the permit implementation deadline is 90-days after adoption it is highly unlikely that all agencies can comply in that short period of time. I suggest that this provision be given two years for the agreements to be created.
6. Part 5.I.1.(e) establishes a new priority for the consideration of BMPs for Priority Projects. While the priority is clear the rationale for dismissing a category of BMPs is not clear. The Board must provide guidance in the permit so that Permittees are not second guessed every time that they allow a lower priority of BMP rather than the first priority of infiltration. As an example, in hillside communities the geotechnical profession will be reluctant to allow infiltration or vegetated swale because they will see the introduction of water into the ground leading to site instability. This may or may not be accurate, but the profession does not want to be sued if a landslide occurs and the lawyer for the property owner points to the water quality system as the cause. The Board must provide guidance for the Permittees so that they have the assurance that the Board staff or the environmental community does not file Notices of Violation against the Permittees over this priority.
7. Part 5.II.1.(a).(7) Creates an unreasonable level for the implementation of Water Quality improvements for city street projects. The private project will be required to implement Water Quality BMPs because it is captured through one of the other project descriptions, but by imposing this description as a New Development project the bar is set too low for municipal projects. The 25,000 square foot limit amounts to less than one city block designated for a simple overlay and the city will be required to expand the scope of work to include Water Quality

improvements that are not funded by the normal street maintenance funding sources. Thus the city will be forced to delay needed resurfacing until a source of funding can be found. I believe that the trigger for street improvement projects cannot be square feet of resurfacing, but rather the cost of the proposed construction. I believe that if the construction cost was set at \$250,000 or larger the cities could address the needed water quality improvements for a project of that size.

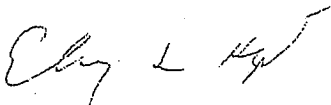
8. Part 5.III.3.(a) sets an impossible standard for the permittees to meet. The last sentence of this section states "This shall be accomplished by maintaining the project's pre-project storm water runoff flow rate and duration." The runoff from an undeveloped site is a function of the infiltration capacity of the soil, the steepness of the land and the intensity of the rainfall. Without defining the standard that must be met in great detail, the city cannot be expected to satisfy the Boards expectation. The previous sentence allows for an increase of the discharge from the developed site, while the quoted sentence gives no leeway for an increase of runoff. This conflict and the impossible standard cannot be included in the permit.
9. Part 5.E.V.2.(a) must be clarified. It appears that the amendment of any listed element will trigger a full General Plan Amendment to incorporate water quality and quantity management considerations. If this is in fact the Boards intent, the requirement imposes on the Permittees a significant unanticipated cost. General Plan Updates go for anywhere from \$200,000 to \$500,000 depending on the size of the City. Elements are much more reasonable to amend and the inclusion of Water Quality and Quantity provisions in an element that the Permittee is intending to amend does not significantly add to the cost of the amendment. If this is not the intent the wording must be clarified to ensure that the Permittees and the environmental community both understand the requirement.
10. Part 5.F.5.(a).(1) proposes a double standard that is unreasonable to Permittees. Since the very first State General Construction Activity Permit the State has used the standard that the applicant must file an NOI, pay the permit fee and prepare the SWPPP. The Applicant has never received a written approval for this document. In fact the State General Permit does not require any review of the document. Now the Board is imposing a requirement "for the Permittees review and written approval prior to the issuance of grading or construction permit for construction or demolition projects." For the very same reasons that the State does not review the SWPPP the Permittees object to be required to commit manpower and resources to the approval of these documents. If the State believes that a local SWPPP for a project that disturbs less than an acre of land is more important than the State SWPPP for a project that disturbs 50 acres of land I do not see the logic nor do I believe that the State is sending the right message to the construction industry.

11. Part 5.H.1.2 must be clarified by the Board. It appears that the Board is requiring the Permittees to maintain a hotline for the reporting of IC/ID complaints. What needs to be clarified is if this requirement is met with the County wide Hotline or if each permittee is required to operate and notify the public of the telephone hotline number? If each permittee is required to implement a hotline this will be a significant burden on small cities. This makes no sense since it is unlikely that, based on past history, there will be many calls to the Hotline. I believe that the County wide Hotline is the most logic solution to this issue.

Thank you for this opportunity to comment on the Ventura County Draft permit. As stated earlier, this draft permit is being followed to address the future impacts if this permit is edited and submitted as the next Los Angeles County MS4 permit. Please provide a fair hearing for these issues. I realize that too much time and effort has gone into the draft permit, but I believe that the Board Staff should consider following the San Francisco process for writing the MS4 permits.

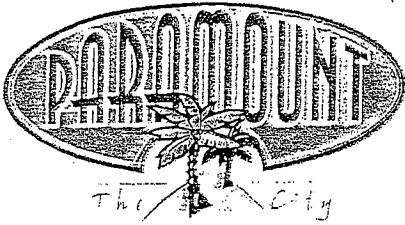
Sincerely,

City of La Cañada Flintridge



Elroy Kiepke  
NPDES Consultant

EK:mec (06130)  
95600-09/L04



DIANE J. MARTINEZ  
Mayor

TOM HANSEN  
Vice Mayor

GENE DANIELS  
Councilmember

DARYL HOFMEYER  
Councilmember

PEGGY LEMONS  
Councilmember

April 6, 2009

Ms. Tracy J. Egoscue  
Executive Officer  
Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Attention: Tracy Woods

Comments on the Draft Ventura County NPDES permit

Dear Ms. Egoscue:

The City of Paramount has been following the development of the Ventura County NPDES permit for several reasons. First, it is likely that this document will form the basis for the overdue Los Angeles County NPDES permit. Second, each new permit contains added requirements that impact the Local Agencies significantly.

Our staff has had the occasion to review the San Francisco Bay area NPDES permit and support its attempt to acknowledge the Maximum Extent Practicable (MEP) requirements in the Federal Regulations. We believe that the San Francisco Bay area approach is more effective over the Los Angeles Regional Board approach.

#### Editorial Comments

We believe that the following comments are purely editorial and are not presented to change the intent or the requirements of the draft permit.

1. For consistency purposes we would like to suggest that the format for the paragraphs and subparagraphs be made consistent throughout the permit. For example Part 1 is a relative short section and is organized with A.1.(a).(1).(A) While Part 5 is more complicated and is longer and is

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Tracy J. Egoscue  
Comments on the Ventura County  
Draft NPDES permit  
April 5, 2009

- Organized with A.1.(a).(1).(A) or A.I.1.(a).(1).(A) with the second level in the later organization the Roman Numeral character.
2. Part 4.C on page 38 of the draft permit highlights another organization issue. There is (a) but no other subparagraphs at this level. Should there be an (a) or should the wording following the (a) be included in the paragraph 1 above? In a similar manner there is a subparagraph (1) but no other subparagraphs at that level. Should this language be included with the language in paragraph 1 above?
  3. On page 46 the Table 3 label is separated from the actual table. This can be corrected by forcing a page break that will place the label with the Table. On Page 47 the same thing happens to the label for table 4.
  4. Reference is made to a USEPA guidance document entitled "Managing Wet Weather with Green Infrastructure: Green Streets" in Part 4.II.1.(a).(7) We have spent time on the USEPA website and could not locate the document. Can you provide a link to the document if the Board wants the information available for the Permittees?
  5. In Part 5.E.III.1.(b) (page 55) the paragraph ends with the phrase "...surface discharge requirements of 5.E.III.4" In reviewing the permit we cannot find a subparagraph 4 under the "III. New Development/Redevelopment Performance Criteria" of the "E. Planning and Land Development Program" of "Part 5 Special Provisions".
  6. In Part 5.E.III.1.(c) the wording is not literate. We believe that it should read "All features constructed to render..." with the word 'structured' deleted to make the requirement read correctly.
  7. Part 5.E.III is one of those sections of the permit that needs to be reviewed closely to make sure that the subparagraphs are properly organized. Specifically "2. Hydromodification (Flow/Volume/Duration) control Criteria" needs to be verified.
  8. On page 68 the 9 in "Table 9" appears to be struck through. This is likely a format error because this is Table 9 and putting a different number would not make sense.
  9. Within Table 9 and several other of the Construction BMP tables the titles of the BMP (i.e. scheduling) are underlined. Is this a formatting error or does the underlines mean something? If it has no purpose it should be deleted otherwise the meaning of the underlining should be explained.
  10. On page 74 in Part 5.G.I.1.(c) public projects are required to comply with the BMPs as identified in Tables 5, 9, 10. Since Table 5 is the requirements for Nursery Businesses we believe that the reference should be to Tables 6, 9, and 10. Table 6 being the BMPs for construction that disturbs less than one acre.
  11. Part 5.G.I.5.(e) appears to impose an unreasonable deadline on permittees in the Ventura County area. It requires that trash excluders or another equivalent device be installed on all catch basins to prevent trash from entering the catch basin

Tracy J. Egoscue  
Comments on the Ventura County  
Draft NPDES permit  
April 5, 2009  
Permit Provisions

1. Table 1 that has been added to Part 1 of the permit raises more questions than it solves. We strongly recommend deletion of Table 1. For example, the table, in its attempt to clarify the intent of the exempt discharges, has introduced limit issues that are problematic. Natural Springs and rising ground water is one of the discharges listed. The table adds a Condition under which the discharge is allowed that states "Segregate flow to prevent introduction of pollutants". It's a simple condition until you try to determine what the condition means. Segregation of the flow means simply keeping it separate from other flows. Springs generally have existed for centuries and as Cities need a source of water, they are generally built near the spring so that the water can be delivered with minimum effort to the consumer. As the Public Agency covered by this permit we need to implement this requirement. How do we segregate the spring flow from flows that it has been commingling with for centuries? How far do we have to segregate the flow? If we put the runoff from the spring in a pipe and release it at the City limit have we complied with the segregation requirement of the permit? Are we guilty of taking water rights from a neighbor that has enjoyed the use of the water for years? The segregation is a simple requirement that probably has not been thought out as well as it should. Several other recognized flows contain the same requirement to "segregate". They are air conditioner condensate and reclaimed and potable landscape irrigation runoff.
2. Part 2 of the draft permit "Municipal Action Levels" is a difficult section that will have many comments, so we will only comment on one provision that we see as unreasonable. These NPDES permits are intended to be implemented to the "Maximum Extent Practicable" for several reasons. First and foremost is the economic cost of treating rain water runoff during a capital event. Second, we are dealing with non-point sources and the ability to solve the problems beyond practicable limits is unrealistic. Part 2.7 states that "As additional data becomes available through the MRP or from the Regional Subset of the National Dataset, MALs may be revised annually by the Executive Officer in accordance with an equivalent statistical method as that used to establish the MALs in attachment C of this order with a 90 day notification to the Permittees." Recognizing the intent of the Board for the inclusion of this section the Regional Board should recognize the objections that the Permittees have to this provision. This provision allows the EO to lower or raise the MALs each year during the term of the permit, while it is likely that the implementation of any plan to address the MALs will take the Permittees several years to complete. So, in year one the Permittees begin installing BMPs based on the original MAL. By year two the EO evaluates current data and revises the MAL to 75% of the initial values. To comply the implementation plan must be revised to lower levels to meet the MAL, which may include amending

those BMPs installed during year one. If the review process is repeated in each of the following years it is apparent that Permittees will be facing a moving target with BMPs being adjusted each year to meet the new MAL. Gentlemen as you well know in these economic conditions installing and reinstalling BMPs is a waste of tax monies. Let the MAL stand for the term of the permit.

3. Part 4.A.3 establishes a numeric limit for the performance of BMPs as contained in Attachment C, Table 3. Permittees have reviewed the design of these BMPs against standards for the various systems, but never to meet Numeric limits for the effluent. This table does not consider the design storm or the weather conditions to which the BMP is being exposed. This design standard should be deleted or state as a performance goal rather than a performance limit.
4. Part 4.B.1.(b).(12) needs clarification. It simple states that Permittees shall possess the legal authority to prohibit the discharge of "Trash Container Leachate" to the MS4. There are two questions that need to be clarified. First, on private property, such as a retail center, does the trash area need to be roofed and drained to the sanitary sewer? This is the only way that we know to address all "Leachate" from the trash area. Secondly, must the Permittees have the ability to stop trash truck on the City streets when there is a flow of liquid from the truck? This problem is one that is better addressed by the Health Department or whatever agency regulates the operation of trash trucks. Certainly the Permittees are not able to regulate the operation of trash trucks and still provide its Citizens with reliable and cost effective service.
5. Part 4.B.2.(a) requires the Permittees to possess the legal authority through interagency agreement to control the transfer of pollutants from one agency to another through the MS4. Since these interagency agreements do not exist at this time and the permit implementation deadline is 90-days after adoption it is highly unlikely that all agencies can comply in that short period of time. We suggest that this provision be given two years for the agreements to be created.
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- environmental community does not file Notices of Violation against the Permittees over this priority.
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  8. Part 5.III.3.(a) set an impossible standard for the permittees to meet. The last sentence of this section states "This shall be accomplished by maintaining the project's pre-project storm water runoff flow rate and duration." The runoff from an undeveloped site is a function of the infiltration capacity of the soil, the steepness of the land and the intensity of the rainfall. Without defining the standard that must be met in great detail, the City cannot be expected to satisfy the Boards expectation. The previous sentence allows for an increase of the discharge from the developed site, while the quoted sentence gives no leeway for an increase of runoff. This conflict and the impossible standard cannot be included in the permit.
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  10. Part 5.F.5.(a).(1) proposes a double standard that is unreasonable to Permittees. Since the very first State General Construction Activity Permit the State has used the standard that the applicant must file an NOI, pay the permit fee and prepare the SWPPP. The Applicant has never received a written approval for this document. In fact the State General Permit does not require any review of the document. Now the Board is

Tracy J. Egoscue  
Comments on the Ventura County  
Draft NPDES permit  
April 5, 2009

imposing a requirement “for the Permittees review and written approval prior to the issuance of grading or construction permit for construction or demolition projects.” For the very same reasons that the State does not review the SWPPP the Permittees object to be required to commit manpower and resources to the approval of these documents. If the State believes that a local SWPPP for a project that disturbs less than an acre of land is more important than the State SWPPP for a project that disturbs 50 acres of land we do not see the logic nor do we believe that the State is sending the right message to the construction industry.

11. Part 5.H.1.2 must be clarified by the Board. It appears that the Board is requiring the Permittees to maintain a hotline for the reporting of IC/ID complaints. What needs to be clarified is if this requirement is met with the County wide Hotline or if each permittee is required to operate and notify the public of the telephone hotline number? If each permittee is required to implement a hotline this will be a significant burden on small cities. This makes no sense since it is unlikely that, based on past history, there will be many call to the Hotline. We believe that the County wide Hotline is the most logic solution to this issue.

Thank you for this opportunity to comment on the Ventura County Draft permit. As stated earlier, this draft permit is being followed to address the future impacts if this permit is edited and submitted as the next Los Angeles County MS4 permit. Please provide a fair hearing for these issues. We realize that too much time and effort has gone into the draft permit, but we believe that the Board Staff should consider following the San Francisco process for writing the MS4 permits.

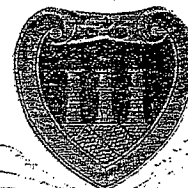
CITY OF PARAMOUNT



Christopher S. Cash  
Director of Public Works

cc: Bill Pagett, City Engineer  
Elroy Kiepke, NPDES Coordinator

# City of San Marino



RECEIVED

April 2, 2009

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Ms. Tracy Egoscue, Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles California, 90013

**Subject: Comments regarding the proposed Municipal Separate Storm Sewer System (MS4) Permit for Ventura County.**

Dear Ms. Egoscue:

The following comments have been provided by Chief John Penido, of the San Marino Fire Department, to express his concern over the impacts to Fire Service Preparedness if the language contained within the Draft Ventura County MS4 permit is adopted in its current form. Fire Departments throughout California are dealing with the same economic conditions that the State and Federal Governments are addressing with legislation. Funds are not available for many of the training activities that the fire service once enjoyed. Now the Water Board is proposing to impose restrictive new conditions on the fire service as they go about their assignment of protecting the life, safety and welfare of the residents of their communities.

Part 1.A.1.(c).(2) lists "Category B – Flows from emergency fire fighting activities." As an exempt discharge when they are not the source of pollutants that exceed water quality standards. Table 1 contains a condition under which the discharge is allowed. The condition is "Pooled water after fire must be controlled." This limit will put fire departments statewide in a difficult position.

Everyone understands that putting water on a fire is in direct response to the fire emergency. In addition, during the period when the debris is still smoldering and the fire fighters are making sure that the fire is out, the overhaul of the site, that activity is also part of the emergency.

The difficulty comes when the fire is out and the fire department begins the final part of their responsibility. Currently, the fire fighters transition from the emergency response to the event clean up. The water that the fire department has applied during the emergency must be dealt with because it will continue to damage the weakened structure. If they must stop to set up BMPs or, worse, turn the site over to Hazmat for the removal of the remaining water, assuming that it is contaminated with chemicals, it will increase costs and become a burden on the property owner and the tax paying public. Since every site is unique, it is impossible for the fire department to respond with the necessary material and equipment to implement effective BMPs for every situation. So the fire department is required to either tell the property owner that the cleanup is his responsibility or they must try to implement a "universal" BMP that may or may not be effective to deal with the pooled water at the site. **I would ask that the Board expand the definition of the emergency to include the "Pooled Water after fire".**

Another indirect impact of the provisions of Part 1.A.1.(c).(3) is an unintended impact on fire service training. While the hydrostatic testing of fire hydrants is not the responsibility of the fire department it serves two purposes in assuring that the fire department is ready and able to respond to an emergency.

During the training that fire personnel undergo, on a regular basis, they will drive to a predefined area and practice the deployment of equipment that will include the flowing of a fire hydrant. This assures the fire department that water is available for their use at this location in sufficient quantity for them to be effective in an emergency. The condition contained in Table 1 will limit the fire department's ability to use this element in training. The condition itself is complex and states "discharges from water lines and potable water sources shall be dechlorinated, pH adjusted if necessary, reoxygenated, and volumetrically and velocity controlled to prevent resuspension of sediment." How would the fire crew know the answer to these questions? With the Board's consideration of the Potable Water System Discharge permit is this provision needed in the MS4 permit?

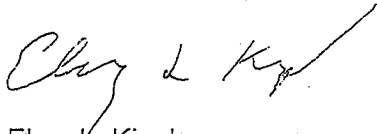
I believe that the draft permit will have negative effects on the emergency response the public expects from fire departments. This unintended affect should be sufficient for the Board to return the permit to its previous wording to (1) remove the specific condition for the treatment of pooled water from a fire emergency, and (2) to allow the occasional discharge of potable water by fire departments when training for emergency response.

The fire departments statewide are charged with protecting the health, safety and welfare of the communities and their citizens. The fire department does not knowingly or willfully pollute the waters of the state or the nation, but when an emergency confronts the fire departments of this state they must be able to attack the emergency with a focus that protects the public and themselves.

Thank you for considering this comment during your deliberations.

Sincerely,

CITY OF SAN MARINO



Elroy L. Kiepke  
NPDES Consultant  
on behalf of Chief John Penido  
San Marino Fire Department

ELK:mec (06130)  
95600-09/L03

# LOS ANGELES RIVER

WATERSHED MANAGEMENT COMMITTEE

ALHAMBRA

ARCADIA

BELL

BELL GARDENS

BURBANK

COMMERCE

COMPTON

CUDAHY

EL MONTE

GLENDALE

HIDDEN HILLS

HUNTINGTON PARK

LA CANADA FLINTRIDGE

LOS ANGELES - CITY

LOS ANGELES FLOOD CONTROL

LOS ANGELES - COUNTY

LYNWOOD

MAYWOOD

MONROVIA

MONTEBELLO

MONTEREY PARK

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PASADENA

ROSEMEAD

SAN FERNANDO

SAN GABRIEL

SAN MARINO

SIERRA MADRE

SIGNAL HILL

SOUTH EL MONTE

SOUTH GATE

SOUTH PASADENA

TEMPLE CITY

VERNON

April 9, 2009

Tracy Egoscue, Executive Officer  
California Regional Water Quality Control Board, Los Angeles Region  
320 West 4<sup>th</sup> Street 200  
Los Angeles, California 90013

**Subject: Comments on the Proposed Ventura County Permit**

Dear Ms. Egoscue:

It is the understanding of the Los Angeles River Watershed Management Committee (LARWMC) that the Ventura Permit will serve as the template for the next Los Angeles Countywide MS4 permit. As such, although the permittees of the LARWMC will not be directly affected by the Ventura permit, the eventual content of the proposed Ventura Permit is of particular interest. Below are several comments. Please note that this is not intended to be a comprehensive listing of comments, but rather a consensus of the most important issues. It is anticipated that individual permittees will be submitting their own comments and your attention to those additional submittal is appreciated.

1. First, we would like to compliment the Board's staff on the flexibility shown in working with the Municipal Action Levels (MALs), which are now more along the lines of a monitoring effort rather than a compliance program. We hope this flexibility continues. The concern is that many of the MALs are for metals which are already being covered in the Los Angeles River under the Metals TMDL and the permittees hope to avoid duplicative monitoring programs.

2. The permittees also appreciate the inclusion of several post-construction treatment BMPs that will satisfy the concept of "Low Impact Development" (LID). The sole reliance on infiltration BMPs is not always applicable, especially in areas of: high-groundwater, impermeable soils and liquefaction zones. The concept of LID is a somewhat vague term and often

is in conflict with development in already built-out high density areas and it is hoped that a satisfactory working definition can be developed as part of the next Los Angeles County MS4 permit.

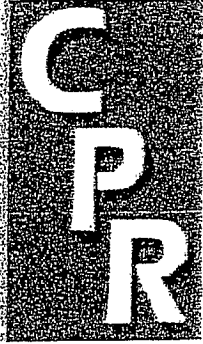
3. We are requesting more clarity in the wording of the post construction treatment section (Section 5.E.III.1). The goal for developed areas is an EIA of 5 percent or less, unless infeasible. But there is no definition of what constitutes "infeasible". Of further concern is that if a development cannot meet the 5 percent EIA and is unable to install other treatment BMPs to meet the 85 percentile criteria, the development can pay a stormwater mitigation fee. Aside from giving developments an alternative for not installing treatment BMPs: How much are the fees? Who sets them? And of course, who are the fees payable too?
4. Having completed field screening for all storm drains 36 inches and larger for illicit connections under the previous MS4 permit, this process will now have to be repeated for all storm drains 18 inches and larger (for the upcoming Los Angeles MS4, this should be "between 18 inches but less than 36 inches) and all storm drains over 50 years of age (recommend "unless screening has already been completed"). For the most part, the few number of illicit connections found has not justified the expense of this effort. The manual that the proposed Ventura Permit references, includes several screening methods and permittees must be allowed to use the most cost effective method.
5. In the past MS4 permits, there has been great concern among public agencies regarding the lack of clarity regarding existing roads and streets and whether these will need to be retrofitted with post construction BMPs when repaired or resurfaced. We appreciate the Tentative Ventura Permit's recognition that this would be essentially impossible to achieve for existing roadways and requires post construction BMPs only in cases of road widening. We do request that further dialogue be held between the Regional Board and public agencies regarding the proposed requirement of post-construction BMPs for construction of roads, highways construction of 10,000 square feet or more. The primary concerns are to make certain that any post-construction BMPs do not inadvertently compromise road safety and performance.
6. The Receiving Water Limitation provisions as proposed seem to add a level of complication and additional effort should be made in order to make these more straightforward. The wording appears to make the permittees (or potentially a third party) responsible for identifying when exceedances occur. The Regional Board should take a leadership position in informing permittees when a RWL violation or exceedance occurs. Without this leadership by the Board, there will very likely be inconsistency by all upstream permittees as to whether to report (or not to report) the same exceedance. It is recommended that the RWL language should replace the word "violation" with the word "exceedance".
7. Finally, we would ask that the wording indicating that compliance with TMDLs, regardless of whether they are authored by the Regional Board or US EPA will not go into effect until an implementation plan and schedule has been developed and gone through a stakeholder hearing and Board's approval process, is carried into the Los Angeles MS4 permit.

Once the first draft for the MS4 permit for the Los Angeles County area is released, we anticipate submitting more extensive comments. We hope that the Board continues to demonstrate flexibility in working with permittees on the various issues. Thank you for the opportunity to comment on this permit. Please feel free to contact me at 562-802-7880 extension 25 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "John L. Hunter". The signature is written in a cursive style with a long horizontal stroke extending from the end of the name.

John L. Hunter  
Chair



# COALITION FOR PRACTICAL REGULATION

"Cities Working on Practical Solutions"

April 10, 2009

VIA E-MAIL

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Control Board  
320 W. 4<sup>th</sup> Street, #200  
Los Angeles, CA 90013-2343  
VenturaMS4Comments041009@waterboards.ca.gov

**Subject: Comments on Tentative Order – Ventura County  
Municipal Separate Storm Sewer System Permit**

Dear Ms. Egoscue:

I am writing on behalf of the Coalition for Practical Regulation, an *ad hoc* group of 39 cities in Los Angeles County that have come together to address water quality issues. We thank the Los Angeles Regional Water Quality Control Board for the opportunity to provide these comments regarding the Tentative Ventura County MS4 Permit. Although our member cities are not in Ventura County, we understand that the Ventura Permit is likely to be used as a model for future MS4 permits in the region. As we have stated in comment letters related to previous drafts of the permit, to that end, we are extremely interested in the process of creating a workable draft MS4 permit for Ventura County.

CPR appreciates the efforts of Regional Board staff to continue to improve upon previous drafts of the Ventura County MS4 permit. The two-day Ventura County MS4 Program Permit Reissuance Coordination Meeting held by the Regional Board in February 2008 provided a forum for Permittees and other interested parties to express their views and concerns. Subsequent to the Third Draft Permit, Board staff worked collaboratively with stakeholders to further improve the draft permit. This effort is consistent with the desires expressed by Regional Water Board members at the April 2, 2009 Board Workshop on the Triennial Review. Several Board members expressed a desire to move forward in a transparent, collaborative manner based on sound science and consideration of stakeholder concerns and needs.

The changes in the Permit have greatly reduced implementation costs. Ventura County Permittees have estimated that implementation of the Tentative Order would now cost approximately \$60 - \$100 per household per year, as opposed to a projected \$600 per household per year to implement the previous draft permit. This is a significant

ARCADIA  
ARTESIA  
BALDWIN PARK  
BELL  
BELL GARDENS  
BELLFLOWER  
CARSON  
CERRITOS  
COMMERCE  
COVINA  
DIAMOND BAR  
DOWNEY  
GARDENA  
HAWAIIAN GARDENS  
INDUSTRY  
IRVINDALE  
LA CAÑADA FLINTRIDGE  
LA MIRADA  
LAKEWOOD  
LAWDALE  
MONTEREY PARK  
NORWALK  
PALOS VERDES ESTATES  
PARAMOUNT  
PICO RIVERA  
POMONA  
RANCHO PALOS VERDES  
ROSEMEAD  
SANTA FE SPRINGS  
SAN GABRIEL  
SIERRA MADRE  
SIGNAL HILL  
SOUTH EL MONTE  
SOUTH GATE  
SOUTH PASADENA  
VERNON  
WALNUT  
WEST COVINA  
WHITTIER



improvement that will facilitate the ability of municipal permittees to better comply with permit requirements. However, the Tentative Order still contains several requirements that remain problematic in terms of implementation. The use of Municipal Action Levels (MALs), although greatly improved from the Third Draft Permit, will still be costly as proposed. Further, the land development sections are extremely prescriptive, particularly with respect to the restrictions on effective impervious area (EIA) and redevelopment projects. Specifically, we will be commenting on the following:

- The overly prescriptive and restrictive nature of the Tentative Order;
- Permit coverage;
- The appropriate use of Municipal Action Levels (MALs) as true action levels;
- The definition of Maximum Extent Practicable (MEP);
- The need for definitions of “pre-project” and “pre-developed condition;”
- The Redevelopment Project Area Master Plan (RPAMP);
- The inappropriate application of a watershed effective impervious area ratio to individual projects;
- The inclusion of a development construction program that unnecessarily duplicates many elements of the Construction General Permit under development by the State Water Board;
- The lack of emphasis on true source control, especially the sources of atmospheric pollutants;
- The benefits of implementing TMDLs through Memoranda of Understanding;
- The attempts in the Findings to deny that the Draft Permit contains unfunded mandates:  
and
- The concerns of the Los Angeles Fire Chiefs Association regarding the Tentative Order.

### **The Tentative Order Is Prescriptive and Overly Restrictive**

A general concern of CPR is that the Tentative Ventura County Permit is still too complex, extremely prescriptive and overly restrictive. For instance, Parts 4.G, 5.D, 5.F and 5.G contain several tables telling local agencies which BMPs they should require of others and which BMPs they should use on public projects. The Permittees would be required to petition the Executive Officer for permission to use alternative BMPs. (See Finding F.8 and Special Provision 5.A.2(a).)

The prescriptive nature of the Tentative Order would limit the flexibility of the Permittees to creatively respond to water quality problems as they arise – particularly given the difficulties inherent in raising fees for stormwater services in the post-Proposition 218 regulatory environment. Staff’s assertion that “the local agency permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order” indicates that staff is still steadfastly holding to some key misunderstandings regarding the reality of municipal funding options. (See Finding E. 7.) In fact, municipalities throughout the state have recently refrained from initiating Proposition 218 stormwater utility fee votes due to the

perception that it is extremely challenging to gain sufficient public support to pass increased fees. This was the case even prior to the current precipitous economic downturn; it would be difficult to imagine a new or increased fee gaining the support required for passage in the current economic climate. The difficulty faced by municipal permittees in trying to generate revenues to fund stormwater measures was recently illustrated in the City of Long Beach, where Measure I was defeated in November 2008. The measure, which would have provided funding for infrastructure, stormwater measures, and wetlands acquisition and restoration, would have cost \$10 per residential unit per month. Passage would have required a 2/3 majority; Measure I received only 52.44 percent of the total votes.

### Permit Coverage

CPR commends the Regional Board staff for including Finding D.3, which recognizes that Permittees may lack legal jurisdiction over certain Federal, State, Regional, or local entities. However, the Finding should go further, or there should be a separate Finding recognizing that "... certain activities that generate pollutants present in urban runoff may be beyond the ability of the permittees to eliminate. Examples of these include operation of internal combustion engines, atmospheric deposition, brake pad wear, tire wear and leaching of naturally occurring minerals from local geography." The source of this language is Order No. R8-2009-0030, The County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County Areawide Urban Storm Water Runoff, scheduled for adoption on April 24 or 25, 2009.

### Municipal Action Levels (MALs)

CPR commends Regional Board staff for working with the Permittees to further revise the municipal action levels (MALs) component of the Tentative Order into a workable method of using quantifiable metrics as a tool to identify subwatersheds requiring additional best management practices (BMPs) to reduce pollutant loads. Reducing the number of conventional pollutants and metals for which MALs are established to a core of common stormwater pollutants will assist the permittees to focus their efforts and, as noted in the Fact Sheet, will lead to appropriate control of the majority of stormwater pollutants.

The MALs, as presented in the Tentative Order, are true action levels consistent with the iterative process in State Water Board Order 99-05. As proposed, the MALs trigger enhanced management measures as called for in the iterative process. As proposed in the Third Draft Ventura Permit, the MALs were not action levels as intended by the State Water Board's Blue Ribbon Panel, but were inappropriate precursors to numeric effluent limits, which then would have become actual numeric effluent limits after three years. These limits would have triggered the installation of BMPs that would be required to meet very strict performance standards based on a national database rather than on local conditions.

The MALs in the Tentative Order have become more applicable to Ventura County since they are now derived from a USEPA climate zone 6 subset of the nationwide database previously

used to develop proposed MALs. Although the climate zone 6 subset is not a strictly local database, it is much more appropriate than the nationwide database.

The use of MALs in the Tentative Order is now consistent with the Findings of the Blue Ribbon Panel and could initiate the implementation of a consistent approach to implementing the Blue Ribbon Panel's recommended use of Action Levels across the state. The Blue Ribbon Panel defined the concept of an Action Level as follows:

“...the approach of setting an ‘upset’ value, which is clearly above the normal observed variability, may be an interim approach which would allow ‘bad actor’ catchments to receive additional attention. For the purposes of this document, we are calling this ‘upset’ value an Action Level because the water quality discharge from such locations are enough of a concern that most all could agree that some actions could be taken...”

However, CPR is concerned about the relationship between MALs and Total Maximum Daily Loads (TMDLs) in the Tentative Order. Part 4.A.5 does contain general authority for the Executive Officer to approve submittals under an applicable TMDL as fulfilling MS4 permit requirements if the TMDL requirements address substantially similar requirements as the MS4 permit. However, CPR believes that the relationship between MALs and TMDLs could and should be clearly established. Part 2 of the Tentative Order should be rewritten to exempt subwatersheds that would otherwise be required to submit a MAL Action Plan from such requirement if the pollutants are being addressed through a TMDL Implementation Plan adopted by the Regional Board for a Regional Board-adopted TMDL or a USEPA-established TMDL.

#### **Maximum Extent Practicable (MEP)**

CPR thanks Board staff for removing the attempt to define MEP in terms of Municipal Action Levels that was contained in the Third Draft Permit. The definition in Part 7 of the Tentative Order is a more accurate description of the concept of MEP added to the Clean Water Act in 1987. CPR recommends that the definition of MEP in Part 7 be expanded to include the workable definition of MEP included in a 1993 memo from State Water Board Attorney Elizabeth Jennings and included in multiple MS4 permits across the state.

The Elizabeth Jennings memo was also the basis of a definition of MEP contained in proposed California SB 1342 (2002), which defined MEP as follows:

“The ‘maximum extent practicable’ standard means the maximum degree of pollutant reduction achievable through the application of practical, technologically-feasible, and economically achievable best management practices, including but not limited to, pollution control techniques and system design and engineering methods.”

Five of the six points in the proposed SB 1342 definition of technologically feasible and economically achievable were derived from the Elizabeth Jennings memo.

“Technologically feasible and economically achievable best management practices are those practices that satisfy all of the following criteria:

- (1) Demonstrate effectiveness in removing pollutants of concern.
- (2) Demonstrate compliance with subsection (p) of Section 1342 of Title 33 of the United States Code.
- (3) Demonstrate the support and acceptance of the public served by those best management practices.
- (4) Demonstrate a reasonable relationship between the cost of the best management practice and the pollution control result to be achieved.
- (5) Demonstrate technological feasibility to effect the intended pollutant removals, considering soils, geography, topography, water resources, and such other limiting physical conditions as may exist.”

#### **Planning and Development Program Issues**

CPR thanks the Board for removing the prohibition on grading activities for 197 days of the year – inclusion of such a requirement would have had far-reaching impacts both for the building industry and the communities included in the Permit. However, we are concerned about several aspects of the Planning and Development Program in the Tentative Order. First, the Tentative Order uses both the terms pre-project and pre-development. However, “pre-project” is an undefined term, and the definition of “pre-developed condition” in the Tentative Order is a carry-over from the Third Draft Permit that is excessive and unworkable. Part 7 of the Tentative Order defines pre-developed condition as:

“native vegetation and soils that existed at a site prior to first development. The pre-developed condition may be assumed to be an area with the typical vegetation, soil, and storm water runoff characteristics of open space areas in coastal Southern California unless reasonable historic information is provided that the area was atypical.”

It appears that staff previously attempted to define a pre-development condition as the condition of an area prior to European settlement in California, and, although the term pre-project was added in the Tentative Order, the term pre-development was retained. Clearly, a regulation based on such a standard would be unrealistic and unattainable. Much of Southern California has been modified by hunting and gathering activities and agricultural activities that

occurred long before urban development and redevelopment. The definition of pre-development should be rewritten to be consistent with the definition used in the State's Draft Construction General Permit, in which pre-development refers to the condition of a site prior to the development of the specific permitted project on the site. If this change were made to the definition of pre-development, the term pre-project would not need to be used or defined.

In addition to the definitional issues related to "pre-project" and "pre-development," CPR is concerned about other aspects of the Planning and Development Program that are both very prescriptive and premature. Redevelopment is different from new development and should be treated differently. However the Redevelopment Project Area Master Plan (RPAMP) is an inappropriate, cumbersome, and potentially costly alternative post-construction stormwater mitigation program. It is a well-intentioned, complex program that should be replaced with increased flexibility in the entire Planning and Development Program. For instance, low impact development (LID) components of the program should recognize that low impact development is an emerging management measure and not restrict implementation of LID to pre-determined measures or categories of measures. Also, the Southern California LID Manual should be recognized as a potential alternative to updating the Technical Ventura County Technical Guidance Manual for Storm Water Quality Control Measures as was done in the Third Draft Permit.

Furthermore, the New Development/Redevelopment Criteria section of the Planning and Land Development Program in the Tentative Order correctly identifies low impact development measures that would reduce runoff volume through percolation, infiltration, storage, and/or evapo-transpiration. However, the section still inappropriately attempts to apply an effective impervious area (EIA) ratio developed through watershed research to individual project areas. This is wrongly applied and should be deleted from the Tentative Order. The EIA component, if it remains in the Tentative Order, should be expressed as a goal for both new development and redevelopment, not as a strict limit.

The research behind Finding B.12 is based on watershed level research – not individual parcel or project research. There is actually more research on the volume capture approach to controlling urban runoff at the parcel or project level. As the California Stormwater Quality Association (CASQA) noted in its comment letter on the Tentative Order, "pollutant loads increase in direct proportion to increase in runoff volume." Therefore, if runoff volume can be mitigated, pollutant loads will be reduced. The critical element is the reduction of urban runoff, as runoff transports pollutants. The importance of reducing the volume of runoff is reflected in the Tentative Order's water quality mitigation criteria for volumetric treatment control BMPs. CPR recommends that the volume capture approach continue to be the basis for regulation of discharges from new development and redevelopment while more experience is gained with implementation of low impact development measures and reduction of effective impervious area in Southern California.

In addition, CPR requests that the Planning and Development Program in the Tentative Program be revised to recognize the continuum of scales at which water quality management

measures can and should be applied. Depending on local conditions, some measures are appropriate at the parcel, neighborhood, or project level. Others are appropriate at the catchment, subwatershed, and watershed level. Other measures may be regional or statewide, especially those that address true source control and cross-media pollution. An effective water quality protection program will include measures at a variety of scales. CPR recommends that a finding be added to recognize this fact and that the permit not over-emphasize parcel and project scales.

### **The Development Construction Program Unnecessarily Duplicates the Draft Construction General Permit**

The Development Construction Program in the Tentative Order still includes detailed instructions that duplicate requirements in the Construction General Permit currently under development by the State Water Board. Furthermore, the requirement for inclusion of local stormwater pollution prevention plans (SWPPPs) could be interpreted as an attempt by the Regional Water Board to transfer some of the responsibility for enforcing the Construction General Permit to local government. Both the requirement for a local SWPPP and the requirement to regulate construction sites less than one acre should be removed from the Tentative Order. Permittees already regulate smaller projects pursuant to their own ordinances. They should not be required through this Order to specifically regulate small construction projects when USEPA and the State have determined that construction projects greater than one acre are the ones that should be regulated.

### **The Tentative Order Fails to Address True Source Control, Especially the Sources of Atmospheric Deposition Water Pollutants**

We would once again like to thank Regional Board staff for continuing to recognize the adverse impacts of aerial deposition on water quality by keeping Finding B.19 in the Tentative Order. Atmospheric deposition and other cross-media problems demand multi-agency planning and policy coordination, and this Finding indicates that staff is aware of that fact. Inclusion of this Finding is a good start; however, we were surprised and disappointed that an important sentence, removed prior to the issuance of the Third Draft Permit, is still missing. This sentence stated, "The Los Angeles Regional Water Board will coordinate with the South Coast Air Quality Management District, the California Air Resources Board, and other governmental agencies to address multimedia sources of pollution that may contribute to pollution of surface waters."

Stormwater permittees are in a difficult position with respect to regulatory requirements and the authority to implement them. As CPR has noted in previous comments, the combination of directly connected impervious areas and atmospheric deposition of pollutants, in effect, produces a "perfect storm" that dramatically impacts water quality control. The Water Boards are charged with regulating permittees, but do not have regulatory control over some of the major pollutant sources, such as the sources of atmospheric deposition. Removing all pollutants at the end of storm drains would be a prohibitive expense on the order of many

billions of dollars for the Region. Together, Permittees and the Water Boards must go after the true sources of the pollutants discharged from the atmosphere onto to our watersheds.

The Water Boards and the regulated community need assistance from the Air Boards to effectively tackle this problem -- we will not be able to achieve clean water until atmospheric deposition of water pollutants is controlled. The Air Boards must acknowledge that water pollution is one of the public welfare effects that need to be addressed in regulating sources of atmospheric pollution. Municipalities would like to work with the Regional Board to develop a strategy to stimulate more action by the Air Boards.

There are regulatory tools available that could be implemented by the Water Boards to compel the assistance of the Air Boards – California Water Code (CWC) Sections 13146 and 13247. These water code sections could be used by the Water Boards to compel state offices, departments, and boards to comply with state policy for water quality and water quality control plans approved or adopted by the State Water Board. The State Board, in its Resolution 2008-0046 (Approving an Amendment to the Water Quality Control Plan for the Los Angeles Region [Basin Plan] to Establish a Total Maximum Daily Load for Metals in the Los Angeles River), discussed the use of CWC Sections 13146 and 13247. In Whereas clause 10 of that Resolution, State Board staff notes,

“The Los Angeles Water Board and the State Water Board will continue to meet with the SCAQMD and CARB to pursue further studies and to assist in developing appropriate controls.”

Whereas clause 11 of the same Resolution states,

“The State Water Board encourages local municipalities within the urban watersheds in the Los Angeles Region and Los Angeles County also to work with SCAQMD and CARB as appropriate under Water Code sections 13146 and 13247, and all other relevant statutes and regulations.”

CPR strongly encourages the Los Angeles Regional Water Board to address the impacts of atmospheric deposition in the Basin Plan and all MS4 Permits to facilitate use of the authorities granted by CWC Sections 13146 and 13247 to compel the assistance of other state offices, departments, and boards in controlling water pollutants.

The permittee-developed atmospheric deposition project related to the Los Angeles River Metals TMDL to which we referred in our letter dated May 29, 2008 is proceeding. It is a two-year project that involves paired measurements of atmospheric deposition and storm flow. Local governments will be contributing an estimated \$1.5 million to fund this research project.

### Implementation of TMDLs through MOUs

CPR believes that TMDLs should be implemented through enforceable Memoranda of Understanding (MOUs), instead of through MS4 NPDES permits. The implementation of TMDLs through permits as strict numeric “end-of-pipe, never to be exceeded” limits would place municipal permittees in the untenable position of having to defend themselves from third-party litigation should they fail to meet the strict numeric limits proposed in the TMDLs – limits that are not reasonably achievable or practicable.

In a hypothetical scenario, a city that failed to reach an 80% numeric limit by one percent could be exposed to third-party litigation and Regional Board fines. Although the Board would presumably act reasonably, cities have no assurances that citizen litigants would show similar restraint. Further, even the State Water Board’s Blue Ribbon Panel of Experts recognizes BMP performance as imprecise at this time. In light of these facts, the MOU approach would be appropriate. An MOU would allow the Regional Water Board and a municipal permittee to focus on the best course of action to correct any BMP deficiencies and implement a BMP approach, rather than a strict numeric limits approach. Such MOUs could include options to install additional BMPs or support BMPs on a regional level, based on high trash generating outfalls.

EPA previously entered into a Memorandum of Understanding (MOU) with the City of Los Angeles and the Los Angeles Regional Water Quality Control Board (Regional Board) for the development of the TMDLs on the Los Angeles River (CREST), and any agreement entered into with the municipalities involved in TMDL implementation could be based on a similar MOU.

### Unfunded Mandates Finding

The California Constitution prevents State entities – including the State and Regional Boards – from imposing additional obligations on communities without first providing a funding mechanism to address the mandates. The Tentative Order recognizes the need for funds to meet Permit requirements, but does not provide a funding mechanism.

Finding E.7 of the Tentative Order still includes the inaccurate assertion that the Permit does not contain unfunded mandates. As CPR stated in its comment letter to the Regional Board dated May 29, 2008, Finding E.7 of the Tentative Order is an expansion of Finding E.10 in the Second Draft Permit that asserts that the Order “does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution” because the Order implements “federally mandated requirements” under Section 402 of the Clean Water Act. Finding E.7 should not be adopted as a matter of good public policy and, as CPR has noted in previous comments, is otherwise objectionable on several grounds.



The Regional Board has no regulatory jurisdiction to make this Finding. The issue of whether a mandate is an unfunded state mandate is within the exclusive jurisdiction of the Commission on State Mandates (Government Code § 17551 and §17552. See also *Lucia Mar Unified School District v. Honig* [1988] 830, 837, [the question must be decided by the Commission on State Mandates "in the first instance."]) Since the Finding would legally carry no weight, it is not clear why the Regional Board would include such a Finding, particularly when it has never done so in the past.

In addition, it is not clear why the Regional Board would want to assert such a Finding. In doing so, it seeks to restrict State funding that might otherwise be available to assist municipalities with implementing the water quality management programs in the Tentative Order. More funds make it possible to implement more programs. Contrary to the stance Finding E.7 reflects, the Regional Board should assist the permittees in obtaining funds to implement the Permit's programs - not limit funds. It is not clear why the Regional Board would consider it good policy to adopt a Finding that makes less funding available to permittees to implement the programs called for by the Permit.

Thirdly, as noted in CPR's comments on the Third Draft Permit, the proposed Finding raises the same issue raised unsuccessfully by counsel for the Regional Board in the recent *County of Los Angeles v. Commission on State Mandates* (2007) 150 Cal.App.4<sup>th</sup> 898. In that case, the Regional Board argued to the Court of Appeals that an MS4 Permit (in that case, the 2001 Los Angeles County MS4 Permit) "is federally required . . . to implement the Clean Water Act's mandates" (150 Cal.App.4<sup>th</sup> at 916 [citing Attorney General's letter to the court]). The Court of Appeals did not accept this argument, noting that "[w]e are not convinced that the obligations imposed by a permit issued by a Regional Water Board necessarily constitutes federal mandates under all circumstances" and that "the existence of a federal, as contrasted with a state, mandate is not easily ascertainable" (150 Cal.App.4<sup>th</sup> at 914).

Further, even if the Regional Board were qualified to determine that the Order represented an exclusively federal mandate and thus not subject to article XIII B, Section 6, the reasoning set forth in Finding E.7 is faulty. None of the cited cases supports the Finding, which states that the provisions of an MS4 permit are an exclusive federal, and not state, mandate. In the only case to attempt to grapple with that question, *County of Los Angeles, supra*, the Court of Appeals declared itself to be "skeptical" with respect to the issue.

Additionally, even if a program were required in response to a federal mandate, a subvention of state funds may be in order. For example, Government Code § 17556(c) provides that if a requirement is mandated by federal law or regulation, but the [state] "statute or executive order mandates costs that exceed the mandate in that federal law or regulation," a subvention of funds is authorized. Also, as held in *Hayes v. Commission on State Mandates* (1992) 11 Cal.App.4<sup>th</sup> 1564, 1577-78, even if the costs were mandated to implement a federal program, if the "state freely chose to impose the costs upon the local agency as a means of implementing" that federal program, "the costs are the result of a reimbursable state mandate regardless whether the costs were imposed upon the state by the federal government."

Finally, Finding E.7 asserts that provisions in the Order that implement TMDLs are also federal mandates. While it is true that the effluent limitations in the TMDL must be reflected in the Order, the manner in which the TMDL is implemented is not a federal mandate, but is left up to the State. For example, the Regional Board could determine that a series of BMPs are sufficient to reach the waste load allocations in the TMDL, or it could impose the waste load allocations as numerical limits that were required to be met. Thus, as CPR has previously noted, implementation of TMDLs is not necessarily a federal mandate, immune from a required subvention of state funds. As a matter of policy, Finding E.7 should not be included in the permit. The Regional Water Board is not the agency that is authorized to address this issue.

### **Los Angeles Area Fire Chief's Association's Concerns**

In addition, CPR shares the concerns expressed by the Los Angeles Area Fire Chiefs Association in its comment letter dated April 7, 2009. Part 1.A.1.(c).(2) of the Tentative Order lists flows from emergency fire fighting activities as an exempt discharge "when they are not the source of pollutants that exceed water quality standards," and notes that "pooled water must be controlled." The condition for discharge further states that discharges "shall be dechlorinated, pH adjusted if necessary, reoxygenated, and volumetrically and velocity controlled to prevent resuspension of sediment." Placing these prescriptive requirements on Fire Departments may create a situation in which Fire Chiefs and their crews are forced to choose between safety and regulatory compliance, which would be extremely unfortunate. We support the Los Angeles Area Fire Chiefs' requests to remove the Condition for the treatment of pooled water from a fire emergency, and to allow for the occasional discharge of potable water by fire departments when training for emergency response.

### **Recommendations and Conclusions**

CPR recommends that the Regional Water Board direct staff to make the following changes to the Tentative Order before it is brought to the Board for adoption:

- Eliminate the prescriptive tables in Parts 4G, 5D, 5F, and 5G requiring use of specific BMPs.
- Modify Finding D.3 or add a new Finding recognizing that "certain activities that generate pollution present in urban runoff may be beyond the ability of permittees to eliminate," as noted in Order No. R8-2009-0030 (North Orange County Permit).
- Eliminate the prescriptive elements of the Development Construction Program, the requirement for Local Storm Water Pollution Prevention Plans, requirements to regulate construction sites of less than one acre, and any duplication of requirements that are in the State's Draft Construction General Permit due to be adopted this spring or summer.
- Preserve the Municipal Action Levels as true action levels designed to set 'upset' values, which are clearly above the normal observed variability and would allow 'bad actor' catchments to receive additional attention.


Ms. Tracy Egoscue  
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- Rewrite Part 2 of the Tentative Order to exempt watersheds from having to submit an MAL Action Plan if pollutants are already being addressed through a TMDL Implementation Plan for a Regional Board-adopted TMDL or an EPA-established TMDL.
- Expand the definition of MEP to include the workable definition included in a 1993 memo from State Board Attorney Elizabeth Jennings.
- Rewrite the definition of “pre-developed condition” to refer to the condition of a site prior to development of the specific permitted project on the site.
- Within the Planning and Land Development Program, eliminate the application of an EIA ratio developed through watershed research to individual project areas; focus on LID as an emerging management measure and eliminate pre-determined LID measures; add a statement that the Southern California LID Guidance Manual is a potential alternative to updating the Ventura County Technical Guidance Manual for Stormwater Quality Measures.
- Maintain the volume capture approach as the basis for regulation of discharges from new development and redevelopment.
- Revise the Planning and Development Program to recognize the range of scales at which water quality management measures are applied and add a Finding to reflect that an effective program will include measures at a variety of scales.
- Add to Finding B.19 a sentence indicating that your Board “will coordinate with the South Coast Air Quality Management District, the California Air Resources Board, and other governmental agencies to address multimedia sources of pollution that may contribute to pollution of surface waters.”
- TMDLs should not be incorporated into the MS4 permit. Instead, they should be implemented through enforceable Memoranda of Understanding (MOU).
- Eliminate Finding E.7.
- Listen to the Fire Chief’s Associations’ Concerns.

Thank you again for the opportunity to submit these comments on the Tentative Order.

Sincerely,

COALITION FOR PRACTICAL REGULATION

  
Kenneth C. Farfising  
City Manager, City of Signal Hill

# Executive Advisory Committee

## Stormwater Program – County of Los Angeles

April 10, 2009

Tracy Woods, Storm Water Permitting  
Los Angeles Regional Water Quality Control Board  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Re: EAC Comments on the Tentative May 7, 2009 Ventura MS4 Permit

Dear Ms. Woods:

We appreciate this opportunity to comment on the subject document; however because of overlapping Water Quality initiatives (Basin Plan Triennial Review Workshop of April 2, 2009 and Los Angeles River Metals TMDL March 26, 2009), we have not yet had the opportunity to complete our review of this very lengthy and complex document. The EAC representatives reserve the opportunity to provide more comments and suggested permit improvements, as a group or individually, at the proposed May 7, 2009 hearing.

Since it is likely that this document will become a template for future MS4 Permits within Southern Los Angeles County, the EAC and MS4 Permittees have been heartened by on-going discussions between Regional Board staff, Non-Governmental Organizations (NGOs), and our professional associates in Ventura County. This is a commendable and welcome Board initiative that will hopefully reduce the misinterpretations and confusion that has plagued implementation of our current 2001 MS4 Permit. We look forward to reviewing the comments of the Ventura County Permittees and hope to endorse their support for the tentative permit by the time of the adoption hearing. We remain concerned by our current interpretation of the following permit issues:

**Lack of an explicit “Safe Harbor” Clause.** During these perilous fiscal times, state and local agencies are pressed to retain current staffing and service levels, while confronted by hiring freezes and even layoffs. The tentative permit requires several new initiatives that will be difficult to fully fund and implement. The draft permit needs to explicitly acknowledge local good faith efforts at compliance, especially given the lack of communication regarding any deficiencies in implementation of our current permits.

**Municipal Action Levels (MALs).** For the full duration of the tentative permit, MALs must remain a prioritization, rather than enforcement, tool. Most MS4 Permittees would assert that both natural and anthropogenic sources of the MAL pollutants have been insufficiently identified. This assertion extends to State General Industrial Stormwater Permittees, within our municipal boundaries. City staff must be given the opportunity to adapt to the analytical and water quality variability that has always characterized urban runoff and has been repeatedly identified as problematic by Board staff.

**Fire Fighting Flows.** The characterization of "pooled water after fire" on page 30 of 121 is too broad and out of the control of municipal Stormwater Coordinators. These events remain emergencies and exceptional events. We do not believe it is the intent of the Board to assert that local agencies can control these discharges any more than the Board can control mud and ash resulting from brush or forest fires on state lands.

**Emphasis on Enforcement over Source Control.** The tentative permit appears to overly emphasize enforcement, or at least its threat, when source identification and control should remain our current emphasis. The State and Regional Board needs to assist local agencies in cooperatively prioritizing the control of pollution sources, while using the "Maximum Extent Practicable" standard to educate all stakeholders when our shared efforts fall short of public goals. As an example, the State Water Board has encouraged synergy with the Air Board for the control of copper, to little effect. Similarly, local agencies following the assertions of the Board are encouraging legislation to control copper in brake pads, but this legislation will become effective long after the term of this permit.

**Unfunded Mandates Findings.** As stated in previous EAC comments, the Permit should remain silent as to whether this program is an unfunded state mandate. We believe it more appropriate for the State Mandates Commission to make this initial determination based on their superior level of professional experience in the matter.

**Addition of New Definitions.** Based on our initial reading of the tentative permit, the Board needs to work with stakeholders to modify several definitions and develop others. As an example, the Redevelopment Project Area Master Plan (RPAMP), requirements for numeric assessment of areas of disconnected impervious areas and overlapping requirements related to the General Construction Permit leads to the need for new definitions related to pre-development, pre-project and re-development conditions.

Once again the EAC appreciates this opportunity and hopes that your continued efforts at negotiating permit terms with the Ventura County Permittees will result in a less contentious local permit adoption effort. If you wish to further discuss these issues, or seek greater input from the EAC, please feel free to contact me at 562-904-7112.

Sincerely,

Original signed by

Gerald E. Greene, DEnv, PE, QEP  
Chair, Executive Advisory Committee

cc: EAC MS4 Permittee mailing list

Comments From Associations/Commissions/Districts  
Tentative Ventura County  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002



## California Stormwater Quality Association

*Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation*

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April 10, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 W. 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**Subject: Tentative Order - MS4 NPDES Permit for the Ventura Countywide Stormwater Program**

Dear Ms. Egoscue:

Thank you for this opportunity to comment on the February 24, 2009 Tentative Order - MS4 NPDES Permit for the Ventura Countywide Stormwater Program (Tentative Order). Please accept these comments regarding the Tentative Order submitted by the California Stormwater Quality Association (CASQA)<sup>1</sup> on behalf of its members.

CASQA has previously provided comments on the Ventura Countywide draft permits in our 3/7/07, 10/15/07, and 5/29/08 letters to the Regional Board. We have also attended and provided testimony at the 4/5/07 and 9/20/07 workshops regarding the draft Permits. Our comments for the most part were directed to requirements that CASQA believed to have precedential implications for other municipal stormwater permits and programs in California. The three requirements we addressed were:

- Municipal Action Levels (MALs)
- Effective Impervious Area (EIA) Metrics
- Best management practice (BMP) design performance criteria

### Municipal Action Levels (MALs)

We concur with the approach proposed in the Tentative Order. As noted previously, CASQA supports the development of quantifiable metrics to assess the effectiveness of stormwater programs including the concept of Action Levels as recommended by the State's Blue-Ribbon Panel<sup>2</sup>. The Panel's recommendations include:

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<sup>1</sup> CASQA is composed of stormwater quality management organizations and individuals, including cities, counties, special districts, industries, and consulting firms throughout California. Our membership provides stormwater quality management services to over 26 million people in California and includes most every Phase I and many Phase II municipal programs in the State. CASQA was formed in 1989 to recommend approaches for stormwater quality management to the State Water Resources Control Board.

<sup>2</sup> The Feasibility of Numeric Effluent Limits Applicable to Discharges of Storm Water Associated with Municipal, Industrial and Construction Activities, June 2006.

1. Set action levels to identify "bad actors" discharges;
2. Use action levels to trigger aggressive efforts by the permittees to investigate the cause of high runoff concentrations and implement appropriate corrective actions; and
3. Derive action levels from a database that is most relevant to the watershed, including local datasets if sufficient.

We believe the Tentative Order correctly addresses each of these recommendations. First, the MALs, as proposed in the Tentative Order, are set at the 80<sup>th</sup> percentile values for constituents relevant to the Ventura Program. Next, the MALs were derived from a USEPA rain zone 6 database, which reflects the arid/semi-arid conditions we have in Southern California. Finally, the MALs will be used to identify problematic drainage sheds in Ventura County and create an accounting process whereby the MS4s must aggressively investigate the sources and/or causes of the discharges. Thus, the Tentative Order mirrors the State's Blue-Ribbon Panel's recommendations regarding action levels, and will provide the tools for municipalities to focus resources on problematic discharges, as well as provide an appropriate metric for assessing program effectiveness by addressing problematic discharges.

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#### Effective Impervious Area (EIA) Metrics

The Tentative Order continues to include an "Effective Impervious Area" threshold requirement for new development and redevelopment projects as a "driver" for Low Impact Development (LID). While the Tentative Order has been modified to include a LID sizing requirement, the Tentative Order still uses the "EIA" requirement. The use of EIA as a regulatory metric for LID implementation is the subject of considerable debate and concern within the stormwater quality management/science community as well as among urban planners and practicing landscape architects. Specific aspects of this concern include whether this EIA criterion should be used, and, if used, whether it should be applied on a site-by-site basis, and its implications with urban redevelopment, smart growth, and urban sprawl. The proposed EIA criterion needs to be further vetted to ensure that environmentally beneficial societal goals, such as redevelopment, brownfield development, and infill development are encouraged, by the permit, rather than further complicated. CASQA would submit that the stormwater manager must have the flexibility to develop program requirements that will result in the most environmental benefit for the cost.

Another key consideration is to understand the nature of a "cure" of the problem. While there is considerable research that demonstrates a correlation between a decline in stream ecology and an increase in impervious cover (the problem), there is considerable debate on whether a watershed with full implementation of stormwater controls would in fact mitigate the impact of impervious cover<sup>3</sup>. Current research in this area is limited. What is known is that pollutant loads increase in direct proportion to an increase in runoff volume. Thus if the runoff volume can be mitigated then the discharge of pollutant loads to receiving waters will be reduced.

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<sup>3</sup> Impacts of Impervious Cover on Aquatic Systems. Center for Watershed Protection, March 2003.



Consequently, we submit that volume reduction is an appropriate LID metric that relates more directly to the protection of the water quality than an indirect method of EIA<sup>4</sup>.

The other point that CASQA would like to highlight is the apparent implication that the full water quality volume must be retained on-site (see Part 5.E.III.1.(c)-(d)). It appears that in order to meet the 5% EIA, projects must retain the water quality volume on-site through either infiltration or storage and reuse. This approach has serious technical issues, as well as implementation challenges, as discussed below.

First, it is important to consider the definition of low impact development. USEPA uses the following definition:

*A comprehensive stormwater management and site-design technique. Within the LID framework, the goal of any construction project is to design a hydrologically functional site that mimics predevelopment conditions. This is achieved by using design techniques that infiltrate, filter, evaporate, and store runoff close to its source.*  
<http://cfpubl.epa.gov/npdes/greeninfrastructure/information.cfm#glossary> . 03/24/09

This definition suggests that the post development hydrograph reflects (or mimics) the pre-development hydrograph, which means the post development runoff flow and volume is similar to the pre-development runoff flow and volume. As noted above, the Tentative Order appears to require that the entire post development volume must be retained onsite, even if there was some surface runoff in the pre-development condition. We submit that such an approach is inconsistent with the intent of LID and will ultimately lead to a reengineering of the water balance within a watershed.

Given the state of knowledge and the definition of LID, CASQA recommends the following actions:

1. Convene a working group with the Water Boards, permittees, CASQA, researchers, and stakeholders to:
  - Identify an initial list of LID strategies that must be considered for all development and redevelopment projects.
  - Develop an effectual performance standard for LID strategies. This performance standard should consider the lessons learned from actual local projects that used LID strategies and recommendations from other drivers such as urban design (e.g., LEED-ND standard).
  - Produce findings that can form the basis of future permit provisions and LID guidance.

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<sup>4</sup> The Ventura County and Orange County review of this issue "Low Impact Development Metrics in Stormwater Permitting" showed that the use of EIA as a LID compliance metric can be severely abused unless a volume reduction standard is also provided.

2. In the meantime, modify the Tentative Order to reflect these concepts:
  - LID BMPs shall be designed to retain the change in runoff volume from pre-development to post development (“delta v”) for the 85<sup>th</sup> percentile, 24 hour storm event.
  - The goal is to retain the full “delta v” by using the following hierarchy of LID strategies:
    - Infiltration based BMPs
    - Capture and reuse BMPs
    - Evapotranspiration BMPs
  - Any water quality volume that is not retained on site by the LID strategies shall be treated using treatment control BMPs, including biofilters, wetlands, and proprietary BMPs.
  - A rigorous feasibility and performance criteria should be established to support implementation of the BMP hierarchy.

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#### BMP Design Performance Criteria

As noted previously, CASQA generally supports the development of design performance standards for assessing treatment control BMPs. We believe the Tentative Order has been significantly improved from the earlier draft permits by establishing design performance standards for BMP categories instead of by constituents. Such an approach will facilitate program implementation and still provide the permittees with the design performance standards for reviewing and selecting appropriate BMPs. However, we caution the Board in using BMP effluent quality data to establish design performance standards as this raises a series of technical questions and implementation issues that have not been studied by or vetted among the stormwater quality management or science community. It is one thing to define the expected performance of a BMP using a median effluent value, but it is another thing to understand the design criteria to support that performance. BMP performance is a function of the amount of runoff captured for treatment in combination with various design criteria that relate to how water flows through the BMP (for example, drawdown time), along with other design criteria. Current research that directly relates design criteria to effluent concentrations is limited. In fact, on this topic, the State’s Blue-Ribbon Panel noted:

*“It will take a substantial research effort, including data gathering on well-designed BMPs, to develop design criteria...”*

Thus, CASQA recommends that the BMP design performance standard in the Tentative Order be written:

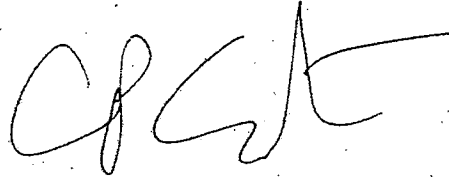
- As a goal rather than as an absolute requirement; and
- To encourage permittees to work with other permittees in the state as well as with CASQA and others to research and develop design criteria for treatment control BMP performance.

CASQA comments to Los Angeles Regional Water Board  
regarding Ventura 2-24-09 Tentative Order

April 10, 2009

We thank you again for the opportunity to submit these comments and to provide our thoughts in developing a more proactive and constructive stormwater quality management permit. If you have questions regarding our comments or recommendations please contact me.

Very truly yours,



Chris Crompton, Chair  
California Stormwater Quality Association

cc: Sam Unger, Supervisor-Regional Programs, Los Angeles Regional Water Board  
Charlie Hoppin, Chair, State Water Board  
Frances Spivy-Weber, Vice-Chair, State Water Board/Liaison, Los Angeles Regional Water Board  
Dorothy Rice, Executive Director, State Water Board  
Jonathan Bishop, Chief Deputy Director, State Water Board  
Bruce Fujimoto, Section Chief-Stormwater, State Water Board  
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April 10, 2009

*Submitted Via Email to:* [VenturaMS4Comments041009@waterboards.ca.gov](mailto:VenturaMS4Comments041009@waterboards.ca.gov)

*Original sent by Overnight Mail*

Attn: Tracy Woods, Storm Water Permitting  
320 W. Fourth Street  
Suite 200  
Los Angeles, California 90013

Re: Comments from Construction Industry Representatives Concerning the April  
2008 Draft Tentative NPDES Permit No. CAS004002 – Ventura MS4.

Dear Ms. Woods:

Thank you for this opportunity to respond to the tentative Waste Discharge Requirements for Municipal Storm Water Discharges within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein (hereinafter, the "4th Draft Permit"), which was released on February 24, 2009, by the staff of the State of California, Los Angeles Regional Water Quality Control Board (the "Board"). The comments herein are those of the following entities, each of which represents the homebuilding industry or related construction and land development industries within the Southern California region that includes Ventura County. Specifically, the comments are from:

- Building Industry Association of Southern California, Inc. ("BIA/SC");
- The Los Angeles/Ventura Chapter of BIA/SC ("LAV"); and
- Building Industry Legal Defense Foundation ("BILD").

BIA/SC is a nonprofit trade association representing more than 1,700 member companies, which together have more than 100,000 employees. LAV, a Chapter of BIA/SC, represents approximately 400 member companies involved in every aspect of building and providing homes in Ventura County and most of Los Angeles County. BILD is a non-profit mutual benefit corporation and wholly-controlled affiliate of BIA/SC. BILD's purposes are to monitor legal and regulatory conditions for the

construction industry in Southern California and intervene as appropriate. BILD focuses particularly on litigation and regulatory matters with a regional or statewide significance to its mission.

During and between the comment periods on four different drafts of the permit, we have met with Board staff in efforts to explain our views on the provisions reflected in those drafts. We have also participated in numerous stakeholder meetings to discuss concerns about the proposed requirements, and submitted extensive comments on the previous drafts. We understand and support the goals of the permit – including the goal of improving water quality by increasing use of low impact development techniques and otherwise influencing land use policy.

In addition to our deep involvement concerning Ventura County, we have similarly been very actively involved in discussions concerning the proposed revisions of similar permits covering different land areas. For example, we have been very involved in discussions concerning the recently released tentative permit for North Orange County (Region 8, the Santa Ana Regional Water Quality Control Board). In addition, we have been working closely with our regulated community counterparts in the San Francisco Bay area.

As our years of involvement have progressed, we have been and remain impressed with the hard work and engagement of the Board's staff. We remain very concerned, however, about some key aspects the 4<sup>th</sup> Draft Permit. Even though some objectionable aspects of the earlier drafts have been removed or corrected, we remain concerned that the 4<sup>th</sup> Draft Permit would in fact damage the land use development process and do substantially harm the already strained economy of Ventura County. Given that the current direction of the Board is to take the requirements of this permit and apply them in the future to LA County, we must again express our disappointment that the 4<sup>th</sup> Draft Permit still fails to the best policy options, despite our efforts to bring science, reason and experience to help craft reasonable and practicable requirements in the new MS4 permit.

In order to emphasize our main concerns, our comments below are aimed mainly at the Land Use Development section of the tentative permit (Section E), as well as the numeric performance standards in the 4<sup>th</sup> Draft Permit.

1. **The proposed permit conditions were not derived following consideration of the statutory factors set forth in California Water Code Section 13241.**

When enacting water quality requirements, the Board is obligated to "balance" using the considerations identified in Water Code section 13241, and made applicable to permit requirements by Water Code section 13263 (in accordance with *City of Burbank v. State Water Resources Control Bd*). This requirement is all the more imperative in the instant circumstance, because there is now – as a consequence of recent litigation – a

judicial cloud over the regional basin plan due to the Board's persistent refusal to consider the Water Code sections 13241 factors are they relate to storm water. Particularly given the status of the basin plan, it is obviously perilous for the Board to again fail to take into account the section 13241 factors.

The 4<sup>th</sup> Draft Permit states, however, that consideration of the Calif. Water Code section 13241 factors is *not* required, suggesting instead that the federal standard for MS4 permitting set forth in 33 U.S.C. section 1324(p)(3)(B)(iii) preempts the need or ability to consider the section 13241 factors. *See* Findings E.25 at p. 21. This legal conclusion is erroneous.

It is true that the relevant federal statute law at issue – 33 U.S.C. section 1324(p)(3)(B)(iii) – directs the Board (here, as the U.S. E.P.A. Administrator's surrogate) to “require controls to reduce the discharge of pollutants to the maximum extent practicable[.]” However, this introductory “maximum extent practicable” directive is what is called “hortatory” (meaning it merely *encourages* or exhorts action) rather than mandatory (indicating any legally enforceable mandate). *See Rodriguez v. West*, 189 F.3d 1351, 1355 (Fed. Cir. 1999) (holding that the express “maximum extent possible” directive of former 38 U.S.C. section 7722(d) was “hortatory rather than to impose enforceable legal obligations”). Because the language is introductory and hortatory, it does not require the Board to impose any and all possible requirements. Instead, the directive is merely a charge to go forth, balance interests, and require *some* reasonable controls.<sup>1</sup> Certainly, the federal directive is not a Congressional mandate to be immoderate.

Our reading of the relevant federal statute is bolstered by the remainder of 33 U.S.C. section 1324(p)(3)(B)(iii). Immediately following the introductory “maximum extent practicable” language is this: “including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State *determines appropriate* for the control of such pollutants.”

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<sup>1</sup> *See Conservation Law Foundation v. Evans*, 360 F.3d 21, 28 (1<sup>st</sup> Cir. 2004):

[The environmentalist plaintiffs] essentially call for an interpretation of the statute that equates “practicability” with “possibility,” requiring [the agency] to implement virtually any measure ... so long as it is feasible. Although the distinction between the two may sometimes be fine, there is indeed a distinction. *The closer one gets to the [environmentalists'] interpretation, the less weighing and balancing is permitted.* We think by using the term “practicable” Congress intended rather to allow for the application of agency expertise and discretion in determining how best to manage ... resources.

(Emphasis added.)

(Emphasis added.) Thus, the federal statute merely instructs the Board (as the E.P.A. Administrator's surrogate here) to *exercise its broad discretion* – within bounds of reason, of course.

The federal courts have consistently ruled that the section 1324(p)(3)(B)(iii) federal directive is one mandating only the reasonable exercise of broad discretion – nothing more. See *Arkansas v. Oklahoma*, 503 U.S. 91, 105 (1992) (“Congress has vested in the [EPA or a surrogate state] broad discretion to establish conditions for NPDES permits.”); *Natural Resources Defense Council, Inc. v. U.S. E.P.A.*, 966 F.2d 1292, 1308 (9<sup>th</sup> Cir. 1992) (“NRDC contends that EPA has failed to establish substantive controls for municipal storm water discharges as required by the 1987 amendments. *Because Congress gave the administrator discretion to determine what controls are necessary, NRDC's argument fails. \* \* \* Congress did not mandate a minimum standards approach or specify ... minimal performance requirements.*” (emphasis added)); *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166-67 (9<sup>th</sup> Cir. 1999) (“Under [the MEP standard set forth in Clear Water Act section 402(p)(3)(B)(iii)], the EPA's choice to include [or exclude] ... limitations in [NPDES] permits [for MS4s] was within its discretion.”); *City of Abilene v. U.S. E.P.A.*, 325 F.3d 657, (5<sup>th</sup> Cir. 2003) (“The plain language of [CWA section 402(p)] clearly confers broad discretion on the EPA [or a surrogate state agency] to impose pollution control requirements when issuing NPDES permits”).

Given that the federal directive set forth in section 1324(p)(3)(B)(iii) merely mandates that the Board must take evidence and exercise its broad discretion concerning permit conditions, there is surely no conflict – of the type giving rise to federal preemption concerns – between 33 U.S.C. section 1324(p)(3)(B)(iii), on the one hand, and Calif. Water Code section 13241, on the other hand. The latter (Water Code section 13241) requires the Board to *consider*, when exercising its discretion, a certain list of *non-exclusive* factors (beneficial uses, environmental characteristics, realistic outcomes, economics, the need for housing, and the need to recycle water). California law further requires the Board to provide a record of the required analysis which is sufficient to demonstrate that it has meaningfully weighed and considered each of the prescribed non-exclusive factors. See *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 515: “[T]he agency which renders the challenged decision must set forth findings to bridge the analytic gap between the raw evidence and ultimate decision or order.... [The agency must reveal] the relationships between evidence and findings and between findings and ultimate action....”

In short, there is nothing about exercising discretion in compliance with Calif. Water Code sections 13241 and 13263 which conflicts with the federal mandate to go forth and exercise broad discretion when regulating MS4 permittees. The Supreme Court of the United States has stated that courts should always attempt to reconcile laws to avoid finding federal preemption. See *Merrill Lynch, Pierce, Fenner & Smith v. Ware*, 414 U.S. 117, 127 (1973); see also *Rice v. Norman Williams Co.*, 458 U.S. 654, 659

(1982) (“[T]he inquiry is whether there exists an *irreconcilable conflict* between the federal and state regulatory schemes.”). Both state and federal courts generally recognize a presumption *against* finding federal preemption, even when there is express preemptive language. *See, e.g., Washington Mutual Bank, FA v. Superior Court*, 75 Cal.App.4th 773 (1999):

In interpreting the extent of the express [federal] preemption, courts must be mindful that there is a strong presumption against preemption or displacement of state laws. Moreover, this presumption against preemption applies not only to state substantive requirements, but also to state causes of action.

*Id.* at 782, citing *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 523 (1992) and *Medtronic, Inc. v. Lohr*, 518 U.S. 470, 485 (1996). In the absence of express federal preemptive language, the presumption against finding federal preemption is even stronger:

“In the absence of express pre-emptive language, Congress’ intent to pre-empt all state law in a particular area may be inferred where the scheme of federal regulation is sufficiently comprehensive to make reasonable the inference that Congress ‘left no room’ for supplementary state regulation.

*Hillsborough County v. Automated Medical Labs*, 471 U.S. 707, 713 (1985).

In addition, the question of whether federal preemption exists is purely a question of law. *See, e.g., Industrial Trucking Association v. Henry*, 125 F.3d 1305, 1309 (9<sup>th</sup> Cir. 1997), citing *Inland Empire Chapter of Associated Gen. Contractors v. Dear*, 77 F.3d 296, 299 (9<sup>th</sup> Cir.1996) and *Aloha Airlines, Inc. v. Ahue*, 12 F.3d 1498, 1500 (9<sup>th</sup> Cir.1993) (“The construction of a statute is a question of law that we review de novo.... Preemption is also a matter of law subject to de novo review.”). It does not matter that federal preemption springs from express statutory language or from federal regulations promulgated under a statute. In either event, federal preemption is a question of law. *See Bammerlin v. Navistar International Transportation Corp.*, 30 F.3d 898, 901 (7<sup>th</sup> Cir. 1994) (meanings of federal regulations are questions of law to be resolved by the court).

Given that the existence and extent of federal preemption is properly as a question of law, the burden of demonstrating to a court that preemption exists rests with the party asserting the preemption (here, the Board) – because federal preemption is an affirmative defense. *See Bronco Wine Co. v. Jolly*, 33 Cal.4<sup>th</sup> 943, 956-57 (2004) (“The party who claims that a state statute is preempted by federal law bears the burden of demonstrating preemption.”); *see also United States v. Skinna*, 931 F.2d 530, 533 (9<sup>th</sup> Cir.1990) (stating that the burden is on the party asserting a federal preemption defense). Therefore, if the Board asserts (as the 4<sup>th</sup> Draft Permit suggests it will) that federal law preempts the consideration and application of the Porter-Cologne Act’s factors, the Board would bear



the burden of demonstrating, as a matter of law, that actions required of it under its enabling state law are preempted.

Armed with this understanding of the law, the Board cannot reasonably maintain that the federal law precludes application of the California Water Code § 13241 balancing factors to the weighty policy choices before it. But the 4<sup>th</sup> Draft Permit betrays a failure – an admitted failure – to consider the section 13241 factors. As explained below, many of the proposed permit conditions in the 4<sup>th</sup> Draft Permit would not survive a fair consideration of the section 13241 factors.

**2. The parcel-by-parcel 5% limitation on Effective Impervious Area does not respect appropriate development patterns and scales, and is not consistent with the underlying research or sound policy.**

The 4<sup>th</sup> Draft Permit still includes the requirement that land use development projects limit the “effective impervious area” (EIA) to 5% of any project site. We have many concerns with this proposed requirement, not the least of which is that the study was based on research that correlates *imperviousness in an entire watershed* with water quality. Despite the fact that the research was conducted at an overall watershed scale, the 4<sup>th</sup> Draft Permit applies a “one-size-fits-all” imperviousness standard at the project or parcel scale.

In addition, there are myriad places where it would be unhelpful (at best) or harmful (worse) to apply an imperviousness standard for purposes of facilitating storm water retention and infiltration. For example, bluff tops (such as those at Pacific Palisades or at La Conchita Ranch farther west) would likely be rendered unstable by any mandate of imperviousness and infiltration coupled with development. Even moderately sloping hillsides would be negatively affected, as would areas where the natural water table is relatively high (for example, Moorpark in Ventura County). Nor would the EIA requirement do any good where development occurs on top of hard pan soils or bedrock, where infiltration could not occur. In many such areas, storm water would flow very *naturally* off of the parcel.

Also, as we have noted before, a 5% EIA requirement would have additional ramifications that are problematic. For example, the requirement would – on a relative basis – encourage and incentivize sprawl, steering development to areas that have the most open space and flexibility concerning perimeter features. Such policy implications are particularly problematic in Ventura County, which has a strict SOAR initiative (urban-growth limitations), such that maximum flexibility to accommodate dense development should be maintained. Similarly, the requirement would incentivize development on relatively porous soils (which could be used better at a regional scale), while discouraging development on impervious ground, even though the latter could be developed with the least change to pre-development flows.

Because the proposed EIA requirement would apply notwithstanding the myriad circumstances where it would be inappropriate (suboptimal at best, disastrous at worst), the requirement is proposed in disregard of Calif. Water Code section 13241(b), which requires consideration of the “[e]nvironmental characteristics of the hydrographic unit under consideration.” Attention to this consideration would indicate that – of course – a 5% EIA requirement should not be generally or universally imposed.

We believe that a *volumetric* engineering approach, coupled with appropriate exceptions or waivers (based on objective criteria or, better yet, site-specific circumstances as determined by those with the closest proximity) is far better than an EIA approach. Ideally, the volumetric engineering approach would be based on calculations that seek to approximate, as closely as practicable, the pre-construction run-off patterns (a so-called “delta volume” or “delta-v” approach). However, as an administrative, regulatory and engineering expedient, we would subscribe to (and have supported in North Orange County discussions) the collection and treatment of the entire volume of a reasonably moderate design storm.

The 4<sup>th</sup> Draft Permit proposes a path for redevelopment projects as an alternative to the 5% EIA requirement, called the Redevelopment Project Area Management Plan (RPAMP). The role of the RPAMP is to afford the co-permittees the authority to develop larger scale solutions that meet water quality goals – on a scale larger than individual projects. We support the seeming intent behind the RPAMP, because it seems aimed at allowing site-specific considerations and appropriate tailoring to site-specific circumstances. However, we believe that attention and tailoring to site-specific circumstances needs to be the rule, not an exception to a “one-size-fits-all” rule like the 5% EIA rule.

3. As proposed, the 4<sup>th</sup> Draft Permit’s EIA requirement violates both the “Natural Flow Doctrine” and the Clean Water Act’s overall objective to “Restore and Maintain” the natural integrity of the water cycle.

One aspect of the 4<sup>th</sup> Draft Permit is especially radical and objectionable. That is the New Development/Redevelopment Performance Criteria on page 55 of 121. Particularly, section 5.E.III.1(c), states that the proposed 5% EIA requirement could generally be met only by the “infiltration and stor[age] for reuse” of the volume of a design storm. As proposed, the provision would seemingly impose, for the first time, a generally-applicable requirement that *no storm water (from a design storm) should leave a parcel that has been developed or redeveloped.*

As it reads, this requirement seemingly flies in the face of recognized, basic low impact development (LID) strategies, which generally aim to have LID undertaken so that the pre-construction flows of storm waters are maintained, matched, or reasonably approximated. For example, the U.S. E.P.A.’s definition of LID, which was updated just last month, states clearly that the use of LID best management practices (BMPs) for the

filtration (not just infiltration) is appropriate – and repeats the basic goal of trying to maintain pre-construction hydrology. Specifically, the US EPA defines LID as follows:

*A comprehensive stormwater management and site-design technique. Within the LID framework, the goal of any construction project is to design a hydrologically functional site that mimics predevelopment conditions. This is achieved by using design techniques that infiltrate, filter, evaporate, and store runoff close to its source. (Emphasis added)*

<http://cfpub1.epa.gov/npdes/greeninfrastructure/information.cfm#glossary>

As proposed, however, the language of the 4<sup>th</sup> Draft Permit generally rules out the use of LID BMPs for filtration, and instead requires generally implementing designs for the *retention* of all storm water for the design storm (which, in parts of Ventura County, could be up to 1½ inches of rain).

Rejecting the use of LID BMPs for filtration – and instead, as a general proposition, requiring that no storm water (except in the largest rains) can leave a developed or redeveloped parcel – is a radical measure that should not be undertaken. It would violate millennia (literally) of civil law concerning flows of storm water (called “diffuse surface water”). Specifically, the law in California – which itself is derived from the laws of the ancient Roman Empire – has long favored what is called the “*natural flow doctrine*,” which states that diffuse surface flows should be permitted to flow from all lands to their natural water course. See *Gdowski v. Louie*, 84 Cal.App.4<sup>th</sup> 1395, 1402 (2000) (“California has always followed the civil law rule. That principle meant ‘the owner of an upper ... estate is entitled to discharge surface water from his land *as the water naturally flows*. As a corollary to this, the upper owner is liable for any damage he causes to adjacent property *in an unnatural manner*.... In essence each property owner’s duty is to leave the natural flow of water undisturbed.” – emphasis added by the court, quoting *Keys v. Romley*, 64 Cal.2d 396, 405-06 (1966)).

The “natural flow doctrine” has been altered by the California courts in recent decades to facilitate reasonable land development and protect private and public land owners. Replacing the natural flow doctrine is a “*modern reasonableness test*.” Property owners (public and private) may alter the natural flow of diffuse and/or discrete surface water, but only if they are reasonable when doing so, and downstream owners can then trump the reasonable efforts of the upstream owner if they also take reasonable defensive steps. See *Locklin v. City of Lafayette*, 7 Cal.4<sup>th</sup> 327, 337 (1994).

Juxtaposed against both the natural flow doctrine and the modern reasonableness test is a third, much less favored doctrine, called the “*common enemy doctrine*.” The common enemy doctrine stands for three propositions, that (i) individual property (development) rights are paramount, (ii) storm water is a common scourge, and (iii) each property owner may act “for herself or himself” and take steps to alter the natural or

unnatural flow of such waters for the protection of his or her property, without regard for the effect on neighbors. See *Skoumbas v. City of Orinda*, 165 Cal.App.4<sup>th</sup> 783, 792 (2008). Although the common enemy doctrine is sometimes still applied in a few other states, the common enemy doctrine has been largely discredited and criticized by progressive courts, environmentalists, academics, and concerned policy makers because of the obvious and very negative implications for the broader community and for the preservation and restoration of natural flows. See *Keys v. Romley*, 64 Cal.2d 396, 400-03 (1966) (Mosk, J., concurring).

Of these three doctrines (the *natural flow* doctrine, the *modern reasonableness* test, and the *common enemy* doctrine), the *natural flow* doctrine – which seeks to *maintain the natural flows* of diffuse and discrete surface water – is the doctrine that conforms best to the federal Clean Water Act’s overarching objective to “restore and maintain” the natural integrity of waters.<sup>2</sup> See 33 U.S.C. § 1251(a). Accordingly, we would, of course, expect the Board and the non-governmental organizations that defend natural resources to prefer strongly the *natural flow doctrine*, and to deviate from it (if at all) only as reasonably necessary to accommodate competing societal goals.

Rather than favor the natural flow doctrine, however, the 4<sup>th</sup> Draft Permit – with its seeming refusal to allow generally (i) the *filtration* of diffuse surface water, and (ii) any discharge across property lines – would establish a new and different doctrine, a “*universal retention doctrine*,” standing for the general proposition that no diffuse surface water should leave any parcel that has been developed or redeveloped, except in very large storms.

If it were the intent of the Board’s staff to propose such a universal retention doctrine, such a radical step should not be taken without far more discussion, study, and major revision. However, we see such a new doctrine as apparently reflected in Section 5.E.II.1(c) of the 4<sup>th</sup> Draft Permit (p. 55 of 121). In addition, we see such a universal retention doctrine reflected in the latest urgings of Natural Resources Defense Council, Inc. (“NRDC”) – both in recent discussions concerning the North Orange County MS4 permit revisions and in a very recently revealed product of secret discussions between NRDC, certain other non-governmental groups, and some city managers in Ventura County. The recent revelations about these discussions show that NRDC and the others who were closeted away would generally impose a new *universal retention doctrine* on all development and redevelopment, especially suburban and exurban development.

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<sup>2</sup> See S. Rep. No. 92-414, 92<sup>nd</sup> Cong. 2d Sess., 2 U.S. Code Cong. & Adm. News ‘72 3668, 3674 (1972) (“The Committee believes the restoration of the natural chemical, physical, and biological integrity of the Nation’s waters is essential.”); H.R. Rep. No. 92-911, p. 76 (1972) (“the word ‘integrity’ ... refers to a condition in which the natural structure and function of ecosystems is [are] maintained.”).

It is very hard to believe that non-governmental organizations that aim to defend natural resources would turn their back on the *natural flow doctrine*, rather than seek to maintain or approximate the natural flows or diffuse and discrete surface waters to the extent and where practicable. But that is what seems to be happening here, even as the U.S. E.P.A. and others are urging that suburban and exurban development should seek to maintain natural flows.

We respectfully urge the Board and staff to reject any embrace of a new *universal retention doctrine*. We urge instead appreciation of the *natural flow doctrine* or, better yet, the *modern reasonableness test* applied with ever-evolving and progressive standards of reasonableness. We suspect that the U.S. E.P.A. would similarly urge abandonment of a universal retention proposition (assuming the E.P.A. representatives are fully aware and fathom the policy implications of the proposal). In addition, we have only barely discussed this new, general universal retention doctrine with the appropriate individuals at the California Department of Fish and Game and the U.S. Fish and Wildlife Service. We found that they were not aware of the implications of the Draft Permit. For example, today, Mr. Roger Root of the U.S. Fish and Wildlife Service's Ventura Office informed us that he has no record or understanding that their staff was ever notified about any proposed permit requirements which would generally and intentionally interfere with the natural flows of water. We urge the Board's staff to thoroughly discuss the new and generally-applicable universal retention policy carefully with your fellow agency counterparts, and then remove any preference for or use of the universal retention doctrine from the eventual permit revisions.

**4. The permit requirements still need to be better integrated into the California Environmental Quality Act.**

As our industry representatives have noted before, California law has long established CEQA as the mechanism for evaluating – and mitigating – the environmental impacts of land development. The CEQA process evaluates all environmental impacts and provides a consistent process for their mitigation, with opportunity for input from a wide cross-section of agencies and public interests. Moreover, CEQA continues to evolve as science and policy imperatives drive it to do so. (For example, several years ago, green house gas emissions were never a focus of CEQA; now they certainly are.)

By establishing fixed, inflexible numeric standards for low impact development, the 4<sup>th</sup> Draft Permit trumps all other considerations (environmental and otherwise) and improperly shifts land use approval authority to the Board. Although the 4<sup>th</sup> Draft Permit may refer to waivers or exceptions for infeasibility, the 4<sup>th</sup> Draft Permit provides no clear process for this site-specific evaluation by the co-permittees and exceptions where the permit requirements are unreasonable, infeasible or suboptimal.

CEQA could – and we maintain should – be utilized to integrate low impact development and grading considerations into the project approval process in ways

heretofore not applied. This would allow for the appropriate evaluation of water quality impacts in the context of all other environmental impacts. Perhaps more significantly, it would integrate the consideration of low impact development techniques into the land use planning process at the time of project design and development – rather than the all-too-common current occurrence where these techniques are evaluated after substantial approvals are in place and changes are difficult to retro-fit. The best way to use CEQA as the tool to accomplish the integration of low impact development techniques would be to establish LID numeric standards as *presumptive thresholds of environmental significance*, which would significantly increase the level of analysis of water quality impacts – at the time when changes are most likely to be accommodated. We offer more detailed analysis of this approach in the accompanying attachment, which is – again – the CEQA integration proposal that we have lodged before. The CEQA integration approach would achieve the Board's goals of appropriate attentiveness and reasonable consistency between jurisdictions and permits, while maintaining the ability to make local decisions appropriate for the jurisdiction's environmental circumstance.

**5. The numerical performance criteria are justified and unworkable.**

The 4<sup>th</sup> Draft Permit reflects the continued inclusion of numerical treatment BMP performance standards in Appendix C, which could be interpreted as arbitrary numeric effluent limits which would be imposed irrespective of site-specific considerations and/or storm-specific considerations. A reasonable approach would be to require consideration of such constituents and their management during planning and design, but not to treat them as performance standards for ongoing maintenance and compliance, due to the myriad of factors (site-specific and storm-specific circumstances) that could influence exceedances. We therefore ask that the Table 3 be either deleted or simply used as design goals, from which the permittees could develop design criteria for treatment control BMP performance and include these criteria in an updated version of the Ventura County Stormwater Design Manual.

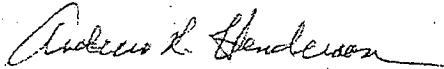
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Ms. Tracy Woods  
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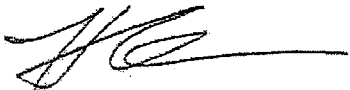
Since the first draft was released, the BIA and its affiliates have been active participants and contributors to the creation of new and improved MS4 permit. We continue to believe that rational, *implementable* permit requirements are critical to achieving great progress concerning water quality and our environment. We hope that these comments are received in the manner in which they are intended – to continue the discussion of how we can create a workable permit that improves water quality to the maximum extent practicable. We remain committed to a positive dialog with the Board and its staff – one that will result in an informed, balanced and effective permit.

Thank you for your consideration of these comments.

Sincerely,



Andrew R. Henderson  
Vice President and General Counsel,  
Building Industry Association of Southern  
California and General Counsel,  
Building Industry Legal Defense Foundation



Holly Schroeder  
CEO, Building Industry Association  
LA/Ventura Chapter

Attachment to  
Construction Industry Comments  
re: proposed Ventura County MS4 permit

Building Industry Association of Southern California, Inc. (BIA/SC)

Integration of  
Low Impact Development Measures  
and CEQA Approvals

May 29, 2008

In recent months, at least one of Southern California's regional water quality control boards have put forth proposals aimed at requiring local governments to impose fixed "low impact development" ("LID") numerical requirements on a lot-by-lot basis on all development within their respective jurisdictions. LID concepts generally involve designing and engineering real estate developments, and incorporating storm water best management practices, such that both (i) the water quality effects of increased storm water volume resulting from construction of impervious surfaces are minimized or mitigated, and (ii) the off-site hydrological impacts of the development are minimized. LID numerics attempt to quantify such concepts by, for example, specifying that new development and redevelopment projects must be mitigated by reducing impervious surfaces, or increasing percolation, infiltration, storage or evapotranspiration such that no more than (for example) 5% of the total project area is effectively impervious.

BIA/SC is eager to foster improvement in real estate development and redevelopment practices concerning LID. However, faced with proposals to impose of one-size-fits-all numeric LID requirements, such as fixed and absolute Effective Impervious Area (EIA) or erosion potential (Ep) requirements, we are opposed to such impositions. This is not to suggest that the LID numerical measures cannot be put to very good use. To the contrary, evolving LID metrics of this type are useful, so long as physical development constraints and land use and environmental policy implications relevant to their application can also be taken into account. LID metrics should therefore be integrated into land use/environmental approvals for development projects.

Despite the potential usefulness of metrics, we oppose the imposition of any strict and absolute numeric mandates, for example, the 5% maximum EIA or the maximum  $Ep=1$  limitation, as generally-mandated restrictions. Our opposition is based on our view that there are many situations where relevant physical site and water quality characteristics, and/or competing land use and environmental policy considerations, would warrant deviation (large or small) from strict compliance with numeric LID requirements – whether for infill, redevelopment, or undeveloped land.

This position paper sets forth the current views of BIA/SC's staff concerning two areas of thought. Both relate to the integration of LID water quality metrics into California's longstanding and highly evolved land use environmental review and



approval process, which is mandated and governed by the California Environmental Quality Act ("CEQA"). In this first section below, emphasis is on *chronologically* synchronizing the application of LID mandates with CEQA review and approvals, which we feel is imperative. Second, looking more at the substantive effects of regulation (i.e., affecting outcomes), we discuss the potential integration of MS4 permit LID metrics into the CEQA review and approval process. We believe that such synchronization and integration with CEQA will permit reasonable consideration of appropriate LID requirements exceptions based on consideration of physical constraints, feasibility, and the availability of scalable solutions.

#### I. Synchronizing application of MS4 LID measures with the CEQA process.

We believe that synchronizing CEQA review and application of MS4 Permit LID objectives is necessary for several reasons. First, to be timely applied, LID water quality metrics should be taken into account as early as possible in land use planning and development design processes. Second, the introduction of LID metrics should not unduly complicate the already challenging land use and environmental review, permitting and approval process. Third, LID metrics should not be imposed in ways that undermine vested project design approvals that are already settled pursuant to CEQA. Therefore, rather than impose water quality LID metric standards apart from CEQA, regulators wishing to impose LID metrics should instead direct proper attention to them at the right stage of the land use and environmental approval process: *during* CEQA.

CEQA compliance is required by law whenever a California public agency proposes to carry out or approve any discretionary plan or project, including private land use and development projects. For example, any approval of a city's or a county's comprehensive general plan must be in compliance with CEQA, as must other discretionary actions (such as the decision of a city to annex additional land, or approve zoning, tentative tract maps, or other development applications). Each such discretionary action where CEQA compliance is required presents an opportunity for LID considerations to be brought to bear.

In general, CEQA compliance is designed to assure that local agencies regulate activities so that major consideration is given to preventing environmental damage and protecting environmental quality. Cal. Pub. Res. Code § 21000(g); 21001. To comply with CEQA, public agencies must analyze projects as provided by the Act to identify the potentially significant effects of the project on the environment, to identify and evaluate alternatives to the project, and to identify and evaluate mitigation measures to avoid, reduce and mitigate impacts of the project on the environment.

Further, CEQA compliance assures meaningful public disclosure of potentially significant project effects on the environment and available mitigation measures, and provides the opportunity for comments and input regarding the project and its effects on the environment by the public and other agencies, including responsible and trustee agencies protecting California's resources. See, e.g., Cal. Pub. Res. Code §§ 21002,

21003, 21080.3, and 21091. Perhaps most importantly, and unlike other environmental review statutes, CEQA requires that public agencies shall not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available that would substantially lessen the significant environmental effects of the project (Cal. Pub. Res. Code § 21001); and the Act further requires the incorporation of all feasible mitigation measures prior to approval of any discretionary project that will result in unavoidable significant adverse effects. Cal. Pub. Res. Code § 21081.

Besides being applicable to proposed discretionary approvals related to *general* planning and potentially sweeping governmental steps like large annexations of land for potential future project development, CEQA is the pivotal and conclusive step in the private *project* planning process. As the California Supreme Court explained long ago:

[W]e have consistently interpreted CEQA to authorize, indeed to require, environmental review of private projects at the earliest possible stage. The CEQA Guidelines embody this principle as well. Thus, **EIRs and Negative Declarations should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment.**

*Napa Valley Wine Train, Inc. v. Public Utilities Com.*, 50 Cal.3d 370, 398-99 (1990) (internal quotations and citations omitted, emphasis added). See also Cal. Pub. Res. Code §21003.1. Because CEQA review should take place at the optimal time to influence a private project's design, conditioning and approval, and when mitigation can best be addressed, LID considerations should be taken into account then as well.

Therefore, we hope that any adopted LID numeric standards would be imposed and applied only in *chronological* (i.e., procedural) synchronicity with CEQA approvals. Stated differently, any imposition of LID metric standards by any of the regional water boards should both "grandfather" vested private project approvals and govern future CEQA analysis and project approvals. Without appropriate grandfathering and chronological and procedural integration, strong industry resistance against otherwise acceptable impositions should be expected.

## II. **Criteria for waivers or exception from of LID numeric requirements based on site-specificity, feasibility, alternative scalable solutions, project scale, and project type.**

If a regional water quality control board were to impose fixed LID numerical limitations for land development within its jurisdiction, many questions would naturally arise about physical and environmental conditions that would warrant exception to such fixed standards. In light of recent proposals by regional water boards, BIA/SC's staff has reflected on these questions, and has attempted to set forth for consideration a slate of "waiver conditions" or "exceptions" which could apply to absolute LID numeric standards. The exercise has clarified our view of a dichotomy between (i) the

opportunity for site-specific balancing and tailoring of LID practices to physical and environmental conditions that is possible under CEQA, and (ii) the futility of efforts to develop a fixed, precisely-described slate of waiver conditions or exceptions that can sufficiently address the many factors that should be considered when considering LID metrics to determine sufficiency of LID measures.

Specifically, as we worked to prescribe a fixed slate of waiver conditions, we continued to recognize the many different circumstances in which site-specific characteristics should be taken into account. Given our recognition of this fact, we would expect that any fixed slate of numeric LID standards, coupled with equally fixed, numeric waiver provisions or exceptions, would likely be objectionable to various camps at the outset – simply because they would fail to take into account both (i) the broad array of potential differing site-specific characteristics and physical conditions, and (ii) the wide spectrum of policy considerations that influence land use and environmental decisions.

As we tried to develop such a slate of waiver provisions, we therefore found ourselves constantly reflecting on the CEQA approach – not just in terms of *chronology* and process, but also in terms of CEQA's substantive approach to site-specificity and tailoring to account for feasibility. That is because CEQA requires focused consideration of the individual physical site characteristics and the specific design and plan for each proposed project, as well as evaluation of project-specific impacts. In addition, CEQA requires environmental mitigation tailored to the specific physical and development characteristics and impacts in each instance. Essentially, the level and degree of informed tailoring that CEQA requires is much more than the level and degree of tailoring that one could achieve through developing and agreeing upon a prescriptive, static slate of waiver criteria, drafted into a county-wide MS4 permit.

The following, brief description of CEQA may help to explain our desire to use CEQA in concert with the MS4 permit as the means to advance LID metrics. Under CEQA, virtually all individual projects and plans (e.g., parcel maps to comprehensive general plans) that may result in significant environmental impacts are required to undergo an "environmental impact" analysis. For relatively simple projects, a lesser degree of analysis is appropriate, resulting in a negative declaration (or mitigated negative declaration) based upon appropriate findings. However, whenever any interested citizen presents a "fair argument" of any significant environmental impact, a full environmental impact report ("EIR") is required, complete with the fielding of public comments, the provision of responses thereto, a public hearing, etc.

Importantly, the processes for both negative declarations and EIRs have opportunities for public participation and inter-agency involvement. Affected agencies such as regional water boards can and should participate in the CEQA processes: (i) *anecdotally* if possible by commenting on any particular plan or project, and (ii) *formulaically* through the establishment of relevant "thresholds of environmental significance" for matters within their respective expertise. Established thresholds of environmental significance in turn drive both (i) the level of required environmental analysis, and (ii) required levels of mitigation.

Also under CEQA, the agency that is primarily responsible for approving and conditioning any project or plan must require the incorporation of mitigation measures to avoid, reduce or minimize significant environmental impacts. If significant, unmitigated environmental impacts likely will remain despite such requirements, then the lead agency may approve the project only upon if it makes two sets of further findings: First, the agency must find that, with respect to each unavoidable significant environmental effect, (a) changes or alterations have been required or incorporated into the project that mitigate or avoid significant effects, (b) those changes or alterations are within the responsibility or jurisdiction of another public agency, and/or (c) specific considerations or circumstances make additional mitigation measures infeasible. Second, the agency must find that the societal benefits of the project outweigh the residual environmental impacts.

Frankly, BIA/SC's member companies are not especially fond of the CEQA process. As a process, it is arduous, costly, and frequently abused by critics of development. Therefore, it is ironic that BIA/SC's staff finds itself touting CEQA as essential to the orderly and wise advancement of LID concepts. We do so because, in addition to the need for chronological and procedural integration discussed above, substantively, CEQA's best attribute is the potential to *balance* and to *tailor* the conditioning and approval of, and development of mitigation measures for any project to its site specific circumstances. The ability to *tailor* and require all reasonably feasible mitigation measures can best assure that sensible LID measures are required and that non-sensible LID measures are not required.

Against this backdrop, we feel that the best approach would be for regional water boards to use MS4 Permits to establish selectively-applicable and presumptive LID thresholds of environmental significance for use in the CEQA process. For example, through the permit, a regional board could make  $E_p = 1.2$  a presumptive threshold of environmental significance for certain larger scale projects, and mandate application of the "hydromodification analysis study" (HAS) process to larger developments and comprehensive plans.<sup>1</sup> CEQA would then operate procedurally to require environmental analysis of all larger scale projects where there is a fair argument that  $E_p > 1.2$  in the post-development condition. Pursuant to CEQA, the analysis would have to evaluate the significance of hydro-modification impacts in light of specific project physical and environmental conditions.

Substantively, unless the required HAS were to lead to finding that there would be no significant environmental impacts from allowing an even higher  $E_p$  value,<sup>2</sup> the

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<sup>1</sup> The HAS process is complicated and expensive – too much so to apply to smaller projects and individual infill projects. Accordingly, we would urge limiting its application to very large projects and also to larger-scale general and watershed planning (which would ultimately influence smaller projects).

<sup>2</sup> We know from experience that there are projects where robust engineering and environmental analyses can show that a project-scale  $E_p$  value in excess of 1.2 will

analysis must identify and evaluate appropriate mitigation to reduce of environmental impacts to below the presumptive level of significance, wherever feasible. Thus, a regional water board could impose the LID numeric standard ( $E_p = \text{no more than } 1.2$ ), both to assure proper assessment of potential impacts and to identify and incorporate of mitigation; but the imposition would not be an inviolable absolute. Instead, the board could impose the measure where appropriate such that, presumptively, it must be (i) achieved where it is reasonably feasible to do so, and (ii) approached as nearly as feasible where achievement is infeasible – in each case by operation of CEQA.

A similar approach could likewise convert the proposed 5% EIA limit from an absolute requirement to a presumptive CEQA threshold, which can trigger CEQA analysis to assure mitigation is appropriately incorporated to the greatest extent warranted and feasible through the CEQA process. Here as well, we would hope that the regional water boards would make the 5% EIA threshold of significance selectively applicable only to the larger projects impacting theretofore undeveloped lands which are likely to impact surface water quality in a potentially significant and adverse way. For example, small projects, infill projects, projects that would improve upon baseline conditions, projects that drain into regional BMPs, and the like, should be expressly exempt from application of such 5% EIA presumptive threshold of significance.

### **III. Conformity between California's CEQA review and approval of new development and redevelopment projects and federal regulations pertaining to MS4 permits and post-construction storm water pollution.**

The federal regulations pertaining to MS4 permit applications and land use planning and development approval processes and outcomes discuss “structural and source control measures to *reduce* pollutants from runoff from commercial and residential areas that are discharged from the municipal storm sewer system....” 40 C.F.R. § 122.26(d)(2)(iv)(A) (emphasis added). Specifically concerning land use planning and post-construction storm water pollution, 40 C.F.R. § 122.26(d)(2)(iv)(A)(2) requires in relevant part (emphasis added) the MS4 permit applicant to provide:

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nonetheless avoid significant environmental impacts (due to the site characteristics, the nature of downhill lands and downstream waters, natural morphologic characteristics, and the like). Accordingly, any prescribed threshold of significance should be “presumptive” rather than absolute, so that mitigation toward the selected threshold is not required when it does not serve to avoid significant environmental impacts. For example, concerning imperviousness, where a project is proposed for development on exposed natural bedrock, there may be no negative environmental impact from failing to provide for disconnection and percolation. By establishing a threshold of significance at  $EIA = 5\%$  which is presumptive, the presumption can be appropriately negated upon a proper showing of facts. Moreover, by making the threshold presumptive, interested citizens could still put forth a “fair argument” that the threshold of significance should be even lower in appropriate instances, consistent with CEQA case law and guidelines.

A description of *planning procedures* including a comprehensive master plan to develop, implement and enforce controls to reduce the discharge of pollutants from municipal separate storm sewers which receive discharges from areas of new development and significant redevelopment. Such plan shall address controls *to reduce* pollutants in discharges from municipal separate storm sewers after construction is completed.

These federal regulations indicate neither (i) that strict maintenance of the *status quo* is the *sine qua non* of all land development and redevelopment, nor (ii) that the EPA Administrator (or its authorized state surrogate) must assert project-specific control over all land use planning and projects in order to define the "maximum extent practicable" pollution-avoidance measures. Instead, the regulations require the MS4 applicant to provide a proposed management program which:

- "shall include *a comprehensive planning process* which involves public participation and where necessary intergovernmental coordination, *to reduce* the discharge of pollutants to the maximum extent practicable using management practices, control techniques and system, design and engineering methods, and such other provisions which are appropriate." 40 C.F.R. § 122.26(d)(2)(iv) (preamble) (emphasis added); and
- describes "procedures of site planning which incorporate consideration of potential water quality impacts." 40 C.F.R. § 122.26(d)(2)(iv)(D).

We believe that CEQA – as a process – fulfills these requirements, including public participation, intergovernmental coordination, and most importantly a very specific, case-by-case determination of what design and mitigation measures are appropriate in light of potential water quality impacts.

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# Construction Industry Coalition on Water Quality

April 10, 2009

Ms. Tracy Woods  
Los Angeles Regional Water Quality Control Board  
320 W. Fourth Street, Suite 200  
Los Angeles, California 90013

**RE: Tentative Order 09-XXX (NPDES Permit No. CAS00402) Waste Discharge Requirements from Stormwater and Non-stormwater Discharges from the Municipal Separate Storm Sewer Systems within the Ventura Watershed Protection District, County of Ventura, and Incorporated Cities Within**

Dear Ms. Woods:

On behalf of the more than 3,000 member companies of the Construction Industry Coalition on Water Quality (CICWQ), we would like to thank the Los Angeles Regional Water Quality Control Board (Regional Board) for the opportunity to offer this public comment on the Draft Ventura County Municipal Separate Storm Sewer System Permit, Tentative Order No. 09-XXX (Draft Permit). We also appreciate the Regional Board's participation in the series of permit stakeholder meetings that we have had over the past three years and staff's willingness to meet with us at various times.

This letter and attachments provide constructive suggestions that we have for the Draft Permit, and defines our positions on planning and land development provisions (most notably Low Impact Development (LID), hydromodification control, and construction site best practices requirements) that have been discussed and debated thoroughly within a stakeholder group framework since the Draft Permit was first released in December 2006. We also comment on the introduction of numeric limits for treatment control best management practices.

## I. Introduction

CICWQ is comprised of the four major construction and building industry trade associations in Southern California: the Associated General Contractors of California (AGC), the Building Industry Association of Southern California (BIA/SC), the Engineering Contractors Association (ECA) and the Southern California Contractors Association (SCCA). The membership of CICWQ is comprised of construction contractors, labor unions, landowners, developers, and homebuilders working throughout the region and state.

These organizations work collectively to provide the necessary infrastructure and support for the region's business and residential needs. Members of all of the above-referenced organizations are affected by the Draft Permit, as are thousands of construction employees and builders working to meet the demand for modern infrastructure and housing in Ventura County. Our organizations support efforts to improve water quality in a cost effective manner.

Our comments and suggestions on the Draft Permit as well as our active involvement in the stakeholder process reflect our commitment to protect water quality while at the same time preserve our member's economic viability in this difficult economic environment. Please know that our membership has invested significant resources into developing sound engineering approaches for LID stormwater management techniques and for hydromodification control, facilitating the appropriate

application of these valuable approaches to water quality management. Our comments reflect this commitment to sound engineering practices and principles and consideration of site-specific feasibility considerations during and following project construction.

## II. Preliminary Statement

Our comments are directed at the content of the Draft Permit, Section E, Planning and Land Development Program and Attachment C, Treatment BMP Performance Standards. We share the common goal of moving the Ventura County program in the direction of using LID Best Management Practices ("BMPs"), and we appreciate the need to avoid hydromodification impacts to sensitive stream channels. We agree that conventional stormwater BMPs should not be used as the primary BMP approach for a site unless it is plainly infeasible or undesirable due to ecological or other societal considerations to use LID BMPs. We also continue to favor the consideration and use of regional and other "scaleable" BMPs and off-site solutions when they can be demonstrated to achieve a high environmental benefit, recognizing at the same time that these options cannot be mandated when they are not generally available, and may not be for some time. Fundamentally, we support more engineering rigor in selecting and sizing LID BMPs. Finally, we support the Draft Permit's consistency with the State of California General Construction Permit for stormwater discharges.

Given these over-arching issues, we have the following remaining concerns:

### **Effective Impervious Area (EIA) Restrictions Must Be Replaced By Volume Capture LID BMP Sizing Standards**

The term "EIA" lacks a common, understandable and implementable definition, and is too vague and ambiguous to be used as a logical standard without assigning a volume capture requirement to it. In other words, EIA is not a stand-alone standard and must use a hydraulic-based translator to have any relevance to LID BMP sizing.

There seems to be willingness on the part of the Regional Board and the NGOs to consider a capture volume approach, without the complication and confusion created by appending EIA to it. The NGOs have acknowledged that EIA lacks meaning without a design storm volume specified and clear criteria of what would be considered non-effective impervious area. This is an important acknowledgement, which we appreciate, as it tends to show that EIA as a stand-alone concept falls short as a performance standard.

CICWQ has often pointed out that a limitation on EIA as a performance standard for sizing LID BMPs has created widespread confusion and misunderstanding in the development and building industry with respect to its definition, what this standard would require, and the reason for it. Proposing EIA as a performance standard has also created confusion among stormwater professionals from the principal permittee and co-permittees and consultants who support them and within Regional Board staff as well. It is quite clear that EIA does not have an agreed upon, logical definition and its suitability across all development project scales raises serious concerns about unintended consequences (such as limiting infill and redevelopment and promoting sprawl). We



strongly question its utility in many project site contexts such as hillsides, bluffs, soils with restrictive layers such as hard pans, or high water tables. It may be a valid scientific concept under uncontrolled conditions (where there are no BMPs), and one that has meaning on a watershed scale where its definition first appeared, but its utility is hampered by confusion and the need for a clear hydraulic sizing translator, such as design storm volume capture.

In recent correspondence, the U.S. Environmental Protection Agency (EPA) appears to be accepting of alternative engineering approaches other than EIA (such as volume capture), which importantly is being considered in draft permits or is found in guidance documents in several states. BIA/SC communicated with the EPA regarding their intent in using EIA as a performance standard in designing and implementing LID BMPs. While EPA supports the use of "clear, measureable, and enforceable requirements" for LID performance, such as limitations on EIA, EPA's letter to BIA/SC dated July 31, 2008 (Attachment 1) clearly states that "use of the 5% EIA requirement is not the only acceptable, quantitative approach for incorporating LID into renewed MS4 permits in southern California." The EPA further states that "we are open to other quantitative means for measuring how LID tools reduce storm water discharges." Finally, EPA recently commented on the North Orange County MS4 permit (March 24, 2009) and stated that "EPA has not determined that EIA is not necessarily the only or always the best method to implement LID" and that they are supportive of a volume capture approach.

#### **All LID BMPs Must be Available for Use to Collect and Treat the LID Storm Capture Volume**

The current Draft Permit in section 5. E. III.1 (d) appears to allow infiltration, rainfall harvest and use, or vegetated LID BMPs to collect and treat the design storm volume that is used as a hydraulic translator for the 5% EIA standard. This apparent flexibility is found in an explanation of how to render an impervious surface "ineffective." However, in the preceding section 5.E. III.1 (c), the permit states that all structures built to render surfaces ineffective must be properly sized to infiltrate or store and use rainwater up to the water quality mitigation criteria value. This somewhat contradictory permit language and a recently surfaced Ventura County City Manager-NGO proposal both attempt to narrow developer choices in selecting and sizing LID BMPs by restricting BMPs to only those that infiltrate or store rainfall for beneficial use. In other words, each project would require zero discharge of a design storm volume with no runoff whatsoever allowed.

The US EPA defines LID as follows:

*A comprehensive stormwater management and site-design technique. Within the LID framework, the goal of any construction project is to design a hydrologically functional site that mimics predevelopment conditions. This is achieved by using design techniques that infiltrate, filter, evaporate, and store runoff close to its source. (emphasis added)*

<http://cfpub1.epa.gov/npdes/greeninfrastructure/information.cfm#glossary>

Mandating the complete on-site retention of any sizable storm volume (i.e. runoff that never leaves as surface flows) is not a reasonable approach and the City Manager-NGO proposal attempts to redefine the allowable site design elements necessary to implement LID. This proposal if adopted may implement LID in a way that is contrary to the EPA definition of LID by restricting BMPs to those that only achieve zero discharge—not allowing any BMPs that appropriately “filter” runoff, such as bioretention cells or other vegetated LID BMPs. Total, 100 percent retention remains impractical and unwise in most circumstances, and is not a goal that can be achieved for most projects within reasonable costs, despite best efforts. Moreover, such a mandate abandons the goal to mimic predevelopment conditions to the extent practicable, as EPA encourages.

We are providing, in Attachment 2, a comprehensive analysis done by Geosyntec Consultants of the feasibility of implementing rainfall and stormwater harvesting systems and the utility of these systems in achieving pollutant load reductions from stormwater runoff as compared to use of all types of LID BMP features. This document and follow up correspondence with Geosyntec show that harvesting alone may result in poor water quality treatment performance relative to a well designed system of LID BMPs that includes all types of BMPs—including filtration, not just those that capture and retain stormwater. This document also identifies the current institutional barriers (code requirements) that will need to be adjusted long before total rainwater capture systems can be considered feasible in any practical sense.

To CICWQ, the retention BMPs of infiltration, harvesting, and evapotranspiration (“ET”) may be described as a preferred tier of LID BMPs for use wherever practical; but they should not be universally mandated to the exclusion of all other options. As the EPA definition of LID indicates, biofiltration, bioretention, filter strips, and other BMPs based on using vegetation to promote stormwater treatment via filtration are fundamental to LID implementation. These BMPs may be specified as additional secondary options (although they best mimic pre-development conditions), but project proponents should have considerable discretion to use these BMPs, and should not be required to apply for a feasibility exception to do so.

The use of conventional BMPs (structural treatment installations) as the principal approach for stormwater management should be a last resort, available only when objective infeasibility criteria are satisfied, and when off-site, scaleable, opportunities are not readily available. When LID BMPs are infeasible, and nearby off-site options are not available, the use of conventional BMPs that have been demonstrated to be effective on the pollutants of concern should be a compliance option.

The NGOs assert that the Draft Permit is too permissive in its application of LID BMPs or in the volume of water that must be collected. Moreover, they point to other locations around the U.S. where these more constrictive BMP measures are required and where larger volumes of water are presumably collected in them. A review and analysis of the documents referenced by NRDC in a recent comment letter regarding the Orange County MS4 permit was prepared by Geosyntec Consultants (Attachment 3). This review shows that, in all cases, none of the LID BMP sizing provisions targeted by NRDC appears in an adopted permit, so the actual utility, practicability, and on the ground results of the permit conditions remains to be seen. In addition, these programs do not: a)

generally mandate zero discharge through application of only infiltration or rainfall harvest and use LID BMPs, and b) require large volumes of water (in excess of 1-inch for example) to be collected in infiltration or harvest and use LID BMPs regardless of feasibility. We recognize and appreciate that these programs may provide approaches for consideration, yet their direct transfer to permit content for Ventura County is inappropriate. Also included for the Regional Boards consideration as Attachment 4 is a critical evaluation requested by the US EPA concerning the content of the Draft Technical Guidance on Implementing Section 438 of the Energy Independence and Security Act. None of the documents cited by NRDC constitute permits adopted for implementation.

#### **Off-site Mitigation and Development Credit Programs Must Be Simple and Flexible**

We are concerned about the current mitigation program requirements, in lieu fee program, and master planning and redevelopment provisions known as RPAMP (Redevelopment Project Area Master Plan). The current mitigation program for implementation of LID and conventional treatment control BMPs lacks coherence, detail, and specificity, and the in-lieu mitigation funding program lacks a clear connection between a determination of impracticability and exactly what is being determined to be impracticable. CICWQ suggests that only that volume of excess water that is not collected and treated at a project through the use of a preferential selection of LID BMPs (infiltration, harvest and use, evapotranspiration, and vegetated/biofiltration) and through the use of clear engineering feasibility criteria (geotechnical concerns, high ground water, pollutant plumes, etc.) be subject to off-site mitigation requirements. Then, that excess volume of water may be mitigated off-site using a similarly broad suite of LID BMPs.

The Draft Permit Section III (b) mentions use of "stormwater mitigation credits" but provides no indication on what such a program would entail beyond the establishment of a mitigation funding program. CICWQ is supportive of a "credit" program that would reduce the amount of stormwater requiring on-site installation of LID site design features. Potential development contexts where credits are immediately applicable in this permit term include (but are not limited to) those listed in Section E. IV. 3. (g). The final adopted Permit should reflect greater clarity on the details of this program (see Attachment 5 for potential permit language).

We maintain great concern regarding the Alternative Post Construction Storm Water Mitigation Program known as RPAMP. In general, we view it as cumbersome and unduly complicated, and it favors large redevelopment or master planning efforts over smaller or more spatially diverse redevelopment and infill efforts across all development settings. We feel the program as constituted could stifle infill and redevelopment projects in urban areas as well as potentially excellent green field development, rather than accelerate it because of its complexity and the inherent barriers (e.g. two layers of regulatory body approvals) it creates for medium to small developers. Here too we recommend using alternative mitigation program requirements as identified in Attachment 5.

### Establishing Effluent Concentrations as Median Values for Treatment BMP Performance Standards are Precursors of Numeric Effluent Limits

We strongly oppose the inclusion of treatment BMP performance standards in Appendix C (we read this table as numeric effluent limits) and suggest that the Regional Board re-think its approach to achieving better treatment BMP performance through specification of unit-based process design principles for selecting and sizing treatment control BMPs. We recommend that Table 3 be either deleted or redirected for use as a design goal, and instead require the permittee to develop design criteria for treatment control BMP performance and include these criteria in an updated version of the Ventura County Stormwater Design Manual. The values given in Attachment C are in essence indirect metrics of performance and require translation into design criteria to have any meaning. For example, unit based process design principles such as the amount of runoff to be captured (design storm), expected forms and concentrations of influent pollutants of concern, BMP length to width ratio, drawdown time, and other hydraulic and pollutant criteria must be integrated in a design approach for these values to have any meaning in properly designing treatment control BMPs. Moreover, we ask that the Regional Board provide more information about how the values in the table were developed from the WERF-ASCE/US EPA International BMP database. We are concerned specifically about which version of the database the Regional Board used and how the statistics were derived in the table including number of data point, number of individual BMPs, and number of non-detects.

### III. Specific Comments on the Draft Permit

What follows are our comments, organized into two sections and supported with attachments where noted: (A) comments on Section E: Planning and Land Development Program and (B) comments on treatment control BMP performance standards (Draft Permit Attachment C).

#### A. Comments on Section E: Planning and Land Development Program (pages 52 of 121 through 65 of 121)

##### Part III. New Development/Redevelopment Performance Criteria, No. 1 (b) and (c)

CICWQ is unsupportive of EIA as an LID BMP sizing standard as previously discussed in our Preliminary Statement, and we ask that you strike Part III, No. 1 (b-d) in favor of a volume capture approach. We urge the Regional Board to consider using the following as an equivalent performance standard:

- (b) *The goal of the New Development and Redevelopment Standards shall be to capture and treat the water quality mitigation criteria volume defined in Section E, Part III, No. 3, through the use of an LID BMP implementation hierarchy described below in Section E, Part III, No. 1, (c).*
- (c) *The selection of LID principles shall be prioritized in the following manner (from lowest to highest priority): (1) Preventative measures (these are mostly structural*

*measures, e.g. preservation of natural features to the maximum extent practicable, minimization of runoff through clustering, reducing impervious areas, etc.) and (2) Mitigation (these are structural measures such as infiltration, harvesting and use, bio-treatment, etc.). The mitigation or structural site design BMPs shall also be prioritized (from highest to lowest priority): (1) Infiltration (examples include permeable pavement with infiltration beds, dry wells, infiltration trenches, surface and sub-surface infiltration basins); (2) Harvesting and use (e.g. cisterns and rain barrels); and (3) Bio-treatment such as bio-filtration/bio-retention.*

- (d) *Any excess surface discharge of the storm water runoff that is not captured or treated in LID BMPs shall be mitigated in accordance with Section E, Part III.No.3.*

#### **Part IV. Implementation, No. 3. Alternative Post Construction Storm Water Mitigation Program**

CICWQ views the redevelopment project area master planning process (RPAMP) as cumbersome and unduly complicated, and it favors large redevelopment or master planning efforts over smaller or more spatially diverse redevelopment and infill efforts across all development settings. We recognize that appropriate mitigation options will need to be available to those infill and redevelopment projects that cannot feasibly treat the design storm water quality volume with LID BMPs. We also recognize that certain types of development projects or development contexts should be afforded waivers or credits from LID BMP and/or hydromodification control requirements for various reasons.

One of CICWQ's principal concerns with the Alternative Post-Construction Storm Water Mitigation Program and the mitigation funding program defined in Part IV, Implementation, No. 4, is inconsistency of the Draft Permit program provisions with other programs defined in adopted or pending MS4 permits elsewhere in southern California. We believe there are more straightforward programs under consideration currently in MS4 permitting contexts. For example, we include as Attachment 5 alternative mitigation program and water quality credit program requirements cited in the second draft of the Orange County Areawide MS4 permit, dated March 25, 2009. CICWQ supports the framework, procedures, and opportunities for mitigation and credits described in the Orange County draft permit.

#### **B. Comments on Treatment Control BMP Performance Standards (page 36 of 121 and Attachment C, page C-2 of 2)**

The Draft Permit introduces numeric effluent limits which appear to be intended to assist in engineering design of treatment control BMPs, presumably both conventional and LID. Six specific BMP classes are given effluent limits for sediment, nitrate, copper, lead, and zinc, with the data extracted from the WERF-ASCE/US EPA International BMP database for those classes of BMPs where data is available. The full extent to which these numeric targets are applied to other types of treatment control BMPs is unclear, as is the ultimate intent of introducing numeric limits in this

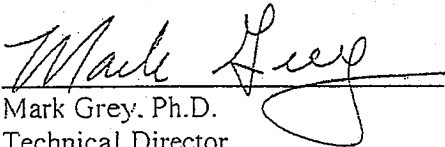
manner. We can only imagine that these values will be translated into end of pipe (BMP) numeric effluent limits at some point.

Therefore, we suggest deleting Attachment C and its implementing Draft Permit provision in Part 4. Storm Water Quality Management Program Implementation. No. 3 in favor of requiring the permittee to develop design criteria for treatment control BMP performance and include these criteria along with other key unit-based process design criteria in an updated version of the Ventura County Stormwater Design Manual. These criteria would include design principles such as the amount of runoff to be captured (design storm), expected forms and concentrations of influent pollutants of concern, BMP length to width ratio, drawdown time, and other important design principles. We must note as well that the WERF-ASCE/US EPA International BMP database has been updated with additional BMP studies since 2007. We recommend that you use the values in the published June 2008 statistical summary report on the BMP database website, or clearly describe what version of the database was used and how the statistics were derived including the number of data points, number of individual BMPs, and number of non-detects.

#### IV. Summary

CICWQ is pleased that an inclusive stakeholder process has ensued since the Draft Permit was first released in December 2006. The process has shed significant light on areas where all stakeholders have common interests and common plans for tackling the pressing water quality improvement issues we all face. We will be an active participant in this group moving forward, and we trust that the Regional Board will continue to promote and engage in this process leading up to permit adoption. If you have any questions or want to discuss the content of our comment letter, please feel free to contact me at (909) 396-9993, ext. 252, (909) 525-0623, cell phone, or [mgrev@biasc.org](mailto:mgrev@biasc.org).

Respectfully,



Mark Grey, Ph.D.  
Technical Director  
Construction Industry Coalition on Water Quality



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX Southern California Field Office  
600 Wilshire Blvd. Suite 1460  
Los Angeles, CA 90017

July 31, 2008

Mark A Grey  
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Building Industry Association of Southern California  
1330 South Valley Vista Drive  
Diamond Bar, CA 91765

Andrew R. Henderson  
Vice President and General Counsel  
Building Industry Association of Southern California  
1330 South Valley Vista Drive  
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Dear Dr. Grey and Mr. Henderson:

This is in response to your July 1, 2008 letter to Alexis Strauss regarding the incorporation of Low Impact Development (LID) provisions into Municipal Separate Storm Sewer System (MS4) permits in southern California.

Your letter refers to your email communications with Ms. Strauss, as well as to testimony provided at the February 13, 2008 San Diego Regional Water Quality Control Board Hearing by Dr. Cindy Lin and to the April 1, 2008 comments to the Colorado River Basin Regional Water Quality Control Board by Mr. Doug Eberhardt. Your letter asks several questions about the U.S. EPA Region 9 Water Division's positions regarding the incorporation of LID provisions into southern California MS4 permits.

Nationally, U.S. EPA has formally recognized the benefits of LID (also termed "Green Infrastructure") in several policy documents. EPA is advocating green infrastructure as an approach to wet weather management that is cost-effective, sustainable, and environmentally-sound. On April 19, 2007, EPA and four national groups signed an agreement to promote green infrastructure as an environmentally preferable approach to storm water management, and on August 16, 2007 EPA issued a memo encouraging the incorporation of Green Infrastructure into NPDES storm water permits. Ongoing efforts are described in the January 17, 2008 Action Strategy for Managing Wet Weather with Green Infrastructure. All of these materials regarding EPA's policy on green infrastructure can be found at:

<http://cfpub.epa.gov/npdes/greeninfrastructure/information.cfm#greenpolicy>.

In EPA Region 9, we are promoting LID strategies that infiltrate, evapotranspire, capture, and reuse storm water to maintain or restore natural hydrologies and improve water

quality. We are encouraging permitting agencies across Region 9 to incorporate LID provisions into MS4 permits as clear, measurable and enforceable requirements.

The next round of MS4 permits in the coastal Regions of southern California will be the fourth generation of these permits. It is our expectation that these latest permits be strengthened to take advantage of lessons learned from previous permits, and to contribute to the restoration of impaired waters impacted by MS4s. These new MS4 permits should include quantitative requirements to enable all parties to clearly identify performance expectations for LID implementation.

Your letter asks several questions about our position regarding permit provisions which call for LID implementation to attain a standard of no more than 5% Effective Impervious Area (EIA). Such provisions are included in the current draft (April 29, 2008) MS4 permit for Ventura County proposed by the Los Angeles Regional Water Quality Control Board, and the February 15, 2008 guidelines provided by the Central Coast Regional Water Quality Control Board to those in the Central Coast Region enrolling under the State's Phase II general MS4 permit. We support the inclusion of the 5% EIA provisions for new development and redevelopment projects in both of these examples as clear, measurable, and enforceable requirements. Use of the 5% EIA requirement is not the only acceptable, quantitative approach for incorporating LID into renewed MS4 permits in southern California. As noted in Mr. Eberhardt's April 1, 2008 letter, and his May 13, 2008 follow-up letter to the Colorado River Basin Regional Water Quality Control Board, we are open to other quantitative means for measuring how LID tools reduce storm water discharges.

Your letter asks about our use of a paper by Dr. Richard Horner concluding that the achievement of a 3% EIA standard for development in Ventura County is feasible. Dr. Horner's paper is one of many we have before us. Our positions have been informed by many documents germane to the management of municipal storm water, including the January 21, 2008 paper by your organization entitled "Integration of Low Impact Development Measures and CEQA Approvals." EPA has also considered numerous publications, case studies and guidance manuals in its consideration of LID/Green Infrastructure as a cost-effective, preferable alternative to storm water management. A partial list of these materials may be found at <http://cfpub.epa.gov/npdes/greeninfrastructure/research.cfm>.

While we cannot attribute our position on future MS4 permits to a single report or analysis, our views on these permits have been most comprehensively informed by the nearly 50 audits of Region 9 MS4 permits we have conducted over the past seven years. These audit reports can be found on our website at <http://epa.gov/region09/water/npdes/ms4audits.html#report>. Twenty of our audits have been conducted in southern California. These audits have highlighted the need for quantitative, measurable requirements in MS4 permits to ensure effective implementation of storm water controls.



I hope this has answered the questions in your July 1, 2008 letter. If you would like to discuss this further, please call me here in EPA's Southern California Field Office, at 213-244-1832

Sincerely,



John Kemmerer  
Associate Director,  
Water Division

cc: Executive Officers, RWQCBs Regions 1-9  
Tam Doduc, Chair SWRCB  
Dorothy Rice, Executive Director, SWRCB  
(all cc's transmitted electronically)

## Memorandum

Date: 9 April 2009  
To: Mark Grey, Director of Environmental Affairs Building Industry  
Association Of Southern California  
From: Eric Strecker, Aaron Poresky, and Daniel Christensen  
Subject: Rainwater harvesting and reuse scenarios and cost considerations

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### SUMMARY

The purpose of this memo was to investigate two hypothetical scenarios involving rainwater harvesting and reuse in newly developed residential neighborhoods in Orange County, California. These scenarios include an on-lot harvesting and re-use and community-scale harvesting and re-use. The community system was also modeled using SWMM to assess its potential benefits using some simplifying assumptions, and general findings are presented in a brief discussion. Lastly, the Appendix, prepared by Dr. Mark Grey, provides an analysis of the institutional and building code issues for constructing rainwater harvesting and reuse systems in California.

For the on-lot scenario, a 1000 to 1300 gallon tank would capture 0.8 inches of runoff depending on the impervious area used to fill the tank. Depending on the assigned water usages (outdoor or indoor + outdoor), the drawdown time of the tank could vary from 7 to 21 days. A single house rain harvesting system for this scenario would cost approximately \$4,900. For the 100 acres neighborhood scenario, a 1.3 million gallon storage basin would capture 0.8 inches of runoff from 60% of the total area of the catchment (impervious area). Depending on the assigned water usages (outdoor or indoor + outdoor), the drawdown time of the basin could vary from 10 to 45 days (longer drawdown time due to inclusion of street runoff). This system would cost approximately 1.65 million dollars. The cost estimates found herein are for new developments and are rough guesses due to unaccounted items and other ancillary costs.

For the same neighborhood scenario, long-term (40 year period) modeling results show that 32% of the total runoff could be captured and used if only toilet flushing were used. If toilet flushing and outdoor irrigation were used, the system could capture and reuse about 55% of the total runoff. Under both usage scenarios, significant volumes of runoff would bypass the storage tank (or cause overflow) from 50 to 70 percent of the runoff or more would be expected to bypass.

## BACKGROUND

Stormwater storage and re-use is a general description referring to the capture and storage of runoff and subsequent re-use of that water. Such a system could take a variety of forms. In the case of urban residential development, the typical storage component consists of some form of an enclosed tank or "cistern" that accepts runoff from roof drains or neighborhood storm drains. Some level of treatment (e.g. screening, filtration, etc.) is typically required upstream of the cistern to prevent the introduction of debris into the system. In addition, some form of treatment would be required, depending on the planned use. Potential re-use demands in residential neighborhoods are generally limited to irrigation of lawns and landscaped areas and/or to meet non-potable demands in homes such as toilet/urinal flushing (EPA 2008). The list below outlines the general materials needed for a reuse system for a single family household.

- Downspouts/Piping to Cistern: Typically a cistern is located near or directly under the downspout and minimal piping is needed. However, if driveway, patio and walkway water is to be collected on a lot, then additional collection and piping systems would be needed. The tank in this case would likely require deeper burial to be able to accept ground level runoff.
- Collection Filters: Fine mesh can be placed over the downspouts to prevent debris from clogging gutters and downspouts and entering the cistern. Filters with finer particle extraction capability, also known as "roof washers", can also be placed at top of the downspout to filter finer particles. (Figure 1a). For inlets from other areas such as driveways, filter materials can be integrated with the inlet and in fact would be more critical than for downspouts as debris quantities would be expected to be larger from ground level.
- First flush diverter: Typically this is a vertical pipe located before the cistern that traps the first flush volume using a ball float helping to prevent built-up contaminants entering the tank. The length and size of the vertical pipe determine the amount of water that will be diverted. A weep hole at the bottom of the vertical pipe empties the trapped first flush water. (Figure 1b). Another option would be to allow the tank to fill and then either divert via an overflow in the incoming pipe system or via a tank overflow.
- Tank/Cistern: Structure receives and stores impervious runoff (typically from roofs) and is design to store a certain volume of runoff to meet water use demands. (Figure 2a)
- Insect tank screens: Any open entrance to the tank should be covered with a fine mesh insect screen to prevent mosquitoes and pests from entering the cistern. (Figure 2b)
- Pump: A pump is used to force water to treatment system as appropriate and then toilets and/or irrigation system.
- UV treatment: Some regulations may require UV treatment for indoor non-potable water reuse or if water is re-introduced into a pressurized irrigation system. Another option would be to have a separate non-pressurized (low-pressure) irrigation system.
- Piping: Additional pipelines (purple lines) inside the house and to the irrigation system are needed to ensure the non-potable water does not mix with potable water.

- Backflow valve: This valve is a safety measure to ensure non-potable water does not mix with the potable water lines. An air-gap may also be used or in addition to a backflow valve.
- Potable water use failsafe system: A potable water line should be in place as a backup in case the non-potable reuse system fails or empties. This requires a double-line system and all measures should be taken to prevent non-potable water from mixing with potable water lines.
- Stencils: All non-potable water outlets should be clearly labeled as a "non-potable" source.

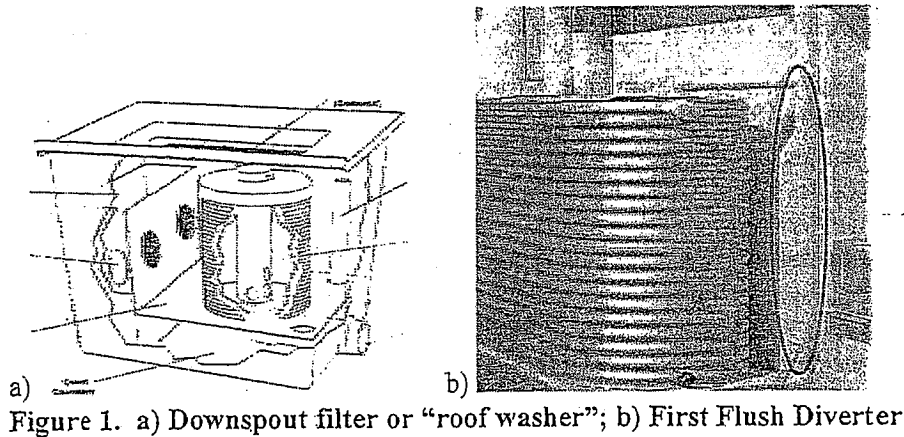


Figure 1. a) Downspout filter or "roof washer"; b) First Flush Diverter

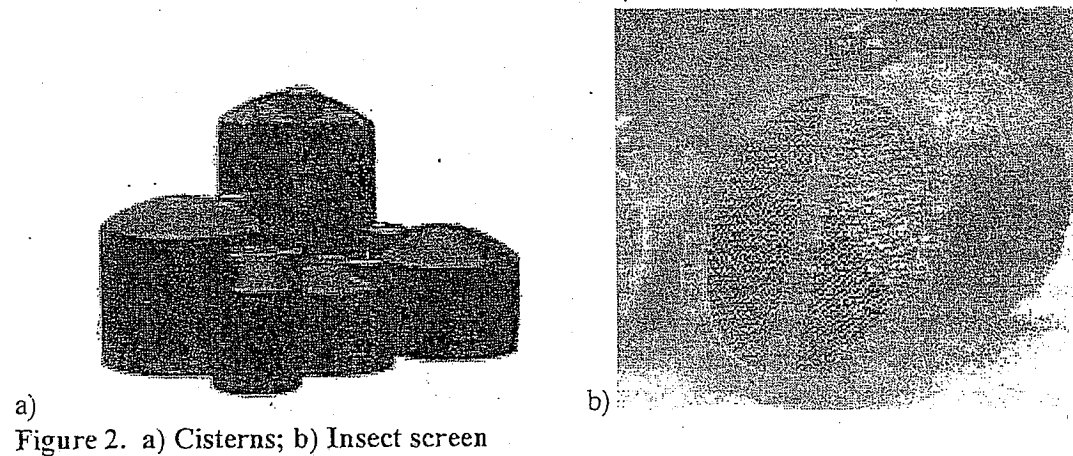


Figure 2. a) Cisterns; b) Insect screen

The critical factor in performance of storage and re-use systems lies in the integration of the magnitude and pattern of inflows and outflows with storage volume. For example, if inflow and outflow are well-matched and fairly constant, the system will require a small storage volume. If inflows and outflows are well-matched in total volume but come at different times, a larger storage volume may be required to match supply with demand. In the case of storage and re-use as a means of "disconnecting" impervious area, the most important requirement is that cistern has sufficient capacity and ability to regenerate this capacity, such that the system captures a significant portion of runoff on an average annual basis. If demand for harvested water during

the period of high runoff is small compared to the overall runoff volume, then the system may not be able to perform its intended function of capturing a significant volume of runoff.

Two scenarios that were used for a general analysis are presented below. The first is a single family home scenario and the second is a 100-acre residential development. For the single family home scenario, two situations are analyzed: 1) only runoff from the roof-top drains to the cistern, and 2) runoff from the roof and additional impervious areas (driveway and patio) drains to the cistern. For the 100-acre residential development, runoff from the entire catchment, including the streets, sidewalks, driveways and roofs and pervious area was considered. The second scenario was also modeled using SWMM to ascertain long-term hydrology benefits.

### HYPOTHETICAL SINGLE HOUSEHOLD SCENARIO

A simple single household example of rainwater harvest and reuse is provided to outline rough estimates of water demand and tank drawdown times that could be expected from a typical reuse system on a newly developed residential lot found in Orange County. This analysis uses the simple rational method to calculate runoff volumes and require tank size following the methods outlined in the "New Development and Significant Redevelopment" chapter in the DAMP. Runoff coefficients dependent on imperviousness found in the DAMP document were used in the runoff calculations. A total lot area of 0.1 acres with 69% impervious area was assumed. This imperviousness is based on 2,400 sq ft of roof area, 600 sq ft of other impervious area (driveway, sidewalks and patio), and the remaining 1,356 sq ft of pervious area. A rainfall depth of 0.8" was used to size storage units. This depth represents approximately the 85<sup>th</sup> percentile, 24 hour rainfall depth for large parts of Orange County. Two storage rainwater collection and storage scenarios were analyzed: 1) only runoff from the roof of the house drains to the cistern, and 2) runoff from the roof and additional impervious areas (driveway and patio) drains to the cistern.

Two reuse demand scenarios were considered: 1) reuse for internal demand only (i.e. toilet flushing), and 2) reuse for internal and external (i.e. irrigation) demand combined. Demand for toilet flushing and outdoor use per household were assumed to be 65 gal/day and 77 gal/day, respectively. The estimate for toilet flushing use was derived from an estimate of 18.5 gal/person/day (AWWARF 1999) and an assumed average occupancy of 3.5 people per house. For outdoor demand, the average use rate for May, September and December was estimated to be 113 gal/day for 2000 square feet of landscape area in the Irvine region (IRWD 2009). Since the majority of rain in Orange County occurs between November and March, the average of May, September and December demand likely over-estimates the demand for harvested rainwater during the months when rainwater is available for harvesting. The average outdoor demand (113 gal/day/2000sqft) was linearly scaled to the equivalent outdoor demand for the assumed 1,356 square feet of pervious area per lot used in this study, yielding 77 gal/household/day.

Based on the capture and storage scenarios and re-use scenarios described above, approximate average drawdown rates were estimated. Drawdown rates are important to the performance of stormwater BMPs because they affect how much storage capacity can be regenerated to capture

runoff in subsequent storms. Table 1 shows the characteristics of the hypothetical lot and resulting cistern volume and drawdown times.

Table 1: Single household rainwater harvesting system attributes used for analyses.

	Roof Runoff	Roof + Other Impervious area	
<b>Lot Characteristics</b>			
# houses	1	1	
Total lot area	0.1	0.1	acres
Impervious area of roof	2400	2400	ft <sup>2</sup>
Other impervious area	600	600	ft <sup>2</sup>
Pervious area	1356	1356	ft <sup>2</sup>
% total impervious area of lot	69%	69%	
% of impervious area to cistern	80%	100%	
Runoff Coeff. for impervious area	0.9	0.9	
<b>Storage Tank Sizing</b>			
Storm Depth	0.8	0.8	inches
Vol Cistern	144	180	ft <sup>3</sup>
	1,077	1,346	gal
	0.0033	0.0041	acre-ft
<b>Demand Calculations</b>			
People/ house	3.5	3.5	
Toilet use/capita	18.5	18.5	gal / day
Toilet use/house	65	65	gal / day
Outdoor / house	77	77	gal / day
<b>Drawdown Times</b>			
Toilets only	17	21	days
Both Toilets & Outdoor uses <sup>1</sup>	7.6	9.5	days

Per the calculations reported in Table 1, the drawdown time of a household cistern is expected to range from approximately 8 to 21 days. Note that these calculations assume that outdoor demand is immediately present following a storm event; likely an over-estimate due to rainfall soaking of landscaped areas and the prevalence of back-to-back storms in Southern California. From a runoff reduction perspective, a user would like to empty the cistern relatively quickly so

<sup>1</sup> Outdoor demand assumes that irrigation demand is immediate; more sophisticated modeling could be completed to more accurately characterize irrigation demand, but for purposes of this analyses, it has been assumed to be immediate. This likely significantly overstates the demand for irrigation.

that adequate storage is available for the next storm. Conversely, from a water reuse perspective, a user would likely desire the tank to empty slowly so that demand could be met for a longer period with the captured stormwater.

### HYPOTHETICAL 100 ACRE NEIGHBORHOOD SCENARIO

A newly developed neighborhood example of rainwater harvest and reuse is provided to outline rough estimates water demand and tank/basin drawdown time that could be expected from a larger centralized reuse system found in Orange County that would capture runoff from the entire catchment (including streets, driveways, and pervious areas if they are contributing). This analysis uses the simple rational method to calculate the runoff to size the volume for storage system following the methods outlined in the "New Development and Significant Redevelopment" chapter in the DAMP 2003 to size the cistern volume. A total tributary area of 100 acres with 60% impervious area was assumed. Assuming the same 0.1-acre lots as above at a density of 4.5 du/ac, the total acreage covered by residential lots would be 45 acres. This leaves approximately 27.5 ac of roads and 27.5 ac of common areas, parks and open space to yield 60 percent neighborhood-wide imperviousness. Based on 1,356 sf of pervious area per lot and 450 lots in the neighborhood, 14 acres of pervious area would be located on private lots and the remaining 36 acres of pervious area would be contained in parks, open space, and greenways. A rainfall depth of 0.8" was used to size the neighborhood storage unit as this depth represents approximately the 85<sup>th</sup> percentile, 24 hour rainfall depth for large parts of Orange County.

The same water demand estimates as the lot scenario were used to develop the neighborhood scenario. Off-lot pervious area was assumed to be irrigated at the same rate per square foot as on-lot pervious area. Table 2 shows the characteristics of the neighborhood tributary area and resulting cistern volume and drawdown times.

Table 2: Neighborhood rainwater harvesting system attributes used for analysis.

Tributary Area Characteristics		
# houses	450	
Impervious area	60	acres
Pervious area	40	acres
% impervious	60%	
Composite Runoff Coeff. C	0.60	
Storage Tank Sizing		
Storm Depth	0.8	Inches
Cistern / Basin Volume	174,000	ft <sup>3</sup>
	1,300,000	Gal
	4.00	acre*ft
Reuse Demand Calculations		
People per house	3.5	
Toilet use per capita	18.5	gal / day
Toilet use per house	65	gal/ day
Outdoor demand per 2000 sf of pervious area	113	gal / day
Total toilet demand	29250	gal / day
Total outdoor irrigation demand	98500	gal / day
Total toilet + irrigation demand	127750	gal / day
Drawdown Time		
For Toilets	45	Days
Both Toilets & Outdoor <sup>2</sup>	10	Days

## BASIC COST CONSIDERATIONS

Cisterns may take a variety of shapes and forms, thus costs may vary substantially by project. Likewise, the appurtenances required to convey water to the tank and supply the building demand are likely to be affected by project-specific factors. Finally, there are a variety of treatment systems that could be considered. Therefore, only a rough estimate of costs for storage and re-use systems in newly developed houses or neighborhoods can be made herein. The basic cost items that will be considered include: collection tanks, filters, UV treatment, 1<sup>st</sup> flush

<sup>2</sup> Outdoor assumes that irrigation demand is immediate; more sophisticated modeling could be completed to more accurately characterize irrigation demand, but for purposes of this analyses, it has been assumed to be immediate. This likely significantly overstates the demand for irrigation.



diverters, inlet piping and filters; pumps and appurtenances; the incremental cost of a dual plumbing system, and installation. The limited implementation of storage and re-use systems of the sort being considered herein allows limited basis for comparison to actual projects. Table 3 shows an itemized cost list for rainfall harvesting items.

Table 3: Rainwater harvesting items and prices

Item	Description	Cost	Reference/Source
<b>TANKS</b>			
Galvanized steel	200 gal	\$225	Fairfax County, 2005
Polyethylene	165 gal	\$160	Fairfax County, 2005
Fiberglass	350 gal	\$660	Fairfax County, 2005
Plastic	800 gal	\$400	Plastic-mart.com
Plastic	1100 gal	\$550	Plastic-mart.com
Plastic	1350	\$600	Plastic-mart.com
Plastic cone	1500 gal w/metal stand	\$1500	Plastic-mart.com
Plastic	2500 gal	\$900	Plastic-mart.com
Plastic	5000 gal	\$3000	Plastic-mart.com
Plastic	10000 gal	\$6000	Plastic-mart.com
Dry Det. Basin(1997) <sup>3</sup>	$C = 12.4V^{0.760}$ for 1 ac-ft	\$41,600	stormwatercenter.net
Below Ground Vault <sup>4</sup>	$C = 38.1 ( V / 0.02832 )^{0.6816}$	\$55,300	fhwa.dot.gov
Concrete	1,000,000 gal above g. (O&P)	\$548,000	RSMMeans
Steel	1,000,000 gal above g. (O&P)	\$467,000	RSMMeans
<b>TREATMENT</b>			
UV (house-scale)	Whole system - 12 gpm	\$700-\$900	rainwatercollection.com
UV bulb	Life: 10,000 hrs or 14 months	\$80-\$110	rainwatercollection.com
UV (neighborhood-scale)	Whole system - 200 gpm	\$10,000	Bigbrandwater.com
Downspout filter	Placed in Gutter	\$20 - \$500	many online
1 <sup>st</sup> Flush Diverter	Vertical pipe w/ ball float	\$50-\$100	raintankdepot.com
PUMP	1 hp (all in one package)	\$575 - varies	rainwatercollection.com

<sup>3</sup> This dry detention cost equation is based on Brown and Schueler, 1997, where C is the construction, design and permitting cost and V is the volume (cu-ft) need to control the 10-year design storm. In this case, the 0.8" storm runoff volume was used in place of the 10-yr design storm volume.

<sup>4</sup> This below ground storage vault equation is based on Weigand et al., 1986, where C is the construction cost estimate in 1995 dollars and V is the runoff volume (cubic meters) of the maximum design event frequency, taken to be the 0.8" storm for this study.

Item	Description	Cost	Reference/Source
PIPING (Purple)			
to Tank (lot)	PVC: 2"-6" (O&P)	\$2-\$12 / LF	RSMeans
to House (lot)	PVC: 2"-6" (O&P)	\$2-\$12 / LF	RSMeans
to Tank (neighbor.)	Concrete: 6" - 18" (O&P)	\$15-\$30 /LF	RSMeans
to House (neighbor.)	HDPE- 4" - 10" (O&P)	\$11-\$27 / LF	RSMeans
to Irrigation	PVC: 2"-6" (O&P)	\$2-\$12 / LF	RSMeans
Backflow prev. valve	Each	\$100-\$200	web
STENCILS	Non-potable water	----	
INSTALLATION	Percentage of material cost	40 % - 50%	

A rough cost estimate for the hypothetical examples can be developed using the table above. Table 4 summarizes the potential costs for the single household (lot), and Table 5 summarizes the potential costs for neighborhood. For the neighborhood scenario, the pipe (purple) lengths were estimated using measurements along the centerline of streets from a similar size neighborhood in Irvine.

According to Table 4, the total cost of the single household rainwater harvest and reuse system would be approximately \$4900, not including design, permitting, and contingency costs which could run from another 30 to 70 percent of the material and installation costs. Table 5 shows the total cost for the neighborhood scenario is approximately \$1.65 million, not including design, permitting, and contingency costs which could run from another 30 to 70 percent of the material and installation costs. This would equate to roughly \$3660 per house, most of the saving being found in the total cost of the tanks verse a large central storage unit.

Table 4: Rainwater harvesting materials cost for single household scenario

Item	Description	Cost
TANKS		
Plastic	1100 gal and 1350 gal	\$550
TREATMENT		
UV	Whole system - 12 gpm	\$800
UV bulb	Life: 10,000 hrs or 14 months	\$80-\$110
Downspout filter	Placed in Gutter	\$250
1 <sup>st</sup> FLUSH DIVERTER	Vertical pipe w/ ball float	\$100
PUMP	1 hp (all in one package)	\$575
PIPING (Purple)		
to Tank (lot)	PVC: 2"-6" (O&P) 20ft	\$8 / LF
to House (lot)	PVC: 2"-6" (O&P) 50ft	\$8/ LF
to Irrigation	PVC: 2"-6" (O&P) 50ft	\$8 / LF
Backflow prev. valve	each	\$200
STENCILS	Non-potable water	----
INSTALLATION	40% of material cost	\$1400
TOTAL		\$4,900

Table 5: Rainwater harvesting materials cost for neighborhood scenario

Item	Description	Cost	Units Assumed
<b>TANKS</b>			
Drv Det. Basin(1997)	$C = 12.4V^{0.760}$	\$119,000	174,000ft <sup>3</sup>
Below Ground Vault	$C = 38.1 ( V / 0.02832 )^{0.6816}$	\$142,000	174,000ft <sup>3</sup>
<b>TREATMENT</b>			
UV - neighborhood	Whole system - 200 gpm	\$10,000	
Catch basin filters	1 every 2 acres	\$2,000	50 catch basins
<b>PUMP</b>		\$50,000	
<b>PIPING (Purple)</b>			
to Tank (neighbor.)	Concrete: 6" - 18" (O&P)	\$15-\$30 /LF	\$23 - 14,000 ft
to House (neighbor.)	HDPE- 4" - 10" (O&P)	\$11-\$27 / LF	\$19 - 14,000 ft
to Irrigation	PVC: 2"-6" (O&P)	\$2-\$12 / LF	\$8 - 60 ft /house
Backflow prev. valve	each	\$100-\$200	\$200 per house
<b>STENCILS</b>		Non-potable water	----
<b>INSTALLATION</b>		40% of material cost	\$470,000
<b>TOTAL</b>		\$1,650,000	

Note that there would also be on-going operation and maintenance costs for operation of both neighborhood and on-lot systems. These costs would include electricity, filter maintenance, operator for the neighborhood system, on-going training for home operators or contract maintenance and other on-going costs (periodic replacements/repairs, etc.).

#### ASSESSMENT OF HYDROLOGIC IMPACTS OF CISTERNS FOR NEIGHBORHOOD SCALE

Four community-scale residential re-use scenarios were analyzed based upon the above description of the 100-acre residential catchment. The four scenarios included:

- A. Storage sized for 0.8" storm event and water reuse for toilet flushing only.
- B. Storage sized for 0.8" storm event and water reuse for toilet flushing and outdoor uses.
- C. Storage sized for 1.6" storm event and water reuse for toilet flushing only.
- D. Storage sized for 1.6" storm event and water reuse for toilet flushing and outdoor uses.

Each scenario was modeled over a long period to better understand the potential hydrology performance of runoff storage and re-use systems in Orange County, California. Simplified representations were used for catchment runoff, cistern storage and re-use demands from toilet flushing and irrigation.

The Laguna Beach rainfall gage was used as a representative rainfall record for large parts of Orange County. The Laguna Beach gauging station is located in the City of Laguna Beach. The

gauge elevation is 210 ft above mean sea level (AMSL). Reuse demand inputs were generated from IRWD estimates of indoor demand and irrigation demand. Results of this effort include the overall stormwater capture efficiency achieved in each scenario and the portion of residential demand that could be supplied by rainwater harvesting (RH).

## METHODOLOGY

This section describes the methodology used to estimate system performance.

### Model Selection

The EPA Stormwater Management Model (SWMM) Version 5.0 was used for continuous simulation analysis of the various facility configurations. SWMM is a dynamic rainfall-runoff simulation model used for single event or continuous simulation of runoff from primarily urban areas. The model accounts for various hydrologic processes that combined to produce stormwater runoff from urban areas. The model also contains a flexible set of hydraulic modeling capabilities used to route runoff and external inflows through the drainage system network of pipes, channels, storage/treatment units and diversion structures (USEPA, 2008). SWMM was selected because of its proven capabilities in simulation of urban hydrology and hydraulics, and its flexibility in representing the proposed systems. Although in this case, SWMM was used with some simplifying assumptions, it could be used with in a more sophisticated modeling approach to account for such factors as irrigation demand based upon available evapotranspiration rates, etc. that would allow for a more accurate analysis of irrigation demand then conducted in this simplified analysis.

### Model Input Parameters

Table 6 shows the input parameters used to represent the tributary area to the re-use facilities. In addition, information from Tables 1 and 2 was used to characterize the attributes of each of the scenarios.

**Table 6. Baseline SWMM Inputs - Hydrology**

Parameter	Value	Units	Source/Rationale
Rainfall	Laguna 2 NCDC record (1952-1993)	in/hr	Representative of rainfall pattern at project locations; long period of record; good resolution; minimal missing data
Imperviousness	60	%	Consistent with hypothetical scenarios described in memo.
Slope	0.03	ft/ft	Includes roofs, lawns, streets, and sidewalks.
Impervious Roughness	0.01	-	Literature <sup>1</sup> (not sensitive to analysis)
Pervious Roughness	0.1	-	Literature <sup>1</sup> (not sensitive to analysis)
Impervious Depression Storage	0.02	inches	Literature <sup>1</sup> (sensitive to analysis, selected conservatively)
Pervious Depression Storage	0.10	inches	Literature <sup>1</sup> (sensitive to analysis, selected conservatively)
Ksat	0.15	in/hr	Literature <sup>1</sup> (representative of B/C soils) (moderately sensitive to analysis)
IMD	0.25	in/in	Literature <sup>1</sup> (representative of B/C soils) (moderately sensitive to analysis, not highly variable)
Suction Head	8	inches	Literature <sup>1</sup> (representative of B/C soils) (not sensitive to analysis)
% of Imp area w/o DS	25%	-	SWMM default (moderately sensitive to analysis)
Path Length	500	ft	Typical of urban development
Routing	Imp and Perv routed directly to outlet	-	Conservative representation; in reality some imperviousness will be routed over pervious area, resulting in diminished volumes for small storm events
Dry Weather Flow	Assumed to be zero	cfs	Based on use of efficient irrigation methods

<sup>1</sup> - Based on James and James, 2000.

### Hydrology Validation

Average annual runoff coefficients recommended by the OC DAMP Table A-1 were compared to model results. For 60% impervious areas, the DAMP Table 1 recommends a runoff coefficient of 0.60. The SWMM model computed a long-term runoff coefficient of 0.58. This is believed to be adequately close for the purposes of this analysis.

### Facility Representation

The storage and re-use systems were simulated as a simple underground storage feature (zero evapotranspiration) with multiple outlets to represent various types of re-use demand. The following assumptions were used:

- Storage volume was simulated per the hypothetical scenarios described in the memo. The baseline design storm depth was 0.8 inches for calculating the size of the storage facility. A scenario was also simulated that included twice as much storage (i.e. a 1.6 inch design storm).
- Toilet flushing was assumed to be the only indoor demand for harvested rainwater and was simulated as a constant use rate. It is acknowledged that toilet flushing will exert a time-dependent demand, most notably on a daily pattern, however average rates were deemed acceptable for the modeling effort given the time scale of facility drawdown being considered (greater than 5 days).
- Irrigation demand was assumed constant within a single day, but to vary seasonally based on irrigation use data from IRWD's website (Table 2). The simulations did not account for reduced irrigation demands following wet periods that likely would significantly extend the storage drawdown times for irrigation use. Therefore, this analysis likely over predicts the effectiveness of the system in reducing runoff when irrigation is included.

Table 7: Landscape irrigation rates by month for IRWD service area (IRWD)

Month	Gal/mo per 2000 sf of landscaping	Gal/day per 2,000 sf of landscaping
Mar	3000	100
July	7500	250
Sept	5300	177
Dec	1900	63

Irrigation demand was interpolated between the monthly averages from Table 2 to yield monthly average values. The same yearly pattern of irrigation demand was assumed through the entire simulation period, though it is acknowledged that irrigation demand will vary by year (as well as following wet periods).

- An overflow weir was simulated to represent the condition in which the cistern is full and additional runoff bypasses the facility.

The simulation was run for 1952 through 1993 at 15-minute computational timesteps and one-hour reporting steps. Cumulative volumes were totaled and processed.

SUMMARY OF RESULTS

Table 3 provides a summary of key inputs and results for 42 years of continuous simulation.

Table 8: Key Inputs and Results

Key Inputs and Results	Units	Scenario			
		A	B	C	D
		Toilet Flushing Only, 0.8" design storm	Toilet Flushing + Irrigation, 0.8" design storm	Toilet Flushing Only, 1.6" design storm	Toilet Flushing + Irrigation, 1.6" design storm
Design Storm for Tank Volume	inches	0.8	0.8	1.6	1.6
Tank Volume	cf   ac-ft   MG	174,000   4.0   1.3		348,000   8.0   2.6	
Indoor Use Rate	cfs   gpd	0.0428   27,700			
Avg Ann Outdoor Use Rate (varies by month)	cfs   gpd	-	0.195   126,000	-	0.195   126,000
Average Annual Drawdown Time	days	47	8.5	94	17
Average Stormwater % Capture and Reuse	%	32%	55%	41%	68%
Avg Annual Volume of Stormwater Reused	MG   CCF	5.2   6,950	8.8   11,800	6.5   8,700	10.9   14,620

DISCUSSION

The modeling results illustrate several key concepts:

- Capture efficiency increases with higher use rate and larger volumes. Higher use rate serves to make more volume available for subsequent storms, while larger volume allows more water to be stored for use longer after the end of rainfall.
- The amount of runoff captured on an average annual basis by a DAMP sized cistern and used is on the order of 30 to 55%, and is likely closer to the 30 to 40 percent range due to optimistic irrigation demand assumptions. Therefore if no other treatment of runoff was provided, the system would leave about 60 to 70 percent of runoff untreated.
- Doubling the tanks size increases the percent capture, but at much less of a rate than the same percentage increase in size of the storage volume (i.e. double the volume with about a 10 percentage point increase in percent capture).

- Although the single lot scenario was not modeled, due to the fact that it does not include streets, the percent capture of runoff from a neighborhood with on-lot systems would be less overall than the community scenario due to street runoff not being included.

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## APPENDIX – RAINWATER HARVESTING AND REUSE CODE ANALYSIS

*Prepared by Mark Grey, Director of Environmental Affairs Building Industry Association of Southern California*

The purpose of this document is to identify the California building codes that may govern design, installation and operation of rainwater harvesting and reuse systems (RHR) in new and redevelopment projects. This document may also aid in identifying relevant code sections for existing building retrofit to accept RHR.

### Regulatory Background

California building and public safety codes do not explicitly recognize RHR or provide definitions for “rainwater” or “stormwater” and instead address plumbing and mechanical system criteria and use of appropriately treated wastewater effluent to protect public health. Plumbing and health and safety code adaptations to using treated wastewater effluent generally began in the early 1990s, with modifications made thereafter at various times. Neither the Uniform Plumbing Code nor the International Plumbing Code addresses the use of RHR.

Three California Code of Regulations sections govern direct reuse of treated wastewater effluent:

Title 24—Building Standards Code (plumbing code)

Title 22—Social Security (recycled water quality standards)

Title 17—Public Health (public water system cross-connection and backflow prevention)

Title 24 contains California building standards including the plumbing code (Chapter 16). Within Chapter 16, requirements for designing and installing dual-plumbed systems to accommodate treated wastewater effluent are found in Appendix J. Interestingly, Appendix J has never been formally adopted within Title 24 by the California Building and Standards Commission (CBSC) and serves as a guidance document. As of April 2009, the CBSC is considering incorporation of graywater recycling system installation standards into Appendix J. In any case, the mechanical design and installation of on-site (project level) or sub-regional or regional water treatment systems and their associated piping and pumping requirements would be governed under California plumbing code found in Title 24.

Title 22 contains the water quality standards for treated wastewater effluent used for dual plumbed systems within residential and commercial buildings and direct reuse of treated effluent for ground water recharge or for landscaping. Recycled water used within buildings for toilet flushing and urinals, or for most landscaping applications must meet disinfected tertiary recycled water standards. Less stringent disinfection standards are in place for other outdoor uses such as roadway landscaping. There are multiple water treatment technologies capable of

meeting Title 22 requirements (CDPH, 2009). Two general classes exist: filtration and disinfection. Filtration technologies generally include granular media, cloth media, or membrane systems. Disinfection technologies include ultraviolet, pasteurization, or ozone/peroxide systems. An important project level planning consideration arises when capture and storage projects intend to use storage facilities in excess of 100,000 gallons or piping systems greater than 16 inches in diameter. Use of these large storage or conveyance systems triggers California Environmental Quality Act compliance.

Title 17 contains cross-connection and backflow prevention requirements where the treated wastewater effluent meeting Title 22 water quality standards is dual plumbed into potable water systems.

### Integration of rainfall harvesting and reuse systems into existing California code structure

Given that state codes do not explicitly recognize rainfall or stormwater which is collected from roof areas or other impervious surfaces and stored and/or treated for use, discretion in plumbing and treatment system component approval will likely reside at the county or city level or both through local codes and ordinances. Few case studies are available for California, but available sources suggest multiple permits will be necessary from the local permitting authorities. These permits are required for installation of piping and mechanical systems (such as treatment) within the building footprint and envelope and below ground around the perimeter of the building site.

From a code transfer standpoint, California plumbing code (Title 24, Chapter 16) and cross connection/backflow system design standards (Title 17, Chapter 5) appear to be directly transferrable to RHR. Likewise, California Title 22, Division 4 Environmental Health standards would always apply to treated rainfall or stormwater serving dual plumbed systems (for toilet and urinal use within the building envelope). Title 22 standards for irrigation use also appear to be generally applicable; uncertainty arises for small single family homes or other buildings where only roof runoff will be collected and used for landscape supply only. Cross connection and backflow protection is always required whenever a recycled (presumably rainwater or stormwater) water source is integrated into the existing potable water system to meet indoor or outdoor demand.

### Case Studies and National Code Guidance Documents on Rainwater Harvesting

City of San Francisco, California. The City of San Francisco amended its plumbing code in 2005 to allow individual property owners to direct rainwater to alternative locations such as rain gardens, rain barrels, and cisterns. Both landscaping and toilet flushing uses are allowed. To install such a system, an applicant must obtain a plumbing permit and a building permit, and if the system will include pumps, be located on a roof, or will be

located underground, additional permits are necessary. If the rainfall collection system is not connected to the existing plumbing system, then permits are not necessary.

Oregon Building Codes Division. Oregon Smart Guide: Rainwater Harvesting. The Oregon Building Codes Division allows collection of roof runoff only for rainfall harvesting. A project applicant must obtain approval from the local authority having building code jurisdiction. Systems must be designed according to Appendix M.

Santa Fe County, New Mexico. Rainwater Catchment System Ordinance. This is a county ordinance that requires installation of rainwater catchment systems for all commercial and residential development from one to four dwellings. Cisterns are required to be designed to capture 1.5 gallons per square foot of roof area. Water collected must be directed to landscape irrigation.

Texas Water Development Board. Rainwater Harvesting Potential and Guidelines. The Texas State Board of Plumbing Examiners governs plumbing regulations in Texas. According to the document, most communities in Texas follow either the Uniform Plumbing Code or International Plumbing Code. Neither code structure addresses rainwater harvesting.

#### References Cited and Resources:

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Oregon Smart Guide: Rainwater Harvesting. Undated.

Rainwater Harvesting in San Francisco. Undated. San Francisco Public Utilities Commission, Department of Public Health, and Department of Building Inspection.

Rainwater Harvesting Potential and Guidelines for Texas: Report to the 80<sup>th</sup> Legislature. 2006. Texas Rainwater Harvesting Evaluation Committee.

Santa Fe County Ordinance No. 2003-6.

## Memorandum

Date: 09 April 2009  
To: Mark Grey, Director of Environmental Affairs Building Industry  
Association Of Southern California  
From: Eric Strecker, Nichole Dunn, and Klaus Rathfelder, Geosyntec  
Subject: NRDC comments on Draft NPDES Stormwater Permit for the County  
of Orange, Tentative Order No. R8-2008-0030

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The Natural Resources Defense Council (NRDC) submitted comments on the Draft NPDES Stormwater Permit for the County of Orange, Tentative Order No. R8-2008-0030 (referred to herein as NRDC comments). As part of their comments, NRDC cites six numeric stormwater standards from jurisdictions nationwide as evidence that various jurisdictions have begun to implement numeric standards that require onsite retention, infiltration, and/or harvesting. Specific citations are included below in italics.

Geosyntec has reviewed the requirements of the stormwater standards cited by NRDC. Following each of the citations below, we provide a summary of the stormwater standards referenced. In particular, we focus on requirements for onsite retention and reuse and if and how these requirements consider site conditions. We have also attempted to characterize the current status of implementation of the requirements.

While the jurisdictions below may have begun implementing numeric standards with a focus on keeping and managing stormwater onsite, they generally recognize that this is not possible in all situations and allow for alternative measures in lieu of retaining all stormwater onsite.

### Pennsylvania

Requirement: *"Capture at least the first two inches of rainfall from all impervious surfaces and retain onsite (through reuse, evaporation, transpiration, and/or infiltration) at least the first one inch of runoff"* (NRDC comments/pg. 3)

According to the Pennsylvania Stormwater Best Management Practices Manual, cited as the reference for the above information, "Pennsylvania laws and regulations do not directly manage

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stormwater at the state level, although some state level management occurs through the Stormwater Management Act and the NPDES permitting program." However, the 3/2009 Draft NPDES Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) General Permit (PAG-13) requires applicants to comply with a Model Stormwater ordinance approved by the DEP in 2005 or later, or the 2008 Pennsylvania Model Stormwater Management Ordinance (SMO). Counties that discharge to special protection watersheds are not eligible for the General Permit and must apply for an individual permit. The volume control requirements stated in the Pennsylvania Stormwater Best Management Practices Manual are required by the Draft 2009 Pennsylvania SMO. Therefore, the standards in the Pennsylvania Stormwater BMP Manual are a requirement in the Draft Phase II General Permit under development by the Pennsylvania Department of Environmental Protection. In addition, the standard cited by NRDC is one of two guidelines in the SMO. The standard selected by NRDC is one that is specifically independent of site constraints and it was stated that it should not be used when regulated activities are greater than 1 acre or for any project that requires design of stormwater storage facilities. Also known as Control Guideline 2 or the Simplified Method, this guideline requires:

- The first 2" of runoff from NEW impervious surfaces be captured.
- At least the first 1" of runoff from NEW impervious surfaces be permanently removed from the runoff flow through reuse, evaporation, transpiration and/or infiltration.
- Where possible, all permanently removed runoff should infiltrate; however, it is suggested that in all cases at least 0.5" should be infiltrated.

The other guideline, which was not cited by NRDC, is Control Guideline 1 or the Design Storm Method. This guideline is applicable to any size of regulated activity and requires that the post-development total runoff volume for all storms equal to or less than the 2-year/24-hour event to not increase. This guideline also requires modeling and requires that for the existing condition all pervious areas must be modeled as in good condition and 20% of the existing impervious area must also be modeled as pervious area in good condition.

The Pennsylvania Stormwater BMP Manual also calls out several Special Management Areas (i.e., Brownfields, Highways and roads, karst areas, mined lands, near supply wells, urban areas, surface water supplies and Special Protection Waters) that may require the above standards to be modified on a case-by-case basis due to site conditions. Neither the General Permit, nor the model ordinance specifically addresses the limitations of Special Management Areas, though they do address Special Protection Waters.

Since the General Permit and SMO are still in draft form it is unknown how the authorities will address situations where Control Guideline 1 is used and the onsite management of the first 1" of runoff from new impervious surfaces is not feasible, or where the site is in a Special Management Area.

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Pertinent findings from our review of the Pennsylvania stormwater ordinance are:

- The requirements cited by NRDC are general requirements (SMO) of a Draft Phase II general permit via reference to the manual. The requirements are not specific conditions in the Permit.
- The requirements cited are applicable to sites of 1 acre or less or that do not require design of stormwater storage facilities. For larger sites, the Draft SMO requires no increase in runoff volume up to the 2-year/24-hour event, which implicitly considers the pre-development site conditions.
- The Draft SMO provides allowances for special site constraints.
- The application of the above is still proposed in a draft permit, so there are no cases studies or information about the practical implications of the requirements.

#### Anacostia, Washington, D.C.

Requirement: *"Retain onsite the first one inch of rainfall and provide water quality treatment for rainfall up to the two-year storm volume"* (NRDC comments/pg. 3)

The original requirement was published in Final Environmental Standards June 2007, by the Anacostia Waterfront Corporation acting on behalf of the District of Columbia. The Anacostia Waterfront Initiative was a Memorandum of Understanding (MOU) entered into by 20 District and Federal agencies that owned or controlled land along the Anacostia Riverfront. The partnership formed by the MOU was formed to help attain a vision for the waterfront areas, known as the Waterfront Revitalization Endeavor. The Anacostia Waterfront Corporation was created to oversee and implement the Anacostia Waterfront Initiative for the cleanup and redevelopment along the Anacostia River. Before being dissolved by the NCR and AWC Reorganization Act of 2008, the Anacostia Waterfront Corporation published, "Final Environmental Standards" in June of 2007 that required retention of the first 1" of runoff for beneficial reuse. However, the standards allow for exceptions where infiltration or collection and reuse are not feasible for public safety or environmental protection. If an exception is required, physical and/or financial offsets may be applied. Physical offsets require 1.5 times the amount of the stormwater that is not retained on site to be reduced through the off-site use of greenroofs, potable water conservation, and LID measures. However, if potable water conservation is used as a physical offset only 25% of the annual volume saved is credited. Financial offsets consist of payments to the Anacostia River Trust Corporation, a subsidiary of AWC, for twice the cost of obtaining an equivalent reduction of the stormwater flow being offset. Since the AWC was rolled back into the Washington D.C. Office of Planning, the District Department of the Environment is responsible for the implementation of these requirements.

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While these standards have gone into law, they will not go into effect until the regulations have been promulgated, which has not happened to date<sup>1</sup>.

Pertinent findings from our review of Anacostia stormwater requirements are:

- The requirements do not apply to the entire geographic area of the city, but are limited to small special district of 3.070 acres in area along the waterfront.
- The requirements specify retention and infiltration as the preferred stormwater management control, followed by capture and reuse.
- The requirements provide for offsets in cases when site conditions limit feasibility of infiltration and reuse.
- Since the regulations have not been issued, there are no cases studies or information about the practical implications of the requirements.

#### West Virginia

Requirement: *"Retain onsite the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation"* (NRDC comments/pg. 3)

While the draft permit currently under consideration in West Virginia states that the first 1" of rainfall must be kept and managed onsite, it also allows for credits if certain types of development are used. The five development types that earn credits are:

- Redevelopment
- Brownfield redevelopment
- High Density (>7 units per acre)
- Vertical Density (Floor to Area Ratio of 2 or >18 units per acre)
- Mixed Use and Transit Oriented Development (within 1/2 mile of transit)

Each of the development types above earns a credit of 0.1" against the first 1" of rainfall. Therefore, it is possible that a site would need to mitigate only 0.5". Similar to the Anacostia standard, West Virginia allows for physical and/or financial offsets where on-site treatment of the entire amount of runoff is not possible or practical. However, the draft West Virginia permit allows offsets for a maximum of 0.4" of the original amount (i.e., if the entire first 1" of rainfall needed to be kept and managed then offsets would only be allowed for 0.4" and 0.6" would need to be managed onsite).

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<sup>1</sup> Personal communication with Shane Farthing of District Department of the Environment. Phone. Apr. 06. 2009.

The West Virginia standard has not been implemented yet since the permit is still in draft form. Therefore, it is unknown how the regulators would address a situation where a developer was not able to keep and manage the entire amount of rainfall because of site constraints or feasibility.

Pertinent findings from our review of West Virginia stormwater requirements are:

- The requirements specify an array of options for meeting on-site retention requirements.
- Stormwater credit options provide incentives for high density development in Brownfield areas and transportation corridors.
- The requirements provide for offsets in cases when site conditions limit feasibility of infiltration and reuse, however, full offsets are not allowable, and some on-site retention will be required for all developments.
- It is a draft permit, so there are no case studies or information about the practical implications of the requirements.

#### Georgia

Requirement: *"Treat the runoff from 85% of the storms that occur in an average year (i.e., provide treatment for the runoff that results from a rainfall depth of 1.2 inches)" (NRDC comments/pg. 3)*

Similar to PA, this standard is from the GA Stormwater Management Manual, which provides guidance on how jurisdictions in the state might address stormwater management. While the entire state has not adopted this standard, some local jurisdictions such as the Metropolitan North Georgia Water District have adopted model ordinances that direct their members to follow the guidelines in the Stormwater Management Manual. In either case, the standard merely requires treatment of the first 1.2" of rainfall; it does not require retention or infiltration of the stormwater.

#### Central Coast, California (RWQCB, Phase II)

Requirement: *"Limit effective impervious area ("EIA") at development projects to no more than 5% of total project area (interim criteria); establish an EIA limitation between 3% and 10% in local stormwater management plans (permanent criteria)" (NRDC comments/pg. 4)*

The above standard was set forth in a letter to small MS4s. Limiting the effective impervious area is an ambiguous task, as ineffective impervious area is not defined clearly. It is not clear if effective impervious area implies:



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1. Total offsite runoff is limited to a volume that is equivalent to 5% impervious area. Essentially this requires that runoff generated by 95% of the project area, under most conditions be managed on site; or
2. Runoff that is not directly connected to the storm sewer. In other words, runoff from 95% of the site must be directed to pervious areas prior to collection in the storm sewer.

This is an interim criteria and it remains unclear as to what ineffective really means.

**All Federal Buildings over 5,000 square feet (under EPA's draft guidance for implementation of the Energy Independence and Security Act of 2007)**

Requirement: *"Manage onsite (i.e., prevent the offsite discharge of) the 95th percentile storm through infiltration, harvesting, and/or evapotranspiration." (NRDC comments/pg. 4)*

According to H.R.6 Energy Independence and Security Act (EISA) of 2007, Sec. 438, Storm Water Runoff Requirements for Federal Development Projects include:

*"The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."*

In a presentation by Jennifer Molloy and Robert Goo from the USEPA in February 2009 to the Interagency Sustainability Work Group, they presented two options for meeting the Section 438 requirement of the EISA. Option 1 is to control the 95th percentile rainfall event by managing it onsite by using infiltration, evapotranspiration, and/or re-use. Option 2 is to preserve the predevelopment hydrology (rate, volume, duration, and temperature) by conducting hydrologic and hydraulic analyses for the 1, 2, 10, and 100-year 24-hour storm events. If Options 1 and 2 are not technically feasible due to site conditions or other factors, the agency/department must follow a process to employ onsite practices to the maximum extent technically feasible and document the design. Again, this stormwater management requirement recognizes that onsite management is not always feasible. The EPA guidance manual is still in draft form. Geosyntec has developed technical comments on the guidance manual and its methods and results regarding effectiveness.

Key points from Geosyntec's technical comments in regards to the EPA's numeric standards requiring onsite retention, infiltration, and/or harvesting include:

- That retention of the 95th percentile storm event may not be cost-effective for achieving the intended level of protection. This is not supported in the Draft Guidance, nor is it generally supported by the body of scientific knowledge.

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- The requirement to retain the 95th percentile storm event does not account for the drawdown time of the captured volume. Therefore, if the capture system draws down slowly the storage volume remaining when the next storm arrives may not be adequate to capture the volume generated by the next storm, which would cause the second storm to bypass or partially bypass the retention system.

See attached comments on the draft manual submitted to EPA.

### **Discussion/Implications**

Out of the six standards cited, the only one that does not specifically recognize that onsite management will not be possible in all cases is the Central Coast standard that is required to be incorporated into small MS4s stormwater management plans for them to be approved. However, this standard is also not as clear as the rest of the standards cited because it does not provide a clear definition of effective impervious areas.

Most of the jurisdictions cited above, recognize that it may not be feasible to manage the entire volume onsite and offer methods for improving the quality of the stormwater runoff within other means. Pennsylvania requires the first 1" of rainfall from new impervious surfaces to be permanently removed from the runoff flow. However, this regulation only applies when regulated activities are less than 1 acre and do not require stormwater storage facilities. In addition, the Pennsylvania Stormwater BMP Manual recognizes that when either of the control guidelines are applied to project, if the project is located in a Special Management Area, (i.e., brownfields, highways and roads, karst areas, mined lands, near supply wells, urban areas, surface water supplies and Special Protection Waters) the guidelines may need to be modified on a case-by-case basis.

The draft permit proposed by West Virginia requires onsite stormwater retention between 0.1" and 1", depending on how many credits are issued for the type of development, but also allows offsets for up to 0.4" of that amount. However, they recognize that it may not be technically feasible to keep the entire amount of rainfall onsite and allow for deviations from that rule as long as there is a net improvement in the overall stormwater runoff for a particular watershed/watershed.

Anacostia's standard is less stringent than West Virginia's standard only in that they do not limit the allowed offset (i.e., if needed the entire standard could be addressed by using offsets). However, Anacostia does not offer credit for different development types either. Similar to Pennsylvania, the EPA in their draft guidance for EISA Sec. 438 they offer two methods for preserving the predevelopment hydrology and if neither of those will fully address the problem, they have a process for implementing BMPs to the maximum extent technically feasible.

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Georgia's stormwater management manual and associated ordinances merely require the treatment of the first 1.2" of rainfall. It recognizes that in critical or sensitive areas, additional requirements may be needed and the use of structural controls may need to be restricted to protect a special resource or address certain water quality or drainage problems.

Based on the information presented above, while various jurisdictions are moving towards implementing numeric stormwater performance standards that include retention, they recognize that numeric standards for retention are difficult to implement across all site conditions and allow alternative methods to improve the stormwater runoff quality. None of the jurisdictions cited above that clearly require implementation of retention and infiltration as the preferred method for addressing post-construction stormwater runoff have had their regulations go into effect. Therefore, there are no case studies or information about the practical implications of the requirements and how they are actually being applied.

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## Memorandum

Date: 9 April 2009  
To: Robert Goo, Nonpoint Source Control Branch, US Environmental Protection Agency  
From: Eric Strecker and Aaron Poresky, Geosyntec Consultants  
Subject: Comments on *Technical Guidance on Implementing Section 438 of the Energy Independence and Security Act*

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### PURPOSE

The purpose of this memo is to evaluate the content of Draft *Technical Guidance on Implementing Section 438 of the Energy Independence and Security Act* (referred to herein as the Draft Guidance) and provide recommendations for improvements to that document and further study. This review is based on the version of the Draft Guidance that was sent to Eric Strecker, Geosyntec, from Robert Goo, EPA, on March 16, 2009, noted as "Draft for discussion with ISWG".

### SCOPE AND INTENT OF DRAFT GUIDANCE

Quoting from the Draft Guidance (p 1):

Section 438 of [the Energy Independence and Security Act (2007)] establishes strict stormwater runoff requirements for Federal development and redevelopment projects. The provision reads as follows:

"Storm water runoff requirements for federal development projects. The sponsor of any development or redevelopment project involving a Federal facility with a footprint that exceeds 5,000 square feet shall use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow."

The intent of Section 438 of the Energy Independence and Security Act (EISA) is to require federal agencies to develop and redevelop applicable facilities in a manner that reduces stormwater runoff and associated pollutant loadings in order to protect or restore the waters of the U.S.

The stated intent of the Draft Guidance is "...to provide guidance and background information on Section 438." Quoting from the Draft Guidance (p. 2):

"The document contains guidance on how compliance with Section 438 can be achieved, measured, evaluated, and reported. In addition, information detailing the rationale for the stormwater management approach contained herein has been included.

The following information is presented within this document:

#### Part I: Implementation Framework

- A. Background
- B. Benefits and outcomes of the new stormwater performance requirements
- C. How to meet the requirements of Section 438
- D. Applicability and definitions
- E. Complying with the performance requirement
- F. Calculating the 95th percentile rainfall event"

The Draft Guidance also contains case studies representing "...typical Federal installations... selected to demonstrate the feasibility of providing adequate stormwater control for a range of site conditions and building designs."

#### ORGANIZATION OF GEOSYNTEC REVIEW

This review is organized into the following sections and subsections:

- **Geosyntec Basis of Evaluation:** list of criteria used in reviewing the Draft Guidance
- **Review of Draft Guidance**
  - *Summary of Contents of Draft Guidance:* brief overview of the contents of Part I of the Draft Guidance
  - *Geosyntec Review:* key findings of our review
- **Review of Case Studies**
  - *Summary of Contents of Case Studies:* brief overview of the contents of Part II of the Draft Guidance
  - *Geosyntec Review:* key findings of our review of Part II with recommendations interspersed
- **Geosyntec Recommendations:** summary of recommendations

## GEOSYNTEC BASIS OF EVALUATION

Geosyntec has approached this evaluation with the following general criteria:

- Guidance should result in project design features that protect receiving waters from stormwater impacts and do not have potential to cause unintended impacts.
- Guidance that results in protective designs that cost substantially more than other equally- or nearly equally-protective solutions, should not be encouraged.
- Guidance should consider the scale of the project and site-specific factors.
- Guidance should be based on the latest scientific findings and make use of accepted tools.
- Guidance should be reasonably simple to interpret and implement.

## REVIEW OF DRAFT GUIDANCE

### Summary of contents of Draft Guidance

The document recommends that an appropriate hydrologic standard for stormwater management would be based upon in part on either a design-storm or continuous simulation results. The proposed standard is based on either:

1. **Event-based:** Retention and infiltration, ET or reuse of the total volume from the 95<sup>th</sup> percentile, 24-hr storm event (days with  $\leq 0.1$ " removed), or
2. **Continuous simulation:** Matching the predevelopment rate, volume, duration and temperature of runoff for 1, 2, 10, 25, 50 and 100 year storms.

The first option is based on the stated assumption that natural watersheds produce runoff from only approximately 5% of storms. The document does not attempt to support this assumption or discuss the potential consequences if this assumption does not apply to a specific watershed or region. In areas of the country where storms arrive back-to-back, the assumption of only 5% of the storms contributing to runoff under natural conditions may not be true. This event-based option does not include requirements or guidance on drawdown (or re-use) time of retained water. This means that although the initial storm may be captured and either retained, that subsequent storms including even those smaller than the event based storm may cause discharge if the storage volume has not been recovered. The document provides guidance on how to calculate a locally-applicable design storm from daily or hourly rainfall data.

The second option is ostensibly based on the assumption that that it is protective to control events from the 1-yr to 100-yr return periods. Continuous simulation models would implicitly factor storage system drawdown (re-use or infiltration) into evaluation of project design features. This option requires stormwater managers to select appropriate models and utilize them prudently. It also requires one to establish which storms in the record are "equivalent" to the design storms listed. In most areas of the country, there are about at most 65 years of hourly rainfall data, so identifying 100-year and even 50-year storms would be difficult at best.

Exceptions to these criteria would be allowed if infeasibility could be demonstrated by the project sponsor. If infeasibility were to be established, the two options above would be modified as follows:

1. **Event based:** Infiltrate, evapotranspire and/or re-use the maximum volume technically feasible on site and provide treatment and peak flow control for the remaining volume below the 95<sup>th</sup> percentile volume.
2. **Continuous simulation:** Provide treatment and match peak flow events where complete matching of peaks, volumes, duration and temperature cannot be achieved.

The document outlines the process to determine Maximum Extent Technically Feasible (METF). It seems that the cost of compliance is not a factor in determining MEFT.

### Geosyntec Review

Geosyntec offers the following general findings:

1. Allowing two options for designing BMPs is consistent with the desires to make guidance suitable for various project scales and would be reasonably simple to implement if proper guidance is provided.
2. Both design options partially fulfill the criteria to consider site-specific factors, but do not sufficiently incorporate site specific factors as detailed below.
3. Our primary criticisms of the event-based design method are:
  - a) The suitability of retention of the 95th percentile storm event to cost-effectively achieve the intended level of protection is not supported in the Draft Guidance and is not generally supported by the body of scientific knowledge. We feel it would be prudent to study the performance that would result for example projects using this standard to determine whether it generally achieves the intended purpose of the regulation. This could be done with continuous simulation modeling analyses (preferably calibrated) or possibly through research. Continuous simulation could be used to model over a long time period, how much runoff would occur, the amount



infiltrated, the amount re-used, and the amount evapotransporated for both natural conditions and developed with the control in place. Various scenarios of infiltration rates, re-use rates (e.g. estimated actual irrigation, toilet flushing, etc.), etc. should be evaluated.

- b) The methodology does not factor in drawdown time of captured volume, which is inextricably linked with long-term performance. For example, take the scenario where a 95<sup>th</sup> percentile, 24-hr storm (say 1.4 inches) and a 50<sup>th</sup> percentile, 24-hr storm (say 0.8 inches) are spaced by two days. Under the event-based sizing methodology in the Draft Guidelines, the first storm would be fully captured. If the drawdown time of this captured volume was less than 2 days, the entire volume of the second storm would surely be captured. However, if the drawdown time of the BMP was 10 days (say for re-use in irrigation or toilet flushing), only about 0.3 inches worth of storage would be made available in the two-day inter-event window, and thus about than 0.5 inches of the subsequent storm event would bypass. Either of these cases would be consistent with the Draft Guidelines as they are now written.

This effect is exacerbated by the fact that storms do not observe clock hours. If a storm is artificially divided by the change of day, there would effectively be no inter-event time. Storm events segregated by an inter-event time are typically larger than those segregated by the calendar day.

The Draft Guidance states that the intent of this requirement is to allow only 5% of events to discharge. The examples provided above essentially prove that unless the 95<sup>th</sup> percentile storm draws down relatively immediately, this standard cannot meet its stated intent. For this standard to result in consistent performance, it should be accompanied by a required drawdown time (and then an analysis to show that the drawdown time is requirement is feasible via either infiltration, evapotranspiration, and/or re-use), or possibly have a sliding scale of design storm as a function of drawdown time. For example, a 1.4-inch design storm with 1-day drawdown time may result in the same overall performance as a 2.0-inch design storm with a 5-day drawdown time. These supposed relationships are provided to illustrate the concept and would depend on local rainfall patterns. We have found that in many cases, for re-use to be feasible, that the density of toilet flushers to impervious area must be fairly high. Irrigation use is limited by already soil saturated conditions following an event(s) and lower evapotranspiration rates during typical rainy periods in the southwest for example and much of the winter throughout the US.

4. Our primary criticisms of the continuous hydrology design method are:
  - a) The range of flows required to be controlled does not seem to be protective based on the body of knowledge. It has been widely demonstrated that flows less than the one-

year average return interval may cause erosion and account for a major portion of the overall erosive work done on a stream. As written, the Draft Guidance may encourage designs that would result in extended discharge just below 1-yr flowrate, effectively increasing the duration of such flows. Extending low flows may result in channel erosion due to longer durations of erosive flows compared to predevelopment, and may result in habitat impacts by modifying the flow regime in ephemeral or intermittent streams (i.e. by increasing the duration of low flows that then results in conversion of open and typically dry creek beds in the southwest under natural conditions to willow or non-native vegetation thickets). Over-infiltration above natural levels can also increase the duration of groundwater discharges to streams potentially having detrimental habitat impacts. The Draft Guidance should consider all erosive flows, consider natural the water balance that includes groundwater recharge levels, and finally include considerations for changes to downstream flow regime, including smaller flows, from both surface runoff and groundwater discharges.

- b) The standard does not account for potentially important sediment supply reductions in the watershed. If the standard was modified as suggested above to cover all erosive flows, theoretically the stream energy, and thus sediment transport, would be approximately balanced between pre- and post-development. However, if the stream is sediment transport limited, a change in the amount of sediment entering the stream may result in changes to channel geomorphology. If development activities result in stabilization (e.g. upland areas that become impervious or are landscaped that reduce sediment supply) or disconnection of areas that were major sediment sources in pre-developed conditions, this alone may result in channel down-cutting even if hydrology were perfectly matched. In areas of the Southwest, sediment supply from upland areas is substantial and needs to be considered. The standard should require at least a minimal sediment balance analysis in conjunction with flow control.
  - c) Finally, the continuous simulation hydrology standard should be accompanied by guidance on how to extract "design storms" (i.e. 1-yr, 2-yr... 100-yr) events from the continuous record. These may be defined in a variety of ways (i.e. independence criteria, statistical methods, etc) which could theoretically lead to different overall performance between projects based on assumptions used in design. Likewise, the estimation of storms with long return intervals is difficult where continuous periods of record are limited to less than the return interval of the event under consideration (i.e. estimating a 100-year event from a 40-year record).
5. There is not a consideration in the Draft Guidance for cases where infiltration may be feasible, but could create unintended consequences. For example, it is highly unlikely that pre-development evapotranspiration rates are matched in the developed condition and therefore infiltration to the extent that natural runoff rates are matched, would cause

infiltration to occur above natural rates. In some situations this could be problematic, resulting in base flows in intermittent or ephemeral streams where none may have previously existed or existed for shorter durations. In other cases, where aquifers have been drawn-down below natural levels, it could be a significant benefit to infiltrate more than natural. The effects on overall water balance, including infiltration and evapotranspiration as well as runoff should be included and considered in feasibility analyses.

6. Finally, the Guidance relies on previously-conducted case studies documented in *Reducing Stormwater Costs through LID Strategies and Practices* (EPA 841-F-07-006, December 2007 - available for download at [www.epa.gov/nps/lid](http://www.epa.gov/nps/lid)) to reach the general conclusion that the implementation of the types of BMPs required by the standard would result in cost savings over traditional stormwater management design. Geosyntec acknowledges that LID can result in substantial avoided costs and thus overall savings. However, we also believe that the conclusions of the above-referenced report may be taken out of context in estimating the cost of the proposed requirements.

a) Out of the 17 case studies, only one provided the volumetric design criteria used for the case studies evaluated, and only three provided a narrative summary of performance. The Seattle SEA Streets study found that swales and bioretention with a design storm depth of 0.75 inch reduced runoff by more than 99 percent. Based on the 95<sup>th</sup> percentile depth of 1.6 inches that the Draft Guidance computes for Seattle, this level of performance is possibly an outlier due to very infiltrative soils or other anomalies in design and analysis. The cost of the facilities would certainly have been less when designing to a 0.75-inch design storm compared to a 1.6-inch design storm. There was also not assessment of impacts to the overall water balance from this system. As it is unlikely that pre-development and current evapotranspiration rates are the same, it is very likely that this system is infiltrating to the aquifer more water than natural. If this was done throughout the watershed, what would the consequences be? The other two studies that reported performance were Crown Street, Vancouver, British Columbia (90% volume reduction estimated through modeling) and Somerset Subdivision, Prince George's County, Maryland (20% reduction in frequency of discharge). It is believed that many of the studies contained in the above-reference document were based on design criteria less stringent than that proposed by the Draft Guidance. This would be an important comparison to make when relying on the findings of the above-referenced document.

b) Some of the studies relied on BMPs such as narrowing street width and downspout disconnection that would not be widely applicable to higher-density projects. Of the BMPs that would likely be used to comply with the Draft Guidance for higher-density projects (bioretention, permeable pavement, green roofs, and cisterns), permeable pavement was considered in only two of 17 case studies, and green roofs were

considered in only one of 17 studies (cost-benefit analysis showed substantially greater costs for this study). Cisterns with reuse were not considered in any of the 17 studies.

Overall, we believe that further study is needed to determine whether it is valid to use the above-referenced study to support conclusions about the cost and effectiveness of the requirements contained in the Draft Guidance.

## REVIEW OF CASE STUDIES

### Summary of Contents of Case Studies

Case studies were completed for 8 sites. The studies used various modeling methods to estimate the runoff volume from the 95<sup>th</sup> percentile storm, established fixed design criteria for a selected suite of BMPs, and identified ways in which the BMPs could be implemented on each site to achieve the event-based standard. Each case study was a volumetric exercise that did not consider routing or drawdown characteristics. Bioretention and porous pavement BMPs appeared to have been designed to ensure 24-hr drawdown in B soils, however designs were not adjusted for cases with C or D soils, which are typical of many urban areas. Regeneration of storage capacity (i.e. drawdown by ET and/or re-use) was not considered for greenroofs and cisterns which do not rely on infiltration to dispose of stored water. Given these limitations, the case studies generally showed that BMPs to capture the 95<sup>th</sup> percentile storm event could be installed on all sites. One of the primary conclusions of the case studies was related to the type of models that could be used to generate the runoff volume that needed to be capture. Modeling was not conducted to estimate long-term performance.

### Geosyntec Review

Geosyntec offers the following general findings:

1. Runoff volumes were generally reasonable and the evaluation of different models to generate runoff volumes was informative. One criticism of all the methods used is that generation of runoff volumes did not consider antecedent conditions which may occur following a previous day with rainfall. The estimates assume maximum infiltration potential at the beginning of each simulation. Likewise, rainfall volumes were distributed evenly across all hours in the day, which would tend to smooth the intensity of rainfall and inherently produce less runoff in most models. We do not feel it is necessary to revisit this analysis as the variability between model results was not great.

2. The site development patterns appeared to be a reasonable cross-section of federal projects. While it would have been informative to see a case study for Southern California, the sites encompassed a range of geographic regions. Some gages in the coastal mountains of Southern California have significantly higher 95<sup>th</sup> percentile rainfall than the highest of the locations studied. For example, the 95<sup>th</sup> percentile, 24-hr rainfall depth is 2.5 inches at the NCDC gage in Newhall, CA. (046162; 1948-Present).
3. The scope of the studies did not evaluate long-term performance that would result from the proposed suites of BMPs, thus only limited conclusions can be drawn. Hourly precipitation data are available for at least 20 years (and in most cases 30 to 50 years plus) in nearly all parts of the country. Therefore, sufficient data would be available to produce a meaningful simulation of the long-term performance that would account for antecedent conditions and ability to infiltrate, re-use water for irrigation, etc. While we understand the effort that such a study would involve, we believe it is minor compared to the cost of complying with this standard.
4. Some BMP design assumptions were developed with consideration for soil infiltration rates, which we believe was a well-considered element of the case studies. However, regeneration rates of greenroofs and cisterns were not considered in developing the design assumptions. This may have resulted in misrepresentative calculations of the spatial extent required for these BMPs. For example, the design retention depth of greenroofs was assumed to be 1 inch. However, during cold and wet months, ET can approach zero and even in Southern California falls to near 0.05 inches/day. As such, drawdown of 1 inch of retained water could typically take about 20 or more days in the times of year when the most rainfall occurs in Southern California (January/February; this will vary by location). Depending on whether cistern water is used for indoor uses (fairly steady demand) or outdoor uses (demand can be lowest during wettest/coldest times of the year) or both, and depending on the demand rate, a drawdown time on the order of 10 to 20 days would be typical for cisterns. It is questionable whether such a BMP could be considered to fulfill its intended function if the storage would not be re-established relatively soon after the end of rainfall.

Additionally, BMP design for bioretention and porous pavement implicitly assumed 24-hr drawdown time based on infiltration rates characteristic of B soils. These were not adjusted for the scenarios that considered C or D soils. In such cases, it is likely that higher runoff would be generated from the watershed, and infiltration rates under BMPs would be slower. BMPs would have to be shallower (and thus more extensive) to draw down in the same amount of time. This consideration both introduces uncertainty into the case study findings and suggests that Draft Guidance possibly should account for existing condition runoff in calculating post-development requirements (i.e. a "delta volume" standard).

5. Other infiltration issues should be considered, including whether abnormal groundwater recharge could occur which could lead to geotechnical issues or habitat changes down gradient (i.e. extending duration of flows in ephemeral streams) and/or the presence of natural or man-caused plumes or soil contamination that could be further mobilized by increased infiltration. These factors may limit where infiltration is either feasible or advisable. In general, more assessment of the effects on overall water balance would be useful.

Overall, the case studies are useful in understanding how BMPs could be applied to various development times. However, they are limited in their findings of feasibility, and do not allow for conclusions about performance or cost.

### GEOSYNTEC RECOMMENDATIONS

In summary of the above commentary, we offer the following recommendations.

1. Revisit and support or revise the assumption that 95 percent of storms do not generate runoff in the undeveloped condition, hence the rationale for selection of the 95<sup>th</sup> percentile storm as a design storm.
2. Revisit and support or revise the range of flows required for peak and volume matching when using the continuous simulation option; consider incorporating sediment balance and habitat changes into guidance for applying this method.
3. Evaluate selected case study scenarios with continuous simulation methods that include storage draw-down to assess whether 95<sup>th</sup> percentile storm surrogate provides approximately intended results.
4. Possibly develop surrogate event-based guidance that incorporates:
  - a. Existing condition runoff potential (i.e. are soils B, C or D in existing condition).
  - b. Drawdown time of proposed BMPs

Such guidance would still not be truly site-specific, but would improve the validity and utility of the design storm method. It would likely require continuous simulation to support development.

5. Evaluate other alternatives for developing a design storm approach that would better ensure intended long-term performance.

6. Assess the potential for infiltration related to geotechnical, contamination, and/or potential for habitat changes down-gradient (due to lengthening of groundwater discharges to ephemeral streams).
7. Assess the potential and feasibility for water re-use for irrigation and other non-potable uses (i.e. toilet flushing, etc.) with regards to recovering storage in a cistern.
8. Revisit the relevancy of *Reducing Stormwater Costs through LID Strategies and Practices* (EPA, 2007) to support conclusions about the costs and effectiveness of BMPs under the proposed requirements.

## E. ALTERNATIVES AND IN-LIEU PRC - AMS

1. Within 12 months of adoption of this order, the principal permittee, in collaboration with the co-permittees, shall develop technically-based feasibility criteria for project evaluation to determine the feasibility of implementing LID BMPs. This plan shall be submitted to the Executive Officer for approval. Only those projects that have completed a vigorous feasibility analysis as per the criteria developed by the permittees and approved by the Executive Officer should be considered for alternatives and in-lieu programs. If a particular BMP is not technically feasible, other BMPs should be implemented to achieve the same level of compliance, or if the cost of BMP implementation greatly outweighs the pollution control benefits, a waiver of the BMPs may be granted. All requests for waivers, along with feasibility analysis including waiver justification documentation, must be submitted to the Executive Officer in writing. Waivers shall only be granted with prior approval from the Executive Officer.
2. The permittees may collectively or individually propose to establish an urban runoff fund to be used for urban water quality improvement projects within the same watershed that is funded by contributions from developers granted waivers. The contributions should be at least equivalent to the cost savings for waived projects and the urban runoff fund shall be expended for water quality improvement or other related projects approved by the Executive Officer within two years of receipt of the funds. If a waiver is granted and an urban runoff fund is established, the annual report for the year should include the following information with respect to the urban runoff fund:
  - a) Total amount deposited into the funds and the party responsible for managing the urban runoff fund;
  - b) Projects funded or proposed to be funded with monies from the urban runoff fund;
  - c) Party or parties responsible for design, construction, operation and maintenance of urban runoff funded projects; and
  - d) Current status and a schedule for project completion.



4. The permittees may establish a water quality credit system for alternative infiltration, harvesting and reuse, evapotranspiration, and other LID BMPs and hydromodification requirements specified above. A summary of any waivers of LID, hydromodification and treatment control BMPs should be included in the annual report for each year. Any credit system that the permittees establish should be submitted to the Executive Officer for review and approval. The following types of projects may be considered for the credit system:

- a) Redevelopment projects that reduce the overall impervious footprint
- b) Brownfield redevelopment
- c) High density developments (>7 units per acre)
- d) Mixed-use and transit-oriented development (within 1/2 mile of transit)
- e) Dedication of undeveloped portions of the project to parks, preservation areas and other pervious uses
- f) Regional treatment systems with a capacity to treat flows from all upstream developments
- g) Contribution to an urban runoff fund (see 1, above)
- h) Offsite mitigation or dedications within the same watershed
- i) City Center area
- j) Historic Districts and Historic Preservation areas
- k) Live-work developments
- l) In-fill projects

**Comments From  
Natural Resources Defense Council, Heal The Bay, and  
Ventura County Storm Water Permittees**

**Tentative Ventura County MS4 Permit  
Municipal Separate Storm Sewer System (MS4) Permit**

**NPDES Permit No. CAS004002**

April 10, 2009

Chair Lutz and Board Members  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**SUBJECT: COMMENT LETTER REGARDING CONSENSUS ON STORMWATER PERMIT LANGUAGE BETWEEN THE NATURAL RESOURCES DEFENSE COUNCIL, HEAL THE BAY AND THE VENTURA COUNTY STORMWATER PERMITTEES – TENTATIVE ORDER OF THE VENTURA COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM PERMIT (TENTATIVE ORDER)**

Dear Chair Lutz and Members of the Board:

Notwithstanding our individual organizations' independent and strongly principled positions on the Tentative Order now being considered by your Board, positions which are detailed in separate letters regarding the upcoming Hearing and Tentative Order, the Ventura County Stormwater Permittees, Heal The Bay (HTB), and the Natural Resources Defense Council (NRDC) have been meeting regularly over the past several months in an attempt to better understand our policy differences and in an attempt to seek common ground where, and if, possible. We believed at the outset of this process, and continue to believe today, that if we can better understand each other and find agreement in at least some areas, we can provide mutual comments and offer ideas to your Board for consideration that would be better for all of our constituencies. We believe our dialogue has been successful and reflects a notably different tenor between stakeholders than has characterized MS4 permitting in the Los Angeles region.

While we had hoped to conclude our discussions in time to meet with your staff prior to the release of the Tentative Order so that they might be able to consider our common ground in their deliberations, the significant differences which we needed to overcome did not allow the time for this to happen. We are therefore providing the following description of points on which we have forged agreement as comments to your Board for your consideration as you work toward finalizing the Tentative Order for Ventura County. We should also emphasize that the agreement on the issues described below is the result of significant give-and-take by all parties. We present the matters on which we have reached consensus as a "package." As we are sure you can understand, if the Board were to eliminate or alter the approach we describe below, the consensus we have reached would lose its character and the signatories would no longer be in agreement. In that scenario, our individual positions on the matters described below would thus remain intact as detailed in our respective comment letters.

We are hopeful that our work will be positively considered by your Board and will provide a constructive basis for positively amending the Tentative Order recommended by your staff.

Our negotiations have led to agreement on the following:

1. Low Impact Development (LID) - Tentative Order, Section E, III. New Development/Redevelopment Performance Criteria

**Request of RWQCB:** Wholly replace, and incorporate the Tentative Order language contained in Attachment A.

2. Municipal Action Levels – Tentative Order, Part 2 Municipal Action Levels

**Request of RWQCB:** The Ventura County Permittees desire to eliminate entirely from the Tentative Order all of Part 2 Municipal Action Levels, Nos. 1-7 and Attachment C, Table 1 (Conventional Pollutants) & Table 2 (Metals). HTB and NRDC have agreed, given their opinion of the weaknesses in the current proposal, that they will not object to the removal of the Municipal Action Levels set forth in the Tentative Order.

3. Monitoring Program – Tentative Order, Monitoring Program CI 7388, Attachment F

**Request of RWQCB:** Incorporate in Section M the new requirement for Beach Water Quality monitoring at 10 sites. In addition, parties were in agreement for year-round weekly monitoring at the 10 sites.

4. Best Management Performance Criteria – Tentative Order, Part 4. A. 3 and Attachment C (Treatment BMP Performance Standards).

**Request of RWQCB:** No changes to the Tentative Order's BMP Performance Criteria language, or the numeric values expressed in Attachment C, Table 3 – "Effluent Concentrations as Median Values". In addition, parties were in agreement that BMP performance criteria should be accompanied by the SUSMP design storm component

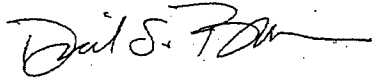
Again, in your consideration of the recommendations above, in order for the parties' agreement to remain supported, the Regional Water Quality Board needs to consider all of the recommendations collectively and not as individual components. The Agreement reached between the parties, and each party's support for the recommendations, is contingent on all of the recommendations being incorporated into the Tentative Order as described herein, and in the case of the LID provisions, as set forth in Attachment A.

Please note that agreement on the issues identified above between NRDC, HTB and the Ventura County Permittees does not provide for agreement on any other provisions in the Tentative Order. As such, each individual party is providing comments on other elements of the February 24, 2009 Tentative Order, and absent this agreement being incorporated in its entirety, each party will maintain their respective positions on all incorporated issues.

Again, thank you for your time and effort in working with us. We sincerely hope that all of the recommendations outlined above will be reflected in the final adopted Order. We will be present at your May Hearing to answer any questions that you may have, and are available to your staff at any time.

Attachment A - Proposed Low Impact Development Tentative Order Language

SIGNATURE PAGE



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David Beckman, Senior Attorney  
NRDC



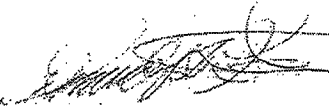
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Mark Gold, President  
Heal the Bay



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Rick Cole, City Manager  
City of Ventura



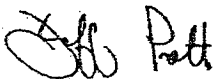
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Edmund Sotelo, City Manager  
City of Oxnard



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Mike Sedell, City Manager  
City of Simi Valley



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Jeff Pratt, Public Works Director  
County of Ventura

*III. New Development/Redevelopment Performance Criteria*

*1. Integrated Water Quality/Flow Reduction/Resources Management Criteria*

- (a) *Except as provided in subpart 5.E.III. 2 below, Permittees shall require all New Development and Redevelopment projects identified in subpart 5.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/biofiltration by reducing the percentage of Effective Impervious Area (ELA) to 5 percent or less of the total project area.*
- (b) *Impervious surfaces may be rendered "ineffective," and thus not count toward the 5 percent ELA limitation, if the stormwater runoff from those surfaces is fully retained onsite for the design storm event specified in provision (c), below. To satisfy the ELA limitation and low-impact development requirements, the permittees must require stormwater runoff to be infiltrated, reused, or evapotranspired onsite through a stormwater management technique allowed under the terms of this permit and implementing documents.*
- (c) *The permittees shall require all features constructed or otherwise utilized to render impervious surfaces "ineffective," as described in provision (b), above, to be properly sized to infiltrate, store for reuse, or evapotranspire, without any runoff, at least the volume of water that results from:*
- (1) *The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998);*
  - (2) *The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or*
  - (3) *The volume of runoff produced from a 0.75 inch storm event.*
- (d) *To address any impervious surfaces that may not be rendered "ineffective," surface discharge of stormwater runoff, if any, that results from New Development and Redevelopment projects identified in subpart 5.E.II which have complied with subparts 5.E.III.1(a)-(c), above, shall be mitigated in accordance with subpart 5.E.III.3.*

2. *Alternative Compliance for Technical Infeasibility*

- (a) *To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 5.E.III.1, above, to comply with this permit through the alternative compliance measures described in subpart 5.E.III.2.c, below.*
- (b) *To utilize alternative compliance measures, the project applicant must demonstrate that compliance with the applicable post-construction requirements would be technically infeasible by submitting a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect. Technical infeasibility may result from conditions including the following:*
  - (1) *Locations where seasonal high groundwater is within 5 feet of the surface;*
  - (2) *Locations within 100 feet of a groundwater well used for drinking water;*
  - (3) *Brownfield development sites or other locations where pollutant mobilization is a documented concern;*
  - (4) *Locations with potential geotechnical hazards;*
  - (5) *Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement; and*
  - (6) *Other site or implementation constraints identified in the LID Technical Guidance document required by subpart 5.E.IV.5.*
- (c) *Alternative Compliance Measures. When a permittee finds that a project applicant has demonstrated technical infeasibility, the permittee shall identify alternative compliance measures that the project will need to comply with as a substitute for the otherwise applicable post-construction requirements listed in subparts 5.E.III.1(a)-(c) of this permit. The Ventura County Technical Guidance Manual shall be revised to identify the alternative compliance measures and shall include the following requirements:*

- (1) *Minimum onsite requirement. The project must reduce the percentage of Effective Impervious Area to no more than 30 percent of the total project area and treat all remaining runoff, pursuant to the design and sizing requirements of subparts 5.E.III.1(b)-(d).*
- (2) *Offsite mitigation volume. The difference in volume between the amount of stormwater infiltrated, reused, and/or evapotranspired by the project onsite and the otherwise applicable requirements of subparts 5.E.III.1(a)-(c) (the "offsite mitigation volume"), above, must be mitigated by the project applicant either by performing offsite mitigation that is approved by the permittee or by providing sufficient funding for public or private offsite mitigation to achieve equivalent stormwater volume and pollutant load reduction through infiltration, reuse, and/or evapotranspiration.*
- (3) *Location of offsite mitigation. Offsite mitigation projects must be located in the same sub-watershed (defined as draining to the same hydrologic area in the Basin Plan) as the new development or redevelopment project. A list of eligible public and private offsite mitigation projects available for funding shall be identified by the Permittees and provided to the project applicant. Offsite mitigation projects include green streets projects, parking lot retrofits, other site specific LID BMPs, and regional BMPs. Project applicants seeking to utilize these alternative compliance provisions may propose other offsite mitigation projects, which the Permittees may approve if they meet the requirements of this subpart.*
- (4) *Timing and Reporting Requirements for Offsite Mitigation Projects. The Permittee(s) shall develop a schedule for the completion of offsite mitigation projects, including milestone dates to identify, fund, design, and construct the projects. Offsite mitigation projects shall be completed as soon as possible, and at the latest, within [3, 4] years of the issuance of the certificate of occupancy for the first project that contributed funds toward the construction of the offsite mitigation project, unless a longer period is otherwise authorized by the Executive Officer. For public offsite mitigation projects, the permittees must provide in their annual reports a summary of total offsite mitigation funds raised to date and a description (including location, general design concept, volume of water expected to be retained, and total estimated budget) of all pending public offsite mitigation projects. Funding sufficient to address the offsite mitigation volume must be transferred to the permittee (for public offsite mitigation projects)*

Comment [BL1]: The NGOs and permittees did not reach consensus on this number.



*or to an escrow account (for private offsite mitigation projects) within one year of the initiation of construction.*

- (5) *The project applicant must demonstrate that the EIA achieved onsite is as close to 5 percent EIA as technically feasible, given the site's constraints.*
- (d) *Watershed equivalence. Regardless of the methods through which permittees allow project applicants to implement alternative compliance measures, the sub-watershed -wide (defined as draining to the same hydrologic area in the Basin Plan) result of all development must be at least the same level of water quality protection as would have been achieved if all projects utilizing these alternative compliance provisions had complied with subparts 5.E.III.1(a)-(d) of the permit. The permittees shall provide in their annual report to the Regional Board a list of mitigation project descriptions and pollutant and flow reduction analyses (compiled from design specifications submitted by project applicants and approved by the permittee(s)) comparing the expected aggregate results of alternative compliance projects to the results that would otherwise have been achieved by meeting the 5 percent EIA requirement onsite.*

Comments From Environmental Groups

Tentative Ventura County  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002



# Surfrider Foundation

Ventura County Chapter

PO Box 1028, Ventura, CA 93002 (805) 667-2222

April 10, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, CA 90013

## Comments on Tentative Ventura County Municipal Separate Storm Sewer System Permit 2-24-2009

In our review of the Tentative MS4 permit we found that, although this regulatory approach may help improve the manner in which future development manages stormwater, it does not adequately require local government to actively address the problems caused by existing infrastructure. Therefore, it is unlikely that the permit as written will adequately address the ongoing degradation of our riparian ecosystems and coastal resources.

The permit is good in that it:

- Requires additional monitoring, including beach water quality
- Advances the requirements for Low Impact Development (LID)
- Includes performance-based BMP's

However, the Permit is inadequate in that:

1. MAL requirements based upon arbitrary outfall monitoring
2. Does not regulate existing or future flood control infrastructure
3. Excludes requirements for municipal infrastructure retrofit

### 1. MUNICIPAL ACTION LEVELS

The criteria for determining MAL's is inadequate. The Permit states:

*In order to determine if MS4 discharges are in excess of the MALs, Permittees shall conduct outfall monitoring as required in the Monitoring and Reporting Program (MRP).*

However, selection of "major outfall" monitoring stations appears to be arbitrary and not related to existing significant impacts to water bodies. For instance, the location chosen for the City of Ventura has little to no dry weather flow and does not drain directly to a listed impaired water body. Monitoring should be required at known problem areas, so that baseline data may be collected and used to monitor progress with BMP's in the future. Suggested monitoring locations for the City of Ventura are Sanjon/Prince Barranca, Stanley Drain, and Arundel Barranca.

### 2 & 3 FLOOD CONTROL AND MUNICIPAL INFRASTRUCTURE

The fundamental problem with urban runoff in Ventura County is the existing urban infrastructure. Research indicates that up to 80% of impervious cover is transportation-related



## *Surfrider Foundation*

Ventura County Chapter

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(i.e. roads, highways, parking lots, driveways, etc.,) all of which is directly connected to receiving waters through flood control infrastructure (i.e. concrete channels, storm drains, etc.)

One significant omission is that the tentative stormwater permit does not require low-flow BMP retrofit with municipal maintenance activities such as storm drain repair/reconstruction, street or parking lot repaving. The time to retrofit existing infrastructure is during the IWPP/CIP planning process before ground is broken and work is being done. Post construction BMP's can be as simple as curb cuts, or as complex as implementing an Integrated Water Management Plan. So while the permit makes progress on ensuring that new and infill development will minimize its 'water footprint' through LID and other BMP's, there is no mechanism for changing the way local government does business.

We do note that the City of Ventura has taken steps in the right direction with the recent "Green Streets" initiative and some components of its 2009 CIP. Although this is a good voluntary step in the right direction, we are concerned that lack of countywide regulatory oversight will continue to allow bad municipal projects to be constructed in the future.

Sincerely,

A. Paul Jenkin  
Campaign Coordinator  
Surfrider Foundation - Ventura County Chapter  
(805) 648-4005 pjenkin@sbcglobal.net



VENTURA COASTKEEPER

April 10, 2009

Executive Officer and Members of the Board  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, CA 90013

Re: Comments on Tentative Order for Ventura County MS4 Permit Distributed  
February 24, 2009 (NPDES Permit No. CAS004002)

Dear Ms. Egoscue and Members of the Board:

Thank you for the opportunity to comment on the Los Angeles Regional Water Quality Control Board's (Regional Board) Tentative Order for the Ventura County's Municipal Separate Storm Sewer System (MS4) Permit (NPDES Permit No. CAS004002).

The Ventura Coastkeeper (VCK) is a program of the Wishtoyo Foundation, a community based 501(c)(3) non profit with over 700 members consisting of Ventura County residents, Chumash Native Americans, and the general public that enjoys, depends on, and visits Ventura County's inland and coastal waterbodies. Wishtoyo uses traditional Native American Chumash beliefs, practices, songs, stories and dances to increase awareness of our connection with the environment and to preserve the maritime culture and resources of coastal communities. Core values of the Chumash include sustainable living and respect for the environment.

In 2000, the Wishtoyo Foundation launched VCK to protect, preserve, and restore the ecological integrity and water quality of Ventura County's inland waterbodies, coastal waters, and watersheds. In pursuit of its mission, VCK investigates polluters and, when necessary, takes legal action to stop them. In commenting on the Tentative Permit, VCK draws upon the Wishtoyo Foundation's unique perspective, our involvement with the local community, and our experience protecting, preserving, and restoring the traditional waterways of Ventura County.

VCK's overriding concern is that the Tentative Order modifies numerous requirements contained in previous permit drafts to the detriment of the water quality and ecological integrity of Ventura County's waterways. VCK is not only troubled by these changes, but is concerned about their legal adequacy because they were substituted by the Regional Board into the Tentative Order without any scientific or policy justification supported by evidence articulated in the record, or in another medium available to the public, that demonstrates that the Regional Board's changes were not arbitrary and capricious, or otherwise an abuse of discretion. For example, as NRDC's and Heal the Bay's comment letter points out, the findings and Fact Sheet for the Tentative Order fail to provide an explanation for the Regional Board's decision not to apply a 3% effective impervious area limitation to all regulated projects, nor a reasoned explanation for the Regional Board's decision to allow redevelopment projects (and other projects where onsite implementation is a concern) to comply merely with the SUSMP treatment criteria.

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Wishtoyo

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VCK strongly supports and concurs with the Natural Resources Defense Council's (NRDC) and Heal the Bay's comments regarding the Tentative Order.

In addition to our comments below, we incorporate by reference our letter submitted to the Regional Board on May 28, 2008 concerning the Draft MS4 Tentative Ventura County Permit distributed April 29, 2008. We ask that the Regional Board publically address on the record, the concerns we voiced in that comment letter, and modify the Tentative Order accordingly to protect the water quality and ecological integrity of Ventura County's waterways where it has not done so.

The concerns that VCK specifically voiced in its May 28, 2008 comment letter that have yet to be addressed by the Regional Board and continue to be a concern are:

**I.) Tentative Order Must Link Monitoring Data to Water Quality Standards**

The monitoring program must be sufficient to determine whether a municipality is causing or contributing to violations of the permit. See 40 C.F.R. §122.44(i). The Tentative Order prohibits any discharges from the MS4 that cause or contribute to a violation of water quality standards. Tentative Order Part 3.1 at page 34. Thus, legally, the monitoring program must be sufficient to determine whether the permittees are violating water quality standards. The Tentative Order, however, does not satisfy this requirement for two reasons:

(1) First, the monitoring locations are insufficient to identify the activities or failures that are causing or contributing to impairment. This source identification problem is summarized by Jonathan Bishop, the former Executive Officer of the Regional Board, in a letter to the Principal Permittee dated March 9, 2007:

"The Monitoring Program has been in effect for several years in the County of Ventura and Permittees report exceedances of several of the same water quality objectives year after year in receiving waters without being able to identify or eliminate the sources of the exceedances. Without differentiation of sources from the Permittee's MS4s, the application of appropriate Best Management Practices (BMPs) to reduce the discharge of pollutants of concern to the maximum extent practicable (MEP) is unattainable."

To evaluate the permittees' compliance with water quality standards and what additional steps must be taken to achieve compliance, the Tentative Order must require upstream monitoring that is representative of their respective discharges. The Regional Board needs to define which major outfalls will be monitored in accordance with this objective. Tentative Order at page F-4. Unless the Regional Board and the permittees know the source of the pollutants causing and contributing to water quality violations, how can anyone know what BMPs are needed or working? For all of these reasons, the Tentative Order needs to contain, at the outset, a robust program of upstream monitoring and source identification.

(2) Second, the Tentative Order does not articulate how to make a determination of compliance with water quality standards. To make such a determination, the Tentative Order must link the measurements obtained by the monitoring program to water quality standards such as those set forth in the California Toxics Rule ("CTR"). VCK is asking the Regional Board to invest a significant amount

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of time to articulate how monitoring data can be converted into a determination of compliance with water quality standards. Not only is it legally required, but it will greatly simplify implementation and enforcement of the final permit.

Has the Regional Board evaluated how many person years it will take to review all of the various reports, Storm Water Quality Management Plans and field inspections required by the Tentative Order (apart from the time it is taking to draft the nearly 200-page permit)? The State Board itself found that "the current level of program staffing resources is not sufficient to fully implement the storm water program." Draft Enforcement Report, CA State Water Board, January 2008, page 14. For fiscal year 2006-2007, the State Board estimated that the NPDES Storm Water Program needed 400 staff in order to operate a fully-functioning program. As of April 2008, the NPDES Storm Water Program had about 100 staff. Baseline Enforcement Report (FY 2006-2007), CA State Water Board, revised April 30, 2008, page 21.

Adoption of water quality standards will lessen the need for so many reports, plans and programs because it will be clear from the monitoring program alone whether the permittees are in compliance and, more importantly, the permittees will know better how to achieve compliance.

It is also important to put the Tentative Order into context. This is the third iteration of Ventura County's Phase I MS4 Permit (first adopted in 1994). Tentative Order at page 1. The MS4 Permit has been regulating storm water discharges for nearly 15 years but storm water continues to exceed water quality standards and impair our waters. Tentative Order at page 1-3. In 2007, monitoring data showed elevated pollutant concentrations at all monitoring sites during one or more monitored wet weather storm events, and at specific sites during one or more dry weather events. Ventura Countywide Stormwater Quality Management Program, Annual Report for Permit Year 7, Reporting Year 13 (October 2007) at page 9-17. Yet, the Tentative Order limits monitoring to three mass emission stations and an undefined set of major outfalls. Let's not wait another five to seven years before we make a serious attempt to identify the source of this pollution.

## 2.) Require Compliance with MALs and Provide a Method of Enforcement

VCK feels that the MALs (a) are too high relative to water quality standards (such as the CTR), and (b) they constitute technology-based effluent limitations that do not reflect the Maximum Extent Practicable (MEP) standard.

Notwithstanding those issues, at a minimum, the Tentative Order needs to actually require compliance with the MALs on a reasonable schedule, and to provide a mechanism for enforcement.

Staff has indicated that, to account for sampling abnormalities, the Tentative Order allows the permittees to exceed the MALs 20% of the time over the first three years of the Tentative Order before attempting to require any corrective action. Tentative Order Part 2 at pages 33-34. If the MALs are exceeded more than 20% of the time, the violating permittee is required to "include an assessment of the sources responsible for the MAL exceedances, the existing stormwater programs and BMPs that address those sources, an assessment of potential program enhancements, alternative BMPs and actions the Permittee shall implement to reduce discharges to a level that is equivalent to or below the MALs, and an implementation schedule for such actions for Executive Officer approval. The MAL Action Plan shall provide the technical rationale to demonstrate the proposed measures and controls will attain the MALs," which is precisely what every permittee is required to do in the first place. Id. Thus, the

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Tentative Order undermines the very MAL standards it sets forth and requires no real progress for at least three more years in a program intended to achieve compliance in 1992.

The Tentative Order should be revised to provide that any exceedance of the MALs shall create a presumption that the permittees have not complied with MEP and require all permittees upstream from the point of discharge to notify the Regional Water Board within 30 days of knowledge of such exceedance and thereafter submit a MAL Compliance Report in accordance with the procedures set forth for RWL Compliance Reports at Part 3.3 of the Draft Permit. If there is any sampling abnormality, the EO can make such a determination and modify the contents of the MAL Compliance Reports accordingly.

### 3.) Trigger for Receiving Water Limitation Compliance Reports is Too Subjective

Part 3 of the Tentative Order is internally inconsistent. Part 3.1 states that “[d]ischarges from the MS4 that cause or contribute to a violation of water quality standards are prohibited.” Tentative Order at page 34. But, Part 3.3 of the Tentative Order goes on to say that “[i]f exceedances of water quality standards or water quality standards *persist* . . . , the permittee shall ensure compliance with discharge prohibitions and receiving water limitations by [submitting a Receiving Water Limitations [RWL] Compliance Report...].” Tentative Order at pages 34-35 (emphasis added). By allowing violations of water quality standards to “persist” for an undefined period of time, the Tentative Order in effect permits rather than prohibits such violations. The word “persist” needs to be deleted from Part 3.3 of the Tentative Order because (a) it is inconsistent with the permit’s stated objective of ensuring compliance with water quality standards, and (b) it undermines effective enforcement of water quality standards by setting a totally subjective trigger for RWL Compliance Reports. Tentative Order Finding F.2 at page 21.

### 4.) Principal Permittee Should Share In Responsibility for Permittees’ Compliance

The Principal Permittee’s pipes convey pollutants from the municipalities to waters of the United States via point sources. Yet, the Tentative Order purports to relieve the County from any liability for these discharges which is inconsistent with the requirements Clean Water Act. Draft Permit, Part 4.E.1(b) at page 39 (stating that “the Principal Permittee is not responsible for ensuring compliance of any other individual permittee”). Not only is this illegal, it is bad public policy. If the parties want to make a distinction between the responsibility of the Principal Permittee and the other permittees, they need to monitor upstream to determine pollutant source and relative contribution of the permittees to water quality impairment. Otherwise, all permittees upstream from a discharge violating water quality standards (including the Principal Permittee) should be jointly responsible for such violations. The permittees can work out relative liability amongst themselves.

### 5.) Replace TMDL “Workplans” with Existing RWL Compliance Report Process

To enforce compliance with Total Maximum Daily Load requirements (“TMDLs”), the Tentative Order provides: “Part 6 of this Order incorporates provisions to assure that Ventura County MS4 permittees comply with WLAs and other requirements of TMDLs covering impaired waters impacted by the permittees’ discharges. Each permittee shall attain the storm water WLAs incorporated into this Order by implementing BMPs in accordance with the MS4 effluent quality workplan and source identification approved by the Executive Officer.” Tentative Order at page 85. However, the Tentative Order does not define “MS4 Effluent Quality Source Identification Workplans.” Staff indicated that

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said Workplans are one and the same document as the workplans required of the permittees at Part 6.II of the Draft Permit, which must be approved by the Executive Officer of the Regional Board. Tentative Order Part 6.II at page 85. There is no need to create another type of compliance report. The Tentative Order should delete all references to the workplans and simply provide that any exceedance of WLAs is a violation of water quality standards and requires RWL Compliance Reports in accordance with Part 3 of the Draft Permit.

#### 6.) Protect Areas of Special Biological Significance (ASBS)

The California Ocean Plan prohibits discharges to Areas of Special Biological Significance (ASBS) (now called "State Water Quality Protection Areas") such as Mugu Lagoon. Although Calleguas Creek flows into Mugu Lagoon, the Tentative Order does not appear to impose any additional requirements based on Mugu's ASBS status. The Tentative Order needs to address the legal protection afforded to Mugu Lagoon by the California Ocean Plan. Moreover, Mugu Lagoon has special significance because it was originally the location of Muwu, a traditional Chumash village from which the name "Mugu" is derived. Allowing polluted discharges of storm water to Mugu Lagoon disregards the value of our traditional village and resources.

Additionally, the VCK has the following specific comments regarding the Tentative Order:

- 1.) The Tentative Order, by wrongly eliminating a provision from the Tentative Order stating that the public can offer documentary evidence of Receiving Water Limitation (RWLs) violations, thwarts the needed efforts of watershed watchdogs to enforce the Clean Water Act (CWA) and impermissibly obstructs the CWA's citizen's suit provision.

The permit explicitly stating that the public can offer documentary evidence of a violation of RWLs is necessary to rightfully encourage the public to conduct their own waterbody sampling and monitoring, as intended and needed, under the CWA to protect the water quality and ecological integrity of Ventura County's inland and coastal waterbodies.

In response to the persisting and newly emerging water quality threats in Ventura County, citizen groups are turning towards local citizen led watershed protection strategies. Because state agencies do not have the resources to conduct regular water quality monitoring where needed on every waterway in Ventura County, citizen involvement in monitoring and reporting water pollution is vital to the protection of Ventura County's waterbodies. Watershed watchdogs, like the Ventura Coastkeeper, often detect potential water quality problems early, quickly, and efficiently through sampling and monitoring conducted by staff, and organized and trained volunteers. The water quality data and information gathered by watchdog groups, can be utilized to alert state and local agencies of the need for emergency response, CWA enforcement actions, permit requirements, or additional inspections to prevent further contamination. Even without the severe California state budget cutbacks that further strain the resources of state environmental agencies, the role of watershed watchdogs in ensuring the enforcement of the CWA is critical.

Without explicitly stated authority that the public can use water quality data as documentary evidence of MS4 RWLs violations, watershed watchdogs may preclude themselves from using their resources to detect MS4 RWL violations, and thus their civil duties protect the water quality and ecological integrity of Ventura County's inland and coastal waterbodies will be thwarted. Further, precluding

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watershed watchdogs from sampling waterbodies to detect RWL violations, will leave an undermanned Regional Board Staff with insufficient resources to adequately monitor Ventura County's waterways for RWL violations.

Additionally, by eliminating the permit provision that clearly allows the public to offer documentary evidence of RWL violations, the Tentative Order impermissibly obstructs the CWA's citizen's suit provision that encourages the public to conduct their own monitoring. To supplement state and federal enforcement of the Clean Water Act, Congress empowered citizens to serve as "private attorneys generals" and bring their own lawsuits to stop illegal pollution discharges.<sup>1</sup> If a violator does not comply with the Clean Water Act or with the regulatory agency's enforcement actions, then any person or entity that either is or might be adversely affected by any violation has the right to file a citizen suit against the violator to prohibit the pollution from continuing. Thus, the citizen suit provision of the Clean Water Act is a crucial tool that Congress intended to be utilized to protect and improve the water quality of Ventura County's rivers, streams, coastal waters, and wetlands.

Removing permit terms that invite the public to offer documentary evidence of Receiving Water Limitation (RWLs) violations, functionally operates to dissuade the public from utilizing their resources to sample Ventura County's waterways because if they fear that their sampling data cannot be used as documentary evidence of a RWL violation, then they may not have the incentive to sample for RWL violations. Thus, not explicitly stating that the public can offer documentary evidence of RWLs violations, and implying that the public cannot offer documentary evidence of RWLs by removing this provision from a draft permit, thwarts the citizen suit provision of the CWA because it dissuades the public from collecting evidence of RWL violations.

Additionally, the public's and watershed watchdog's utilization of Monitoring Quality Assurance Project Plans (QAPPs) approved and certified by the Regional Board, all but eliminates concerns that permittees will have to address incorrect allegations.

2. **The VCK would also like to emphasize its concurrence with, and incorporate by reference, the following Tentative Order comments, recommendations, and justifications submitted by NRDC and Heal the Bay to improve the Tentative Order:**
  - A. **The Tentative Order Fails to Explicitly State that Waste Load Allocations from Applicable TMDLs Must be Enforceable Permit Limitations.**
  - B. **The Tentative Order Is Inadequate to Control Stormwater Pollution from New Development and Redevelopment and Fails to Ensure Compliance with the Maximum Extent Practicable Standard.**
  - C. **The Tentative Order Impermissibly Allows the Discharge of Pollutants from New Dischargers and Sources.**
  - D. **The Tentative Order Fails to Include Provisions that Effectively Prohibit all Non-Stormwater Discharges, as Required by the Clean Water Act.**

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<sup>1</sup> The citizen suit authority can be found in Subchapter V, General Provisions, Section 505, of the Clean Water Act (USC 33, Section 1365).

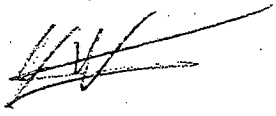


**E. The Permit Application Is Incomplete for Failure to Include an Assessment of Controls for Reducing the Discharge of Pollutants into Stormwater that is not Arbitrary and Capricious.**

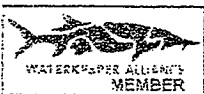
We thank the Board Members and Board Staff for this opportunity to comment on the Tentative Order. As the ecological integrity and water quality of Ventura County's inland and coastal waterbodies continue to be detrimentally impacted by stormwater runoff, we urge the Board and its Executive Officer to implement the comments submitted by NRDC, Heal the Bay, and the Ventura Coastkeeper into Ventura County's MS4 permit to adequately protect Ventura County's waterbodies.

Thank you for considering our comments. Please feel free to contact us with any questions.

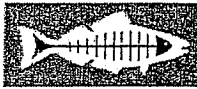
Sincerely,



Jason Weiner, MEM  
Associate Director & Staff Attorney  
Ventura Coastkeeper



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April 10, 2009

Ms. Tracy Egoscue  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, CA 90013

**Re: Fourth Draft Ventura County Municipal Separate Storm Sewer System Permit,  
dated February 24, 2009 (NPDES Permit No. CAS004002)**

Dear Ms. Egoscue:

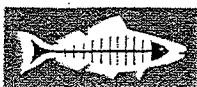
On behalf of Heal the Bay, we submit the following comments on the February 24, 2009, Fourth Draft Ventura County Municipal Separate Storm Sewer System Permit ("Fourth Draft" or "Permit"), NPDES Permit No. CAS004002. We submit these comments to address important areas in which the Permit must be strengthened to best resolve Ventura County's water quality problems. We also incorporate by reference the October 15, 2007 letter submitted to the Regional Board by Heal the Bay and NRDC, the May 29, 2008 letter submitted by Heal the Bay and the April 10, 2009 letter submitted by NRDC and Heal the Bay.

Our comments concern four areas within the Permit: (1) Performance Criteria; (2) Municipal Action Levels (MALs); (3) TMDL waste load allocations; and (4) Monitoring Requirements. We believe that the Permit can be – and needs to be – revised as we have described in order to meet the Clean Water Act's NPDES standards. These concerns are described in detail below.

**I. Performance Criteria**

**The Draft Permit's performance-based criteria should be slightly modified for clarification purposes.**

We commend the Regional Board for including BMP performance criteria in the Fourth Draft. One of the most effective ways to ensure the success of stormwater programs and the attainment of water quality standards is to require performance-based criteria. Appropriately, the Permit includes scientifically-based Treatment BMP Performance Design Standards for treatment control BMPs implemented under the provisions of this Order (subpart 4.A.3 and Attachment C), whereas the previous draft contained arbitrary BMP performance ranges. It is likely an oversight, but this Draft Permit does not include a design storm component. We ask that the Regional Board include a design storm component to the current language in order to provide certainty to the regulated community on how to apply the design criteria. Since this is a new concept, we believe that the SUSMP standards that have been used for a decade in local stormwater permits should apply. The 85<sup>th</sup> percentile storm standard in SUSMP should be used (the 85<sup>th</sup> percentile runoff event



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with 0.2 inches per hour intensity).. In addition for clarification, we ask that the Regional Board insert the following language into subpart 4.A.3: "Every BMP constructed in Ventura County during the life of the permit shall meet the design performance criteria."

## II. Municipal Action Levels ("MALs")

The MALs provided in the Permit are seriously flawed and should be revised.

The Fourth Draft includes municipal action levels ("MALs") that were calculated using the 80<sup>th</sup> percentile concentrations of selected pollutants in the nationwide Phase I MS4 monitoring data. The Permit calls for an Action Plan to address exceedances of MALs, if monitoring data show that there is a "running average of twenty percent or greater exceedances of the MALs." Of note, each of the four drafts of the Ventura County Municipal Separate Storm Sewer System Permit released by the Regional Board for public comment has included a section on MALs, yet each version has been significantly weaker than its predecessor in this area despite our request for strengthening the MALs after every draft. In the Fourth Draft, there are only five pollutants with associated MALs (down from thirteen in the previous draft and sixteen in the first draft), and four of the five MALs are less stringent than those proposed in the May 29, 2008 draft.

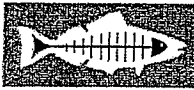
Although MALs are not intended as equivalent to attainment of water quality standards, the comparison to California Toxics Rule ("CTR") criteria brings to light flaws with the proposed values. As shown in the following table, the proposed copper, lead, and zinc MALs are significantly less stringent than CTR criteria. For instance, the lead MAL is *twenty-eight times* less stringent than the CTR chronic criterion. Discrepancies of this magnitude are not substantiated.

Parameter	Proposed MAL (ug/L)	CTR Acute Criterion (ug/L)	CTR Chronic Criterion (ug/L)
Total Cu	87	13.5	9.38
Total Pb	122	82.17-110	3.16-4.24
Total Zn	660	122.7	121.7

Table 1: Comparison of proposed MAL values and CTR criteria

More important, a comparison of the MALs to actual BMP performance data shows that the MALs are flawed. The attached tables (Exhibit 1) were taken from an analysis by Geosyntec Consultants of the ASCE/EPA BMP database.<sup>1</sup> The comparison of the proposed MALs to demonstrated BMP effluent water quality clearly indicates that the MALs are set to reflect

<sup>1</sup> The Geosyntec study was an internally funded document on BMP performance. Heal the Bay's use of this information does not imply any agreement or disagreement by Geosyntec with the conclusions advanced by Heal the Bay.



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relatively poor BMP performance. For instance, the proposed MAL for total copper is 87 ug/L, while over 95% of the hydrodynamic devices in the database achieve at least 38.55 ug/L total copper. The median performance is 15.41 ug/L. As another example, the MAL for zinc is 660 ug/L, while even the worst 5% of biofilter BMPs achieve 181.28 ug/L. The median performance is 30.26 ug/L.

In other words, almost all of the BMPs that were monitored achieved better effluent water quality than the proposed MAL in these cases, and the median performance is vastly superior to the MAL value. This discrepancy between the proposed MALs and demonstrated BMP performance cannot be justified given that MALs are used to trigger further action such as modifying BMPs. Municipal stormwater permits have required BMP implementation to the maximum extent practicable for nearly two decades, and the current MAL provision gives the impression that implementation of even the worst performing BMPs is an appropriate Municipal Action Level. Although the majority of the Fourth Draft appropriately removes any association between MALs and MEP, the definition still maintains that MALs are used to identify areas that require additional attention in order to "reduce the discharge of pollutants to the maximum extent practicable."<sup>2</sup> The MALs in the Fourth Draft in no shape or form represent MEP as demonstrated in the comparisons to BMP performance data above. This is likely an oversight, but it is critical that this definition be modified accordingly in the Fourth Draft. The MAL approach in this draft will never allow water quality standards attainment in receiving waters impacted by municipal stormwater discharges.

The MAL concept has great potential as identifying problem areas and requiring follow-up actions until the MALs are achieved. MALs should furthermore be retained in the final Permit, but more pollutants should be given a MAL and the values must be strengthened to reflect good science and existing technical achievement in this region and the rest of the country. The Board could use as its reference point the water quality achieved by the top 10% of MS4 programs in the U.S. Clearly, these programs have systematically implemented BMPs in an effective manner that achieves water quality improvement. Alternatively, the Board could utilize the Geosyntec analysis of BMP performance to develop appropriate MALs. Perhaps an average of the median performance levels for the range of appropriate BMP types would be a good approach.

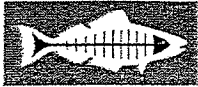
### III. TMDLs

**The Permit must include numeric effluent limits based on waste load allocations ("WLAs") and required implementation actions for all TMDLs in effect in Ventura County.**

Appropriately, the Regional Board includes Waste Load Allocations and required implementation schedule actions for most TMDLs that are in effect in Ventura County. Federal law clearly commands that the Board integrate already adopted TMDLs into the effluent limitations of appropriate NPDES permits. Specifically, federal regulations require that:

Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for

<sup>2</sup> Fourth Draft at 104.



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the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7.<sup>3</sup>

Further, implementation schedules' actions must be included in the Permit, as they are vital steps in ensuring that dischargers are on-track for ultimate compliance with the waste load allocations.

However, the Permit fails to include WLAs for four TMDLs in effect in Ventura County: Calleguas Creek Watershed Salts TMDL (in effect December 2, 2008), Calleguas Creek Nitrogen TMDL (in effect July 13, 2003), Santa Clara River Chloride TMDL (in effect May 4, 2005), and Malibu Creek Nutrients TMDL (in effect March 22, 2003). In conversations with Regional Board staff, it appears that chlorides in Santa Clara and nutrients in Calleguas Creek are primarily attributed to POTWs and thus were excluded from the Draft Permit. However, the Santa Clara River Chloride TMDL includes a WLA for "other NPDES" permittees. This should be considered for inclusion in the Draft Permit. In addition although the Regional Board-approved TMDL updates to the Santa Clara River Chloride TMDL and Calleguas Creek Nitrogen TMDL from late 2008 are not in effect, the previously adopted TMDLs for these waterbody-pollutant combinations are in effect. Thus these WLAs should be included in the Draft Permit.

The absence of the Malibu Creek TMDL WLAs in the permit is particularly troublesome, as stormwater is a large source of nutrients to the Creek. High nutrient concentrations and eutrophication problems continue to plague the Malibu Creek watershed, yet the Regional Board has not included nutrient WLAs, LAs or effluent limits in any permits to date despite the fact that the TMDL was approved by the USEPA over six years ago. Thus, the Board must modify the Permit to include these numeric WLAs in the Ventura MS4 permit.

In addition, the Malibu Creek Trash TMDL has been approved by State Board but is not in effect as of the date of this letter. The WLAs and implementation actions in this TMDL should be included in the Permit, if it comes into effect before the Board hearing to consider this item. As these and other future TMDLs come into effect, the Board should incorporate the appropriate WLAs into the MS4 Permit as soon as possible.

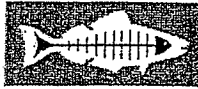
**The Permit must clearly state that numeric effluent limits based on waste load allocations are enforceable.**

The Draft Permit appears to state that an exceedance of a WLA may not be enforced upon:

"If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for further enforcement action."<sup>4</sup>

<sup>3</sup> 40 CFR § 122.44(d)(1)(vii)(B).

<sup>4</sup> Fourth Draft Permit at 85--95.



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The implementation of an implementation plan or special study does not constitute an enforcement action. A WLA must be met for purposes of water quality standards attainment and is an enforceable limit. Thus, the Permit must clarify that any exceedance of a WLA is a violation and will be enforced.

#### Miscellaneous

- The zero trash WLA for Revolon Slough and Beardsley Wash and Ventura River Estuary is appropriately included in the Permit. However the Draft Permit should also include the trash reduction milestones. For instance, a 20 percent trash reduction from baseline is required at year four.
- There appears to be a typographical error for the Arroyo Simi 4,4-DDD Interim WLA in Table 11. The Basin Plan Amendment assigns a limit of 14 ng/g, not 140 ng/g.
- WLAs for nitrogen compounds in Reach 7 of the Santa Clara River are not included in the Draft Permit. Is Reach 7 within Ventura County? If so, this WLA should be included in the Draft Permit.

#### IV. Monitoring

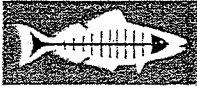
The Clean Water Act requires that a Permittee undertake a self-monitoring program sufficient to determine compliance with its NPDES permit.<sup>5</sup> This general requirement is reflected in the Fourth Draft, which lists one of its monitoring goals as assessing "...compliance with TMDL targets and water quality objectives."<sup>6</sup> However, many elements of the Monitoring Program (Attachment F) must be strengthened in order to meet this stated objective.

As an overarching comment, the monitoring program in the Draft Permit is difficult to evaluate, as it is unclear what monitoring is already underway and the additional monitoring locations required in the Draft Permit. As we have asked for on numerous occasions over the last year, the Board Staff should compile a list or table of all stormwater monitoring requirements in order for the public to evaluate whether the Permit's requirements, when combined with current monitoring efforts, will be sufficient. Heal the Bay has asked for the Ventura County TMDL monitoring requirements for 9 months, yet Ventura County and the Regional Board have not provided that information, thus making assessment of the adequacy of the MS4 monitoring program impossible. This additional monitoring program information is especially important given that there is only receiving water monitoring at mass emissions locations and not throughout the watersheds. In general, though, the Permit must contain minimum monitoring requirements, which are necessary to assess compliance and impacts from the MS4. If another program covers some of these requirements, the discharger can work with this other monitoring program to coordinate logistical issues like cost-sharing.

<sup>5</sup> See 40 C.F.R. § 122.44(i)(1).

<sup>6</sup> Fourth Draft Permit at F-1





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## Beach Water Quality Monitoring

We commend Regional Board staff for requiring beach water quality monitoring at ten Ventura County beach locations in the proposed monitoring program. As you know, stormwater runoff is a major source of beach bacteria pollution. It is critical that the Permittees be on hand to undertake beach water quality monitoring at stormwater impacted sites should the Health Department discontinue this weekly monitoring, as this is a major public health issue. However, we ask that the Regional Board expand the scope of the monitoring program to include *year-round monitoring* at these beach locations, similar to what the Regional Board has required for the LA County MS4 permit for over a decade. Nuisance flows occur on a year-round basis and are a known source of bacteria to beaches. In addition for clarity purposes, the Regional Board should outline within the Permit that a minimum of *weekly* monitoring will be conducted. Although this is implied by stating that the monitoring shall be conducted in accordance with AB 411 procedures, it should be clearly stated within the Permit. Lastly, the Permit should specify that monitoring take place at the wave-wash directly in front of stormdrain and stream sources (point zero). This is necessary to ensure that the waters closest to the discharge are evaluated.

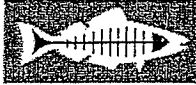
## Major Outfall Monitoring

The Draft Permit requires monitoring at "the end-of-pipe of major outfalls" four times per year and includes the latitude and longitude of eleven locations throughout the County that should be monitored on this cycle. Without accompanying maps or descriptions of the sites, it is nearly impossible to determine if the selected outfalls are truly representative of the discharge area. The Regional Board must ensure that appropriate land-use categories are monitored in order to be able to more readily determine if a MS4 is causing or contributing to a water quality objective exceedance, and if so, which Permittee. Drainages carrying stormwater from commercial, industrial, and high-use transportation should be prioritized. More importantly, without the more detailed descriptions of the subdrainages, the efficacy of the monitoring program for determining municipality compliance assessment can not be readily determined.

In addition to outfall monitoring, there should be downstream receiving water monitoring at each of these stations in order to assist in the determination if MS4 discharges are causing or contributing to water quality standards exceedances. This monitoring program shortcoming has plagued the Regional Board in previous permits and has contributed to a lack of compliance assurance action based on exceedances of receiving water quality standards. More monitoring locations are likely merited for better compliance assurance purposes, but we can't tell based on the lack of information provided in the permit. Of note, the first draft of the Permit included a tributary monitoring program to identify sub-watersheds where stormwater dischargers are causing or contributing to exceedances of water quality objectives; the major outfall monitoring program must now serve this purpose as the tributary monitoring is no longer included as an element in the core monitoring program.

Several clarifications are necessary in the Major Outfalls section of the Monitoring Program. Although the Permit requires that a total of four monitoring events shall be sampled per identified major outfall each year<sup>7</sup>, a subsequent subsection states that "[i]n the first year after the

<sup>7</sup> Fourth Draft at (Section B.1.1(c))



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permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment H are to be monitored annually according to the schedule above.”<sup>8</sup> These two subsections appear to be in conflict. At a minimum, all eleven stations must be monitored four times per year. In addition, Attachment H does not list major outfall stations. Perhaps this is a typographical error. Accordingly, the Regional Board should make necessary clarifications to the Permit.

### **Mass Emissions Monitoring**

The mass emissions monitoring element of the Draft Permit’s core monitoring program requires that three mass emission stations be monitored four times per year.<sup>9</sup> This is a very small number of monitoring locations given that Ventura County covers an area of 1,873 square miles and multiple Permittees preside over each of the three main watershed management areas (“WMAs”). A stated goal of the mass emissions monitoring program is to determine if the MS4 is causing or contributing to exceedances of water quality objectives.<sup>10</sup> As we’ve stated above, the best way to determine compliance is to have receiving water monitoring stations just below major outfall monitoring stations. The Mass Emission Stations integrate the pollution sources from the entire watershed and give one an estimate of the pollutant load to the ocean.

### **TMDL Monitoring**

The Total Maximum Daily Load Monitoring section of the Draft Permit simply refers back to the monitoring plans that have been “agreed upon” by stakeholders. This ambiguity makes review of the overall scope of the Draft Permit’s monitoring program in conjunction with the TMDL monitoring plans extremely difficult as the monitoring provisions are not described in the permit itself. It is impossible to discern if the TMDL monitoring programs are adequate for determining if water quality objectives are achieved in the receiving water. Also, are monitoring programs in place for all of the TMDLs that are in effect in Ventura County and have all of these monitoring plans been approved by the Regional Board Executive Officer? The Regional Board should provide specificity and clarity in the Draft Permit’s TMDL monitoring program.

### **Dry Weather Monitoring**

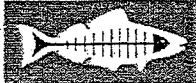
The Fourth Draft includes a new monitoring section for “Dry Weather Monitoring.” This monitoring entails collecting samples and/or taking visual observations once per dry season at outfalls to be selected by the Permittees at a later date. While we appreciate this idea in concept, the program outlined is insufficient to meet the objectives. First, the Permit requires that each Co-Permittee identify 5 monitoring stations; however, it is unclear if each of these stations will be monitored as the Permit also refers to “a primary station” and “four alternate stations” in a later subsection. The Regional Board should clarify that all 5 stations in each jurisdiction should be monitored. Any fewer sampling sites would have very limited use, due to the variability of nuisance flows. In addition requiring only one sampling event per year will not capture the variability of nuisance flows. The nuisance flow issue is a significant problem throughout the

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<sup>8</sup> Fourth Draft at Section B.1.1(d)

<sup>9</sup> Fourth Draft Permit at F-2.

<sup>10</sup> Fourth Draft Permit at F-1.



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Los Angeles Region, yet it is a problem that only the Las Virgenes MWD is aggressively pursuing. As we've seen historically, many cities are ignoring dry weather discharge and hosing prohibitions, and as a result, numerous beaches continue to frequently exceed beach bacteria TMDL requirements during the summer months. Thus, the Regional Board should increase the number of sampling events to at least twice per dry season. In addition, the Permittees should conduct pre-dawn and early morning visual inspections (including weekends) throughout the city on at least a monthly basis.

**The Board should revise toxicity requirements to meet the working group's recommendations.**

Several years ago, the Board convened a multi-stakeholder toxicity working group that developed the *SMBRC Technical Memorandum on Toxicity Testing of Wet and Dry Weather Runoff* ("Memorandum"). This working group was chaired by the Southern California Coastal Water Research Project ("SCCWRP") and included representatives from wastewater treatment and stormwater agencies. The objective of the SCCWRP- and stakeholder-authored Memorandum is to provide guidance to the Board for use in developing MS4 permit toxicity monitoring and reporting requirements. However, several of the current toxicity requirements in the Fourth Draft appear to be inconsistent with the Memorandum. For instance, the Memorandum recommends sampling both dry and wet weather events, but the Fourth Draft includes only wet weather sampling. The Board should revise the Permit to be consistent with the Board's working group recommendations.

Several of the toxicity monitoring program requirements included in the Third Draft are arbitrary and will not provide a proper determination of whether stormwater discharges are impacting aquatic life. A Toxic Reduction Evaluation ("TRE") is only triggered if the same pollutant or class of pollutants is identified through the TIE process.<sup>11</sup> TREs should be required when there is a trend of toxicity, even if the cause of the toxicity varies. Additionally, each TRE action should include an implementation plan with milestones for constructing specific BMPs that meet the 75<sup>th</sup> percentile performance criteria and target the pollutant of concern.

Through conversations with several of the Permittees, we understand that a concern with the toxicity monitoring is that there may not be sufficient flow to collect 5 gallons of receiving water to perform the test. The Permit seemingly provides an exception to sampling if a sufficient sample volume is not possible. We urge the Regional Board to include a clause that states an alternate location near the initial monitoring location should be selected if insufficient sample cannot be collected.

**The Board should include bioassessment monitoring in the Permit that is sufficient for determining receiving water trends and stormwater impacts on specific aquatic communities.**

The Fourth Draft Permit requires that the Permittees participate in the SMC Regional Monitoring Program for bioassessment monitoring. Specifically, the program calls for probabilistic monitoring at three to six sites in each of the three major watersheds and one fixed site in each of

<sup>11</sup> Fourth Draft Permit at Attachment F-12.



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these watersheds. While the SMC Regional Monitoring Program is useful in measuring the overall health of Southern California watersheds, probabilistic monitoring does not provide adequate information on compliance or trends over time at specific sites. Including one fixed site in a large watershed will not solve this overall deficiency. The SMC Program should not take the place of a compliance monitoring program that is necessary for compliance assurance purposes in an MS4 permit. As Jim Harrington, bioassessment expert for California Department of Fish and Game, states in regards to the proposed SMC Regional Monitoring Program:<sup>12</sup>

“... maintaining all or some of the 16 existing fixed sites in the Ventura River would also be important to help County staff pin point particular water quality problems or better track improvement in water quality due to implementation of site specific BMPs. A probabilistically designed monitoring program with only 6 sites a year is not adequate for watershed-wide compliance monitoring.”

Bioassessment monitoring is critical to assess the full impacts of the discharge and should be performed on a regular basis. Ventura County has some of the best remaining aquatic biological resources in Southern California, and the impacts of stormwater on these resources must be assessed. Heal the Bay has monitored over a dozen fixed sites per year in the Malibu Creek watershed for over a decade to observe trends. In order to determine the impacts of stormwater on biological resources in receiving waters, the Board must include a defined semi-annual or annual bioassessment monitoring program with at least six fixed sites per watershed in the Permit as part of the “Core Monitoring” requirements.

### Conclusion

We thank the Board Members and Board Staff for this opportunity to comment on the Fourth Draft. More than fifteen years after urban stormwater runoff permitting took effect under the Clean Water Act, the region still struggles with the impacts of this source of pollution. This draft Permit contains the seeds of approaches that can make a significant difference in better controlling runoff. However, the weaknesses described above must be corrected before the Permit is adopted.

If you have any questions, feel free to contact us.

Sincerely,

Mark Gold, D. Env.  
President

Kirsten James  
Water Quality Director

<sup>12</sup> Email communication to Heal the Bay on February 3, 2009.

Effluent Statistics		Effluent Percentiles										
BMPID	Parameter	Count	NDC	Count %	ND	5th	10th	25th	50th	75th	90th	95th
Detention Basins	Cadmium, Dissolved (ug/L as Cd)	75	43	57%	0.012	0.020	0.050	0.144	0.566	1.830	2.167	
Detention Basins	Cadmium, Total (ug/L as Cd)	97	29	30%	0.083	0.110	0.248	0.568	1.313	2.359	3.145	
Detention Basins	Copper, Dissolved (ug/L as Cu)	152	0	0%	1.947	2.526	4.864	8.117	13.727	24.263	28.125	
Detention Basins	Copper, Total (ug/L as Cu)	184	14	8%	2.870	3.697	7.180	13.016	21.922	32.357	42.223	
Detention Basins	Lead, Dissolved (ug/L as Pb)	111	52	47%	0.061	0.093	0.185	1.031	3.353	5.731	7.519	
Detention Basins	Lead, Total (ug/L as Pb)	146	18	12%	0.837	1.639	4.902	12.725	28.191	52.553	97.903	
Detention Basins	Nitrate + Nitrite, Total (mg/L as N)	27	18	67%	0.002	0.003	0.010	0.048	0.142	0.575	1.020	
Detention Basins	Nitrate Nitrogen, Total (mg/L as N)	103	10	10%	0.133	0.174	0.270	0.578	0.918	1.684	2.150	
Detention Basins	Nitrogen, Ammonia Total (mg/L as N)	13	3	23%	0.016	0.019	0.029	0.048	0.098	0.208	0.289	
Detention Basins	Nitrogen, Kjeldahl, Total (mg/L as N)	97	14	14%	0.436	0.542	0.781	1.242	1.951	3.162	3.918	
Detention Basins	Nitrogen, Total (mg/L as N)	12	0	0%	0.528	0.575	0.775	1.272	2.431	3.856	4.495	
Detention Basins	Phosphorous, Dissolved (mg/L as P)	49	12	24%	0.028	0.035	0.049	0.085	0.143	0.251	0.329	
Detention Basins	Phosphorous, Total (mg/L as P)	174	20	11%	0.014	0.019	0.037	0.108	0.283	0.460	0.670	
Detention Basins	Solids, Total Dissolved (mg/L)	81	1	1%	9.083	19.536	45.677	73.510	111.402	233.722	379.539	
Detention Basins	Solids, Total Suspended (mg/L)	177	8	5%	2.114	3.043	9.192	21.958	43.145	76.742	117.692	
Detention Basins	Zinc, Dissolved (ug/L as Zn)	153	1	1%	3.585	7.232	20.610	34.267	60.530	101.297	146.808	
Detention Basins	Zinc, Total (ug/L as Zn)	207	2	1%	12.097	17.843	34.930	60.976	105.574	197.697	263.675	
Biofilters	Cadmium, Dissolved (ug/L as Cd)	342	66	19%	0.079	0.096	0.199	0.200	0.200	0.303	0.464	
Biofilters	Cadmium, Total (ug/L as Cd)	361	49	14%	0.081	0.149	0.200	0.206	0.424	0.840	1.258	
Biofilters	Copper, Dissolved (ug/L as Cu)	399	4	1%	1.046	1.530	2.939	5.868	11.064	17.656	22.703	
Biofilters	Copper, Total (ug/L as Cu)	468	9	2%	1.787	2.656	4.273	7.984	17.241	32.435	44.607	
Biofilters	Lead, Dissolved (ug/L as Pb)	368	26	7%	0.293	0.471	1.000	1.000	2.959	6.677	11.700	
Biofilters	Lead, Total (ug/L as Pb)	483	50	10%	0.824	1.000	1.345	4.157	14.028	43.513	66.517	
Biofilters	Nitrate + Nitrite, Total (mg/L as N)	27	0	0%	0.138	0.174	0.311	0.611	0.955	1.641	2.215	
Biofilters	Nitrate Nitrogen, Total (mg/L as N)	476	12	3%	0.052	0.095	0.165	0.375	0.748	1.601	2.486	
Biofilters	Nitrogen, Ammonia Total (mg/L as N)	14	4	29%	0.007	0.009	0.017	0.031	0.066	0.142	0.173	
Biofilters	Nitrogen, Kjeldahl, Total (mg/L as N)	395	4	1%	0.469	0.633	0.894	1.342	2.138	3.600	6.378	
Biofilters	Nitrogen, Total (mg/L as N)	96	0	0%	0.128	0.205	0.396	0.643	1.560	2.329	2.855	
Biofilters	Phosphorous, Dissolved (mg/L as P)	38	0	0%	0.136	0.151	0.197	0.283	0.483	1.039	1.417	
Biofilters	Phosphorous, Total (mg/L as P)	539	8	1%	0.042	0.056	0.114	0.240	0.451	0.815	1.167	
Biofilters	Solids, Total Dissolved (mg/L)	357	1	0%	11.444	23.210	46.397	76.845	114.831	164.080	201.933	
Biofilters	Solids, Total Suspended (mg/L)	467	7	1%	1.255	3.043	8.371	20.027	49.854	115.978	233.464	
Biofilters	Zinc, Dissolved (ug/L as Zn)	399	4	1%	5.000	5.000	8.732	19.485	35.696	52.821	71.794	
Biofilters	Zinc, Total (ug/L as Zn)	533	51	10%	4.479	6.395	14.164	30.256	67.208	119.646	181.275	

BMPID	Effluent Statistics	Parameter	Count	NDCount	%ND	Effluent Percentiles									
						5th	10th	25th	50th	75th	90th	95th			
	Hydrodynamic Devices	Cadmium, Dissolved (ug/L as Cd)	79	32	41%	0.011	0.017	0.042	0.199	0.785	1.793	2.239			
	Hydrodynamic Devices	Cadmium, Total (ug/L as Cd)	88	25	28%	0.024	0.038	0.102	0.382	1.261	3.035	5.047			
	Hydrodynamic Devices	Copper, Dissolved (ug/L as Cu)	89	15	17%	1.074	1.409	2.961	9.580	16.630	31.985	41.695			
	Hydrodynamic Devices	Copper, Total (ug/L as Cu)	99	0	0%	2.791	3.340	7.462	15.409	21.659	32.301	38.550			
	Hydrodynamic Devices	Lead, Dissolved (ug/L as Pb)	89	35	39%	0.123	0.201	0.434	1.184	3.769	7.376	8.733			
	Hydrodynamic Devices	Lead, Total (ug/L as Pb)	95	8	8%	0.887	1.351	2.691	6.297	13.428	23.845	42.576			
	Hydrodynamic Devices	Nitrate + Nitrite, Total (mg/L as N)	42	13	31%	0.062	0.078	0.117	0.226	0.359	0.506	0.707			
	Hydrodynamic Devices	Nitrate Nitrogen, Total (mg/L as N)	59	2	3%	0.073	0.098	0.152	0.306	0.680	1.299	2.120			
	Hydrodynamic Devices	Nitrogen, Ammonia Total (mg/L as N)	69	19	28%	0.009	0.014	0.041	0.090	0.313	0.814	1.103			
	Hydrodynamic Devices	Nitrogen, Kjeldahl, Total (mg/L as N)	77	4	5%	0.224	0.351	0.566	1.086	1.830	3.576	5.984			
	Hydrodynamic Devices	Nitrogen, Total (mg/L as N)	13	0	0%	0.902	0.988	1.335	2.101	3.633	5.233	5.939			
	Hydrodynamic Devices	Phosphorous, Dissolved (mg/L as P)	58	19	33%	0.000	0.001	0.002	0.001	0.088	0.172	0.253			
	Hydrodynamic Devices	Phosphorous, Total (mg/L as P)	170	5	3%	0.011	0.023	0.067	0.148	0.270	0.926	2.612			
	Hydrodynamic Devices	Solids, Total Dissolved (mg/L)	198	6	3%	3.905	6.206	19.175	60.768	422.937	795.478	22415.772			
	Hydrodynamic Devices	Solids, Total Suspended (mg/L)	199	14	7%	2.977	5.543	17.995	43.173	99.360	190.249	303.150			
	Hydrodynamic Devices	Zinc, Dissolved (ug/L as Zn)	99	18	18%	3.357	5.113	12.784	34.762	76.530	156.734	334.604			
	Hydrodynamic Devices	Zinc, Total (ug/L as Zn)	174	13	7%	11.341	17.793	37.092	69.089	124.178	201.430	291.030			
	Media Filters	Cadmium, Dissolved (ug/L as Cd)	111	74	67%	0.009	0.014	0.033	0.097	0.290	0.680	1.261			
	Media Filters	Cadmium, Total (ug/L as Cd)	139	80	58%	0.035	0.053	0.109	0.257	0.764	1.401	1.778			
	Media Filters	Copper, Dissolved (ug/L as Cu)	258	7	3%	1.344	1.971	4.050	7.084	13.178	23.449	29.351			
	Media Filters	Copper, Total (ug/L as Cu)	294	19	6%	1.881	2.692	5.569	9.795	19.043	35.176	54.304			
	Media Filters	Lead, Dissolved (ug/L as Pb)	227	117	52%	0.055	0.088	0.195	0.550	1.641	3.681	5.916			
	Media Filters	Lead, Total (ug/L as Pb)	251	44	18%	0.426	0.609	1.397	4.376	13.378	23.679	39.362			
	Media Filters	Nitrate + Nitrite, Total (mg/L as N)	35	11	31%	0.170	0.213	0.301	0.951	1.763	2.859	3.926			
	Media Filters	Nitrate Nitrogen, Total (mg/L as N)	232	16	7%	0.181	0.253	0.424	0.690	1.151	2.029	2.643			
	Media Filters	Nitrogen, Ammonia Total (mg/L as N)	38	19	50%	0.003	0.006	0.022	0.102	0.728	1.919	2.931			
	Media Filters	Nitrogen, Kjeldahl, Total (mg/L as N)	229	12	5%	0.352	0.464	0.855	1.491	2.303	3.779	6.796			
	Media Filters	Nitrogen, Total (mg/L as N)	20	0	0%	1.921	2.077	2.530	3.472	4.695	6.024	6.682			
	Media Filters	Phosphorous, Dissolved (mg/L as P)	90	21	23%	0.019	0.025	0.038	0.085	0.142	0.238	0.407			
	Media Filters	Phosphorous, Total (mg/L as P)	280	25	9%	0.018	0.040	0.075	0.129	0.230	0.394	0.566			
	Media Filters	Solids, Total Dissolved (mg/L)	114	0	0%	12.216	24.105	41.104	56.574	85.506	137.169	230.416			
	Media Filters	Solids, Total Suspended (mg/L)	358	15	4%	1.317	2.762	6.321	14.784	37.784	87.741	148.957			
	Media Filters	Zinc, Dissolved (ug/L as Zn)	254	15	6%	3.212	5.915	14.843	30.677	76.394	143.497	266.374			
	Media Filters	Zinc, Total (ug/L as Zn)	383	19	5%	2.596	4.680	14.669	35.580	103.083	281.505	436.429			

Effluent Statistics BMPID	Parameter	Count	NDCount	%ND	Effluent Percentiles									
					5th	10th	25th	50th	75th	90th	95th			
Retention Ponds	Cadmium, Total (ug/L as Cd)	200	89	45%	0.003	0.007	0.043	0.145	0.527	7.252	9.983			
Retention Ponds	Copper, Dissolved (ug/L as Cu)	182	5	3%	1.744	2.473	3.224	4.358	5.976	9.829	12.865			
Retention Ponds	Copper, Total (ug/L as Cu)	327	10	3%	1.122	1.891	3.140	5.367	8.958	28.112	49.725			
Retention Ponds	Lead, Dissolved (ug/L as Pb)	153	53	35%	0.174	0.310	0.821	2.848	9.059	29.422	35.410			
Retention Ponds	Lead, Total (ug/L as Pb)	404	78	19%	0.256	0.466	1.007	3.386	15.793	36.788	64.062			
Retention Ponds	Nitrate + Nitrite, Total (mg/L as N)	247	18	7%	0.004	0.005	0.012	0.038	0.173	0.371	0.546			
Retention Ponds	Nitrate Nitrogen, Total (mg/L as N)	142	2	1%	0.040	0.066	0.114	0.310	0.632	1.408	1.031			
Retention Ponds	Nitrogen, Ammonia Total (mg/L as N)	265	21	8%	0.011	0.016	0.027	0.056	0.127	0.238	0.314			
Retention Ponds	Nitrogen, Kjeldahl, Total (mg/L as N)	244	9	4%	0.463	0.577	1.043	1.043	1.571	2.258	3.202			
Retention Ponds	Nitrogen, Total (mg/L as N)	239	0	0%	0.537	0.631	0.867	1.278	1.776	2.410	2.907			
Retention Ponds	Phosphorous, Dissolved (mg/L as P)	204	5	2%	0.019	0.021	0.039	0.062	0.116	0.206	0.253			
Retention Ponds	Phosphorous, Total (mg/L as P)	486	14	3%	0.018	0.035	0.063	0.142	0.283	0.714	1.198			
Retention Ponds	Solids, Total Dissolved (mg/L)	79	0	0%	27.590	56.563	129.402	390.152	633.739	1389.317	1779.409			
Retention Ponds	Solids, Total Suspended (mg/L)	469	3	1%	0.559	1.197	4.281	11.612	28.307	66.130	110.111			
Retention Ponds	Zinc, Dissolved (ug/L as Zn)	158	6	4%	1.002	1.199	2.482	9.770	28.517	47.281	75.918			
Retention Ponds	Zinc, Total (ug/L as Zn)	423	52	12%	1.426	2.172	7.183	19.601	37.214	70.121	121.125			
Wetland Basins	Cadmium, Dissolved (ug/L as Cd)	7	4	57%	2.726	4.014	9.874	28.487	61.896	85.135	92.601			
Wetland Basins	Cadmium, Total (ug/L as Cd)	50	1	2%	0.090	0.100	0.100	0.164	1.145	5.736	9.569			
Wetland Basins	Copper, Dissolved (ug/L as Cu)	7	0	0%	4.772	4.956	5.538	6.522	7.389	7.724	7.793			
Wetland Basins	Copper, Total (ug/L as Cu)	80	0	0%	1.087	1.578	2.257	3.091	5.404	8.409	10.310			
Wetland Basins	Lead, Dissolved (ug/L as Pb)	11	1	9%	0.354	0.391	0.524	0.793	1.070	1.385	1.582			
Wetland Basins	Lead, Total (ug/L as Pb)	91	0	0%	0.231	0.377	0.830	1.066	2.351	4.940	6.356			
Wetland Basins	Nitrate + Nitrite, Total (mg/L as N)	144	0	0%	0.006	0.008	0.015	0.043	0.178	0.468	0.791			
Wetland Basins	Nitrate Nitrogen, Total (mg/L as N)	91	4	4%	0.015	0.040	0.111	0.207	0.410	0.798	1.084			
Wetland Basins	Nitrogen, Ammonia Total (mg/L as N)	188	1	1%	0.006	0.009	0.019	0.041	0.118	0.278	0.401			
Wetland Basins	Nitrogen, Kjeldahl, Total (mg/L as N)	146	0	0%	0.640	0.717	0.888	1.146	1.376	1.691	2.073			
Wetland Basins	Nitrogen, Total (mg/L as N)	201	0	0%	0.558	0.741	0.922	1.278	1.783	2.670	3.976			
Wetland Basins	Phosphorous, Dissolved (mg/L as P)	114	0	0%	0.007	0.010	0.024	0.053	0.178	0.356	0.444			
Wetland Basins	Phosphorous, Total (mg/L as P)	220	1	0%	0.014	0.024	0.040	0.070	0.183	0.405	0.522			
Wetland Basins	Solids, Total Dissolved (mg/L)	25	0	0%	6.596	8.420	12.181	20.775	70.372	312.445	460.257			
Wetland Basins	Solids, Total Suspended (mg/L)	211	0	0%	0.866	1.110	1.956	6.775	16.507	41.338	75.644			
Wetland Basins	Zinc, Dissolved (ug/L as Zn)	7	0	0%	9.726	10.433	12.592	15.943	19.866	23.022	24.222			
Wetland Basins	Zinc, Total (ug/L as Zn)	107	1	1%	8.342	9.903	12.884	19.005	40.343	124.055	227.030			

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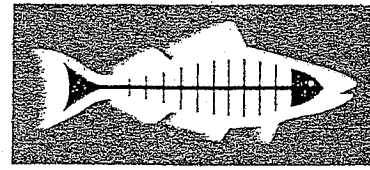
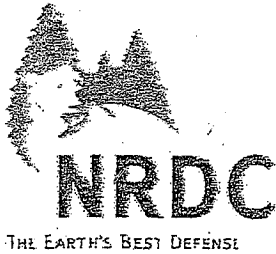
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Effluent Statistics		Effluent Percentiles									
BMPID	Parameter	Count	NDCount	%ND	5th	10th	25th	50th	75th	90th	95th
Welland Channel	Lead, Dissolved (ug/L as Pb)	11	0	0%	1.425	1.674	2.751	5.129	15.298	41.726	61.601
Welland Channel	Lead, Total (ug/L as Pb)	41	0	0%	1.008	1.079	2.308	5.387	13.481	41.883	112.900
Welland Channel	Nitrate Nitrogen, Total (mg/L as N)	41	0	0%	0.056	0.081	0.122	0.235	0.458	0.841	1.544
Welland Channel	Nitrogen, Ammonia Total (mg/L as N)	10	0	0%	0.030	0.036	0.062	0.132	0.338	0.810	1.087
Welland Channel	Nitrogen, Kjeldahl, Total (mg/L as N)	33	0	0%	0.657	0.717	0.868	1.285	1.576	1.926	2.198
Welland Channel	Nitrogen, Total (mg/L as N)	42	0	0%	0.729	0.851	1.033	1.491	1.949	3.650	9.669
Welland Channel	Phosphorous, Dissolved (mg/L as P)	41	0	0%	0.039	0.045	0.059	0.080	0.136	0.188	0.226
Welland Channel	Phosphorous, Total (mg/L as P)	43	0	0%	0.073	0.083	0.118	0.190	0.315	0.502	0.997
Welland Channel	Solids, Total Dissolved (mg/L)	9	0	0%	80.579	89.337	116.846	250.169	890.815	1588.032	1806.235
Welland Channel	Solids, Total Suspended (mg/L)	41	0	0%	3.126	4.359	8.931	19.119	75.927	322.275	992.616
Welland Channel	Zinc, Dissolved (ug/L as Zn)	9	0	0%	6.392	7.679	10.642	22.766	105.009	236.595	291.699
Welland Channel	Zinc, Total (ug/L as Zn)	9	0	0%	20.242	22.827	30.856	54.025	207.935	545.748	713.850

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Heal the Bay

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LOS ANGELES REGION

April 10, 2009

Via personal delivery and electronic mail

Chair Lutz and Members of the Board  
Los Angeles Regional Water Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013  
[VenturaMS4Comments041009@waterboards.ca.gov](mailto:VenturaMS4Comments041009@waterboards.ca.gov)

**Re: Comments on February 24, 2009, Tentative Order for Ventura County MS4 Permit**

Dear Chair Lutz and Members of the Board:

We write on behalf of the Natural Resources Defense Council ("NRDC") and Heal the Bay. We have reviewed Tentative Order No. 09-xxx, NPDES Permit No. CAS004002—the latest draft of the Ventura County Municipal Separate Storm Sewer System NPDES Permit, released on February 24, 2009. We appreciate the opportunity to submit the following comments on the Tentative Order.

**I. Introduction**

NRDC and Heal the Bay are concerned that the Tentative Order weakens key requirements contained in previous drafts of the Permit without any basis articulated either in the record or otherwise. We are troubled by the circumstances of these changes, which come after a series of meetings between Regional Board staff and some stakeholders. While we believe that permit applicants, like any stakeholder, have every right to make their views known, it is incumbent on the Regional Board to ensure that pollution control language is based on more than simply the desire to accommodate these stakeholders. The Regional Board has not done so, in our view, as described below; in many instances, staff have adopted submitted redline language *verbatim* or nearly so, typographic errors and all. Without evidence in the record to support these changes, this approach is effectively a self-regulatory one that is poor public policy and legally prohibited.

II. Standards Governing the Adoption of the Tentative Order by the Regional Board

In considering the Tentative Order, the Regional Board must not only ensure compliance with substantive legal standards, but it must also ensure that it complies with well-settled standards that govern the Regional Board's administrative decision-making. The Tentative Order must be supported by evidence that justifies the Regional Board's decision to include, or not to include, specific requirements. The Regional Board would be abusing its discretion if the Tentative Order ultimately fails to contain findings that explain the reasons why certain control measures and standards have been selected and others omitted. Abuse of discretion is established if "the respondent has not proceeded in the manner required by law, the order or decision is not supported by the findings, or the findings are not supported by the evidence." (Cal. Code Civ. Proc. § 1094.5(b); *see also Zuniga v. Los Angeles County Civil Serv. Comm'n* (2006) 137 Cal.App.4th 1255, 1258 (applying same statutory standard).) "Where it is claimed that the findings are not supported by the evidence, ... abuse of discretion is established if the court determines that the findings are not supported by the weight of the evidence." (*Phelps v. State Water Resources Control Bd.* (2007) 157 Cal.App.4th 89, 98-99.)

The administrative decision must be accompanied by findings that allow the court reviewing the order or decision to "bridge the analytic gap between the raw evidence and ultimate decision or order." (*Topanga Ass'n for a Scenic Cmty. v. County of Los Angeles* (1974) 11 Cal.3d 506, 515.) This requirement "serves to conduce the administrative body to draw legally relevant sub-conclusions supportive of its ultimate decision ... to facilitate orderly analysis and minimize the likelihood that the agency will randomly leap from evidence to conclusions." (*Id.* at 516.) "Absent such roadsigns, a reviewing court would be forced into unguided and resource-consuming explorations; it would have to grope through the record to determine whether some combination of credible evidentiary items which supported some line of factual and legal conclusions supported the ultimate order or decision of the agency." (*Id.* at 517 n.15.) In the case of the Tentative Order, the findings and Tentative Order Fact Sheet provide no support for the Regional Board's decision not to apply a 3% effective impervious area limitation to all regulated projects, nor any support for the Regional Board's decision to allow redevelopment projects (and other projects where onsite implementation is a concern) to comply merely with the SUSMP treatment criteria. They also do not explain or substantiate the failure to address the other issues described in this letter.

III. The Tentative Order Is Inadequate to Control Stormwater Pollution from New Development and Redevelopment and Fails to Ensure Compliance with the Maximum Extent Practicable Standard

The Tentative Order's Planning and Land Development Program section remains legally inadequate. As currently written, the Tentative Order would, as explained below, allow the implementation of relatively ineffective conventional treat-and-discharge

techniques at many development sites and is so confusingly drafted that some of its requirements are nearly impossible to discern. Moreover, it has been weakened in almost every respect from prior versions of the Permit, without any supporting documentation to demonstrate why such serial weakening is necessary. Without correction of the various problems in the Tentative Order, it cannot pass muster under the Clean Water Act.

The Planning and Land Development Program section is particularly critical for addressing the root causes of stormwater pollution, which is why we have focused significant attention in our comments here and in previous letters on these requirements. As the U.S. EPA has noted:

Most stormwater runoff is the result of the man-made hydrologic modifications that normally accompany development. The addition of impervious surfaces, soil compaction, and tree and vegetation removal result in alterations to the movement of water through the environment. As interception, evapotranspiration, and infiltration are reduced and precipitation is converted to overland flow, these modifications affect not only the characteristics of the developed site but also the watershed in which the development is located. Stormwater has been identified as one of the leading sources of pollution for all waterbody types in the United States. Furthermore, the impacts of stormwater pollution are not static; they usually increase with more development and urbanization.<sup>1</sup>

**A. The Standard of Practice in the U.S. Requires the Imposition of Low Impact Development Techniques Implemented with Clear Metrics for Development and Redevelopment Activities<sup>2</sup>**

LID has been established as a *superior and practicable* strategy and, therefore, must be required. Accordingly, the United States Environmental Protection Agency has called upon Regional Boards across California to prioritize the implementation of LID, recently threatening to “consider objecting to the [San Francisco Bay region’s] permit” if it does not include “additional, prescriptive requirements” for LID.<sup>3</sup> Along with the

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<sup>1</sup> U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at v.

<sup>2</sup> We have advocated a 3% effective impervious area (“EIA”) limitation, based on the technical work of Dr. Richard Horner. We continue to support this as the appropriate standard—however, because the Tentative Order imposes a 5% EIA limitation, we refer to the 5% standard throughout the letter.

<sup>3</sup> Letter from Douglas E. Eberhardt, EPA, to Dale Bowyer, San Francisco Bay Regional Water Quality Control Board (April 3, 2009), at 1.

prioritization of LID implementation, "EPA's primary objective for incorporating LID into renewed MS4 permits, especially for those that represent the third or fourth generation of permits regulating these discharges, is that the permit must include clear, measurable, enforceable provisions for implementation of LID.... [P]ermit[s] should [also] include a clearly defined, enforceable process for requiring off-site mitigation for projects where use of LID design elements is infeasible."<sup>4</sup> In South Orange County, EPA likewise observed that "the permit must include clear, measurable, enforceable provisions for implementation of LID.... We would not support replacing ... approaches [such as EIA] with qualitative provisions that do not include measurable goals."<sup>5</sup>

Other government agencies in California and around the U.S. have come to the same conclusions. The California Ocean Protection Council, for instance, strongly endorsed LID last year by "resolv[ing] to promote the policy that new developments and redevelopments should be designed consistent with LID principles" because "LID is a practicable and superior approach . . . to minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities."<sup>6</sup> In Washington State, the Pollution Control Hearings Board has found that LID techniques are technologically and economically feasible and must, therefore, be required in MS4 permits.<sup>7</sup> The National Academy of Sciences recently issued a comprehensive report with the same recommendation for stormwater management programs: "Municipal permittees would be required under general state regulations to make [LID] techniques top priorities for implementation in approving new developments and redevelopments, to be used unless they are formally and convincingly demonstrated to be infeasible."<sup>8</sup>

Critically, as demonstrated in the EPA comments quoted above, the prioritization of LID practices is insufficient by itself to meet the MEP standard and *must* be paired

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<sup>4</sup> *Id.* at 1-2.

<sup>5</sup> Letter from Douglas E. Eberhardt, EPA, to Michael Adackapara, Santa Ana Regional Water Quality Control Board (February 13, 2009), at 2-3.

<sup>6</sup> California Ocean Protection Council (May 15, 2008) *Resolution of the California Ocean Protection Council Regarding Low Impact Development*, at 2.

<sup>7</sup> *Puget Soundkeeper Alliance et al. v. State of Washington, Dept. of Ecology et al.* (2008) Pollution Control Hearings Board, State of Washington, No. 07-021, 07-026, 07-027, 07-028, 07-029, 07-030, 07-037, Phase I Final, at 6, 46, 57-58.

<sup>8</sup> National Academy of Sciences, Committee on Reducing Stormwater Discharge Contributions to Water Pollution, National Research Council (2008) *Urban Stormwater Management in the United States*, at 500.

with a measurable requirement for the implementation of LID. Since its inception, the MS4 permitting program has been seriously hampered by a pervasive absence of numeric performance standards for the implementation of best management practices (“BMPs”) such as LID. For this reason, in December 2007, the State Water Resources Control Board commissioned a report which found that “[t]he important concept across all of [the] approaches [described in the report] is that the regulations established a *performance requirement* to limit the volume of stormwater discharges.”<sup>9</sup> The report also noted that “[m]unicipal permits have the standard of Maximum Extent Practicable (MEP) which lends itself more naturally to specifying and enforcing a level of compliance for low impact development.”<sup>10</sup> Another study, completed for the Ocean Protection Council, recommended the following standard: “Regulated development projects shall reduce the percentage of effective impervious area to less than five percent of total project area by draining stormwater into landscaped, pervious areas.”<sup>11</sup>

While we appreciate the fact that the Tentative Order does require some implementation of LID and includes an effective impervious area limitation, which we support in concept, its requirements have been unacceptably weakened and confused, due to the wholesale insertion into this draft of pages of language drafted by the permit applicants. The Regional Board must now reassert its regulatory role and make important revisions so as to issue a permit that meets the MEP standard and complies with the Clean Water Act.

**B. The Planning and Land Development Program Section Has Been Significantly Weakened Pursuant to the Requests of the Permittees**

During the last round of comments, the Permittees submitted a redline of the Permit draft.<sup>12</sup> Nearly every one of the Planning and Land Development Program suggestions in this document has been accommodated in the Tentative Order, with the effect of severely weakening the Permit. Staff have not just accommodated conceptual criticism, they have instead adopted *verbatim* approximately 1,000 words from the

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<sup>9</sup> State Water Resources Control Board (December 2007) *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption*, at 23 (emphasis added) (hereinafter “SWRCB LID Report”).

<sup>10</sup> *Id.* at 4.

<sup>11</sup> Ocean Protection Council of California (January 2008) *State and Local Policies Encouraging or Requiring Low Impact Development in California*, at 27.

<sup>12</sup> Letter from Gerhardt Hubner, Ventura Countywide Stormwater Management Program, to Tracy Egoscue, Los Angeles Regional Water Quality Control Board (May 27, 2008), Attachment A1 (“Permittees’ redline”).

Permittees' redline of the Planning and Land Development Program section, rejecting only about 70 words of proposed changes.<sup>13</sup> These unjustified revisions have had the impact of fundamentally altering the critical LID provisions and specifically affect the following:

- The applicability of the Tentative Order's numeric performance standard for post-construction controls (5% EIA) to all projects, including redevelopment (Tentative Order ¶ 5.E.III.1(b));
- The Planning and Land Development Program section's applicability criteria, in terms of both square footage and whether only impervious surface counts toward the threshold (Tentative Order ¶ 5.E.II.1);
- Exemptions for "routine maintenance activity" (Tentative Order ¶ 5.E.II.2(b));
- The grandfather clause (Tentative Order ¶ 5.E.II.3);
- The baseline for hydromodification analysis ("pre-development" vs. "pre-project") (Tentative Order ¶ 5.E.III.2(a));
- The creation of an entirely new section that allows the Permittees to waive compliance with the hydromodification control requirements (Tentative Order ¶ 5.E.III.2(a)(2));
- The elimination of any interim hydromodification requirements for projects disturbing less than fifty acres of land (Tentative Order ¶ 5.E.III.2(a)(3)(i));
- The revision of the interim hydromodification criteria for projects over fifty acres such that meeting an Erosion Potential of 1 is no longer strictly required (Tentative Order ¶ 5.E.III.2(a)(3)(ii)); and
- The allowance for Permittees to create interim hydromodification criteria that do not have to meet any standard (Tentative Order ¶ 5.E.III.2(a)(3)(A)(4)—this section number is not consecutive and appears to be mislabeled in the Tentative Order).

The Permittees even eliminated the provisions that granted the Regional Board enforcement authority over the Planning and Land Development Program section of the

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<sup>13</sup> Compare Permittees' redline ¶ 5.E with Tentative Order ¶ 5.E.

prior draft, and Regional Board staff accepted this deletion in whole.<sup>14</sup> Some of these revisions are discussed in more detail below.

The degree to which staff apparently have not critically reviewed the Permittees' submissions (despite including them in the Permit) is evidenced by the Tentative Order's incorporation of the same typographical and syntactical errors as the Permittees' redline submission—e.g., "BMP pollutant *removal performance*,"<sup>15</sup> "[E]ach Permittee shall require *that* during the construction of a single-family home, the following measures *to be implemented*..."<sup>16</sup> These facts suggest that Regional Board staff simply accepted the Permittees' revisions *verbatim* and did not read these insertions critically. The result: the Permittees have been allowed in the Tentative Order *literally* to write vast portions of their own permit. This is a serious violation of law that undermines public confidence in the Regional Board. To the extent that the apparent delegation of regulatory duties to the permit applicants is the result of an oversight or is otherwise explained, this error must be fully corrected prior to issuance of the Permit.

Further reinforcing the self-regulation problem and lack of transparency in the permit-writing process, Regional Board staff have not—in the findings, Tentative Order Fact Sheet, or Response to Comments—provided any explanation of why weakening the Permit is necessary. Indeed, the Response to Comments never mentions the numerous ways in which the Tentative Order has been enfeebled through the incorporation of the Permittees' revisions, claiming instead in the vast majority of cases: "No changes required to address this comment." (*Compare, e.g.,* Response to Comments at 29-36 *with* the many substantive changes listed above.) In contrast, where Regional Board staff implemented some NGO suggestions for certain provisions, the Response to Comments specifically acknowledges the changes made. (Response to Comments at 36.)

Taken as a whole, the LID provisions in the Permit have been significantly changed, in virtually each instance in ways that reduce environmental protection. While we discuss many of the most important issues in separate sections below, the changes affect a wide range of key requirements. For example, at the behest of the Permittees, Regional Board staff have rewritten the applicability section, as mentioned above, such that it now will fail to ensure pollution control at a large number of development and redevelopment projects. Specifically, the Tentative Order doubled the number of square feet required for many development projects to be regulated (from 5,000 to 10,000) and now requires that only impervious surface be considered in calculating whether a project

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<sup>14</sup> *Compare* Tentative Order 08-xxx, NPDES No. CAS004002, Third Draft Ventura County MS4 Permit ¶ 5.E.IV.3 *with* Tentative Order ¶ 5.E.IV *and* Permittees' redline at 55.

<sup>15</sup> Tentative Order ¶ 5.E.IV.6(a)(1) (emphasis added); Permittees' redline at 57.

<sup>16</sup> Tentative Order ¶ 5.E.II.1(a)(11) (emphasis added); Permittees' redline at 47.

meets the threshold. (Tentative Order ¶ 5.E.II.1.) These new criteria could hardly be construed as meeting the MEP standard since both the San Francisco Bay and North Orange County Phase I MS4 permits under consideration for adoption contain more stringent applicability criteria.<sup>17</sup> Additionally, the Tentative Order sets a catchall threshold of 1 acre (now with the additional requirement of at least 10,000 square feet of impervious surface), which is, arbitrarily, far higher than the catchall threshold for the San Francisco Bay permit. (Tentative Order ¶ 5.E.II.1(a)(1).) Even though NRDC mentioned this in our previous comment letter, the Response to Comments has not provided more than a cursory and unsupported explanation of staff's reasoning.

A second specific example of how wide-ranging the weakening of the Tentative Order is involves unexplained edits to the "grandfathering" provision such that all projects that have been "deemed complete for processing" or are "without vesting tentative maps" need not comply with the permit. (Tentative Order ¶ 5.E.II.3.) This is an unjustifiably weak requirement which also compares unfavorably with approaches taken by other Regional Boards. The draft San Francisco Bay regional MS4 permit, despite its many flaws, establishes a much more appropriate threshold: development projects must have received "final, major, staff-level discretionary review and approval for adherence to applicable local, state, and federal codes and regulation[s]."<sup>18</sup> The draft North Orange County MS4 permit also surpasses the Tentative Order and requires that projects have received approval of their "Water Quality Management Plan."<sup>19</sup> The inadequate language adopted by staff is taken directly from the Permittees' redline.

**C. The Weaker Planning and Land Development Program Requirements Are Inconsistent with Evidence in the Record and the Longstanding Position of the Regional Board**

Although Regional Board staff have clarified that appropriate numeric sizing criteria must be applied to BMPs used to render impervious surfaces "ineffective," various changes in ¶ 5.E.III.1 have created considerable internal inconsistency, arbitrary distinctions between projects, and impermissibly lacking requirements for large categories of projects. These changes have weakened the Tentative Order, as discussed above, and represent a considerable shift from the prior three drafts of the permit. Of all the revisions to the Planning and Land Development Program section requested by the

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<sup>17</sup> Tentative Order R8-2009-0030, NPDES Permit No. CAS618030, Orange County Draft MS4 Permit, at 47-49; Tentative Order R2-2009-00XX, NPDES Permit No. CAS612008, San Francisco Bay Draft MS4 Permit, at 16-19.

<sup>18</sup> Tentative Order R2-2009-00XX, NPDES Permit No. CAS612008, San Francisco Bay Draft MS4 Permit, ¶ C.3.c.ii.

<sup>19</sup> Tentative Order R8-2009-0030, NPDES Permit No. CAS618030, Orange County Draft MS4 Permit, ¶ XII.J.



Permittees and implemented by Regional Board staff, as noted above, every single one applies to a provision that has remained essentially unchanged through three drafts of the permit, with the exception of the grandfather provision, which came into being in the second draft. (*Compare* First Draft, Second Draft, and Third Draft Ventura County MS4 Permit *with* Tentative Order.) This, combined with the apparent reassignment of the lead permit author who is a National Academy of Sciences-level expert on stormwater, highlights the extent to which the recent revisions to the permit are arbitrary and do not reflect the application of agency expertise. (*See, e.g., CBS Corp. v. F.C.C.* (3rd Cir. 2008) 535 F.3d 167, 188 (agency interpretation set aside because no reasoned basis for departure from prior policy was provided and agency conclusion, “even as an interpretation of its own policies and precedent, [was] ‘counter to the evidence before the agency’ and ‘so implausible that it could not be ascribed to . . . product of agency expertise.’”) ) Unfortunately, the effect of Regional Board staff’s weakening of the Tentative Order is that the many changes in the Planning and Land Development Program section are bound to lead to poorer water quality results and will not adequately address impaired waters in Ventura County, as discussed below.

1. The New Development/Redevelopment Performance Criteria Have Been Weakened So that 5% EIA Is No Longer a General Requirement that Is Subject to Waiver Only in Situations of Technical Infeasibility

The Tentative Order states that reducing effective impervious area to 5% or less is a “goal.” (Tentative Order ¶ 5.E.III.1(b).) This creates potential uncertainty regarding whether the 5% EIA limitation is, in fact, a requirement for all regulated projects, and indeed, it appears that it is *not* such a requirement since all redevelopment projects and any other development projects for which “the 5% goal is infeasible” may simply comply with the state-law-backstop SUSMP treatment criteria. (Tentative Order ¶ 5.E.III.1(b).)<sup>20</sup> Regional Board staff are essentially saying that LID techniques should not apply in redevelopment areas.<sup>21</sup> There is, however, a wealth of technical information to demonstrate that this exemption is nonsensical and vastly over-inclusive.

<sup>20</sup> It bears mention that the definition of “redevelopment” is extremely broad and could encompass sites anywhere in Ventura County that have experienced any sort of development. Indeed, the only requirement to qualify as a redevelopment site is that the site must already have been “developed,” a term which is not defined in the Tentative Order. (Tentative Order at 107.) This could include suburban areas, as well as downtown centers, so Regional Board staff cannot here legitimately claim to base this exemption on concepts of “smart growth” (which NRDC advocates) since the redevelopment of a suburban strip mall, for example, would do nothing to reduce vehicle miles traveled or to encourage denser development patterns.

<sup>21</sup> This is an especially problematic result because the Tentative Order has gutted the hydromodification section and no longer requires any hydromodification controls for

a. **Technical Studies and Other National Standards for LID Implementation in Redevelopment Areas**

A recent EPA report noted that “LID approaches can be used to reduce the impacts of *development and redevelopment* activities on water resources.”<sup>22</sup> Similarly, a study completed for the State Water Board found that retention-based standards for LID implementation (like the 5% EIA limitation) are “appropriate models” for urbanized areas where most projects will involve redevelopment.<sup>23</sup> The study went even further in recommending LID retrofits as “a critical need” for existing development.<sup>24</sup> Another study analyzed one existing redevelopment site that had implemented LID, and not only was such implementation possible, but the authors found that “[t]he LID option produced a better return on initial investment, as measured by improvements to water quality, than did investments in conventional controls.”<sup>25</sup>

The record for the Tentative Order even contains locality-specific analysis demonstrating that achieving 5% EIA is feasible for a wide range of sites in Ventura County, including a technical report by stormwater expert Dr. Richard Horner, which specifically addresses the feasibility and water quality and quantity benefits of imposing a 5% EIA limitation on development projects in Ventura County.<sup>26</sup> A recent study by

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projects under 50 acres, referring instead to “LID and/or source or treatment BMPs” as if they are adequate to address hydromodification. (Tentative Order ¶ 5.E.III.2(a)(3)(a)(i).) (This is a highly problematic assertion in the first place, as discussed below.) Yet, at the same time, the Tentative Order has also gutted the LID section of the permit by waiving the retention-based 5% EIA standard for all redevelopment projects. To the extent that this is not the result of an oversight, it resembles a “shell game” wherein one permit provision asserts that the required control elements exist in another section, but that section has been revised to delete the purported controls.

<sup>22</sup> U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at 2.

<sup>23</sup> State Water Resources Control Board (December 2007) *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption*, at 22-23.

<sup>24</sup> *Id.* at 23.

<sup>25</sup> ECONorthwest (November 2007) *The Economics of Low-Impact Development: A Literature Review*, at 14.

<sup>26</sup> R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices (“LID”) for Ventura County* (February 2007) (“Horner Report”).

consultants for the Permittees also demonstrated the feasibility of implementing LID techniques in Ventura County through a water quality volume-based standard on constrained redevelopment sites.<sup>27</sup> The Tentative Order and its supporting documents, however, fail to provide any justification for the blanket waiver of the 5% EIA standard or any explanation for why no onsite maximization and accompanying offsite mitigation are required when a project cannot implement the 5% EIA "goal" onsite, which is effectively the recommendation of the United States Environmental Protection Agency in other similar scenarios in California:

The permit should stipulate that use of these [LID] design elements must result in the onsite management of the total [water quality design storm] runoff... [T]he permit should be clear that the use of [any] conventional means ... would not be counted in determining whether projects meet the permit's LID requirements.... The permit should include a clearly defined, enforceable process for requiring off-site mitigation for projects where use of LID design elements is infeasible.<sup>28</sup>

The Tentative Order's waiver, like the other loopholes in the Planning and Land Development Program section, is not only inconsistent with technical analyses, but it is also inconsistent with prior drafts of the permit, which applied the 5% EIA standard to all regulated projects, and with other standards from around the country. In the Anacostia area of Washington, D.C., all projects must retain the first inch of rainfall onsite.<sup>29</sup> In Philadelphia, all projects must infiltrate the first inch of rainfall.<sup>30</sup> West Virginia's draft MS4 permit also requires that the first inch of rainfall be retained onsite. Additionally, Anacostia and Philadelphia face redevelopment constraints arguably much more challenging than Ventura County. Nonetheless, in all three of these jurisdictions, projects cannot receive exemptions from the onsite retention requirement unless they demonstrate

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<sup>27</sup> Geosyntec Consultants et al., *Low Impact Development Metrics in Stormwater Permitting* (January 2009). We have also attached separately a critique of this study by Dr. Horner, as well as our February 13, 2009, comment letter addressed to the Santa Ana RWQCB, which critiques this report and highlights several significant errors in its methodology and presentation—nonetheless, the report does show that implementing LID through a volume-based standard is feasible on the three case study sites.

<sup>28</sup> Letter from Douglas E. Eberhardt, EPA, to Dale Bowyer, San Francisco Bay Regional Water Quality Control Board (April 3, 2009), at 2.

<sup>29</sup> Anacostia Waterfront Corporation (June 1, 2007) Final Environmental Standards, at 16.

<sup>30</sup> City of Philadelphia, Philadelphia Stormwater Regulations § 600.5; City of Philadelphia (2006) *Philadelphia Stormwater Management Guidance Manual: Version 2.0*, at 1-1, Appendix F.4.1.

infeasibility, and in such cases, the relevant regulations call for offsite mitigation or in-lieu fee payment, as discussed below. Thus, even the most constrained redevelopment sites must achieve the same overall, watershed-wide results as other projects, even if they cannot comply with the onsite retention standards. The evidence in the record, the position of EPA, and evidence from other jurisdictions all lead to the conclusion that the Tentative Order must do the same to pass legal muster.

**b. Water Quality Detriments from the Tentative Order's Waiver of LID BMPs for Redevelopment Projects**

From the perspective of water quality, the most problematic aspect of the Tentative Order's allowance for all redevelopment projects to implement mere SUSMP treatment is that it spurns the use of LID practices, which, as highlighted above, are superior stormwater management techniques and must be included in MS4 permits.<sup>31</sup> Indeed, in the new draft of the Tentative Order, there is no requirement at all for the type of BMPs that would have to be installed at projects exempted from the EIA limitation. (Tentative Order ¶¶ 5.E.III.1(b), 5.E.III.4.) If conventional BMPs are used at redevelopment sites (which would likely be the case), water quality benefits will be severely diminished. In keeping with the observations of the ECONorthwest report quoted above, Dr. Horner demonstrated in his Ventura County-based study that using CDS units, for instance, would result in pollutant loading reductions of between 0% and 46%, whereas LID techniques would create reductions mostly in the 97% to 99% range.<sup>32</sup> This is in addition to the ancillary water supply benefits of retaining water onsite. With evidence in the record showing the widespread applicability and feasibility of LID onsite retention practices in Ventura County specifically and around the entire U.S. generally, passing the Tentative Order as drafted would be an abuse of the Regional Board's discretion. The current draft would not reduce pollution and improve water quality to the maximum extent practicable.

Overall, the Tentative Order's "New Development/Redevelopment Performance Criteria" provisions do not establish a comprehensive, numeric performance standard—they create, instead, a massive loophole for numerous projects in Ventura County, many of which would be able to comply with the 5% EIA standard onsite but are not required to by the Tentative Order. This loophole would allow the installation of poor-performing BMPs when vastly superior BMPs are available, cost-effective, and feasible for implementation. The criteria for granting an exemption from meeting the 5% EIA limitation onsite should be strictly based on technical infeasibility and not on an overbroad, blanket exemption for the very category of projects that may encompass most

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<sup>31</sup> See, e.g., Letter from Douglas E. Eberhardt, EPA, to Dale Bowyer, San Francisco Bay Regional Water Quality Control Board (April 3, 2009).

<sup>32</sup> Horner Report at 12. 16.

of the development that takes place in Ventura County in coming years. The Tentative Order must be revised to specify that 3% or less EIA is a *requirement or design standard* (not a "goal") for *all* new development and redevelopment projects, and strict infeasibility criteria, paired with an alternative compliance/offsite mitigation requirement, must be imposed. Only in this manner will the implementation of LID, and thus the improvement of water quality, be maximized.

2. Whenever the Obligation for a Project to Meet the 5% EIA Limitation Onsite Is Waived for Infeasibility, the Project Must Be Required to Provide Offsite Mitigation for any Impacts Not Addressed Onsite.

Not only will the Tentative Order, as drafted, lead to inferior water quality results compared to those that are otherwise practicably attainable, but they will continue to allow watershed-wide degradation. By gutting the 5% EIA limitation and ignoring evidence in the record that the technically-justified requirement is 3% EIA, the Tentative Order is inconsistent with evidence that, absent such control, watershed and aquatic ecosystem health will decline. Dr. Horner explained the reasoning behind this concept in his report.<sup>33</sup> The flexibility and benefits of this watershed-oriented approach are apparent: even if the implementation of retention-based BMPs on a given site might not meet the 5% EIA standard, the same positive effects can be achieved through offsite mitigation and/or in-lieu fees used to construct pollution-reducing facilities elsewhere. Thus, to meet the MEP standard, the Tentative Order must be revised so that any instances of LID infeasibility on a particular site results in mitigation offsite, a result consistent with the evidence in the record and with EPA recommendations and now implemented in a wide range of permits nationally. This can be accomplished by the Permittees either through the RPAMP provision (§ 5.E.IV.3) or through the otherwise applicable requirements of the Permit itself, such as the mitigation funding provision.

A system that allows for onsite noncompliance but requires commensurate offsite mitigation would parallel other stormwater regulations in the rest of the country. Anacostia, for instance, requires either physical offsets (at 1.5 times the volume not retained onsite) or in-lieu payments (at 2 times the cost of mitigating the volume not retained onsite).<sup>34</sup> The Philadelphia Water Department has the discretion to accept offsite mitigation that provides water quality and/or quantity control equal to or greater than the

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<sup>33</sup> Horner Report, Attachment A.

<sup>34</sup> Anacostia Waterfront Corporation (June 1, 2007) Final Environmental Standards, at 16.

onsite practices whose infeasibility has been demonstrated.<sup>35</sup> The West Virginia draft permit allows offsite mitigation in the same sewershed/watershed at a ratio of 1:1.5—at least 0.6 inches of the original volumetric obligation must still be retained onsite, however.<sup>36</sup> The same thrust guides the Tentative Order's RPAMP provision, but this requirement only comes into play if the Permittees submit and receive approval for an RPAMP.

In contrast to the standards outlined above, as currently written, the Tentative Order may allow all redevelopment projects, as well as other development projects where onsite compliance is infeasible, to avoid meeting the 5% EIA standard altogether. These provisions must be revised such that whenever a project applicant demonstrates the technical infeasibility of implementing the 5% EIA limitation onsite, the project applicant is required to implement the standard through alternative compliance measures that could take the form of offsite mitigation, in-lieu fees to pay for achieving the same retention and pollution reduction benefits in the subwatershed, or whatever else would have the watershed-wide effect of reducing EIA to 5%. The Tentative Order has already created provisions to address these various alternative compliance measures, and it already applies them to non-exempt projects. (Tentative Order ¶ 5.E.III.1(b).) Without requiring alternative compliance measures for all projects where onsite compliance is infeasible, the Tentative Order will be falling behind other parts of the country and granting unnecessary exemptions to many undeserving projects while allowing the implementation of BMPs that have been proven far less effective at pollutant removal than other available and appropriate practices.

**D. The Tentative Order's Planning and Land Development Program Provisions Do Not Meet the Clean Water Act's "Maximum Extent Practicable" Standard for Stormwater Pollution Reduction**

As discussed above, the Tentative Order represents in many regards a significant weakening of the requirements that previous drafts of the permit would have imposed. Now, unfortunately, the Tentative Order's provisions are far from legally adequate to meet the Clean Water Act's MEP standard, and they must be revised accordingly.

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<sup>35</sup> City of Philadelphia. Philadelphia Stormwater Regulations § 600.5; City of Philadelphia (2006) *Philadelphia Stormwater Management Guidance Manual: Version 2.0*, at 1-1, Appendix F.4.1.

<sup>36</sup> State of West Virginia (December 11, 2008) Department of Environmental Protection, Division of Water and Waste Management, Draft General National Pollution Discharge Elimination System Water Pollution Control Permit. NPDES Permit No. WV0116025 at 13-14.

1. The MEP Standard Requires that the Tentative Order Impose More Stringent Stormwater Control Measures and Performance Criteria

Section 402(p) of the Clean Water Act establishes the MEP standard as a requirement for pollution reduction in stormwater permits. “[T]he phrase ‘to the maximum extent practicable’ does not permit unbridled discretion. It imposes a clear duty on the agency to fulfill the statutory command to the extent that it is feasible or possible.” (*Defenders of Wildlife v. Babbitt* (D.D.C. 2001) 130 F.Supp.2d 121, 131 (internal citations omitted); *Friends of Boundary Waters Wilderness v. Thomas* (8th Cir. 1995) 53 F.3d 881, 885 (“feasible” means “physically possible”).) As one state hearing board held:

[MEP] means to the fullest degree technologically feasible for the protection of water quality, except where costs are wholly disproportionate to the potential benefits.... This standard requires more of permittees than mere compliance with water quality standards or numeric effluent limitations designed to meet such standards.... The term “maximum extent practicable” in the stormwater context implies that the mitigation measures in a stormwater permit must be more than simply adopting standard practices. This definition applies particularly in areas where standard practices are already failing to protect water quality...

(*North Carolina Wildlife Fed. Central Piedmont Group of the NC Sierra Club v. N.C. Division of Water Quality* (N.C.O.A.H. October 13, 2006) 2006 WL 3890348, Conclusions of Law 21-22 (internal citations omitted).) The North Carolina board further found that the permits in question violated the MEP standard both because commenters highlighted measures that would reduce pollution more effectively than the permits’ requirements and because other controls, such as infiltration measures, “would [also] reduce discharges more than the measures contained in the permits.” (*Id.* at Conclusions of Law 19.)

Similarly, in Ventura County, we have demonstrated that an onsite retention standard based on the effective impervious area of a site would be a technologically feasible approach that would reduce stormwater discharges and pollution far better than conventional BMPs, which are now allowed for a large class of projects under the Tentative Order.<sup>37</sup> Additionally, the Tentative Order and its supporting documents have not offered concrete evidence that a single site in Ventura County could not meet the otherwise applicable 5% EIA standard or the 3% EIA standard supported by the record. The Tentative Order also has not justified the wholesale weakening of the permit’s requirements in many other respects, as set forth above, to the significant detriment of water quality.

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<sup>37</sup> Horner Report at 9-17.

2. Other Stormwater Permits and Regulatory Documents Around the Country Have Adopted Stronger, Practicable Requirements for the Implementation of Post-Construction Stormwater BMPs

The widespread implementation of other far more stringent requirements (not to mention the technical reports that we have submitted) creates a presumption that such requirements would be practicable in Ventura County. These standards do not contain wholesale waivers for redevelopment projects and require equivalent alternative compliance where onsite compliance is infeasible, as discussed in section III.C.2 of this letter. above. The decision to waive the EIA requirement for many projects in Ventura County, with contrary examples elsewhere in the U.S. and without any technical justification for doing so or any obligation to provide equivalent offsite mitigation, evidences a disregard for the MEP standard.

**E. The Planning and Land Development Program Section Contains Many Provisions that Would Allow the Permittees, in Essence, to Regulate Themselves, a Result at Odds with Federal Law**

Permittee self-regulation and lack of direction are well-known and acknowledged problems. As EPA recently stated, "In our review of MS4 programs across our Region, we have found that it is common for permits to rely on the development of plans to achieve certain permit objectives, rather than including prescriptive requirements in the permits.... [T]he plans often result in a reliance on qualitative provisions rather than specific measurable criteria. As a result, we have found that there is often uncertainty among both the MS4 permittees and the permitting agencies as to specific permit expectations."<sup>38</sup> The Tentative Order must prevent this outcome by ensuring that the Regional Board exercises meaningful review authority over the Permittees' stormwater management programs so that they meet the MEP standard and contain the requisite "specific measurable criteria" through which permit expectations can be understood and progress toward them measured. This obligation is imposed by the Clean Water Act:

[S]torm water management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program reduces the discharge of pollutants to the maximum extent practicable.

(*Environmental Defense Center v. EPA*, 344 F.3d 832, 856 (9th Cir. 2003); *Waterkeeper Alliance*, 399 F.3d at 501-502 (discussing importance of review of management plans for concentrated animal feeding operations).) Meaningful review must mean *ensuring* that the MS4 permits are *in fact* designed to reduce pollutants in stormwater to the MEP. (33 U.S.C. § 1342(b) (States are allowed to issue NPDES permits only where, *inter alia*, the

<sup>38</sup> Letter from Douglas E. Eberhardt, EPA, to Dale Bowyer, San Francisco Bay Regional Water Quality Control Board (April 3, 2009), at 2.



state permitting programs “*apply, and insure compliance with, any applicable [effluent limitations and standards].*”) Without regulatory oversight by the Regional Board to verify that the program contains the necessary specificity to meet legal requirements, the program amounts to “impermissible self-regulation.” (*EDC, 344 F.3d at 843.*)

The Tentative Order has, *de facto*, created an impermissible self-regulatory system (1) by failing to define a large number of operative terms and, relatedly, (2) by allowing the permittees to develop key control requirements without public review. First, a large number of key terms and provisions that determine the level of control required by the development and redevelopment provisions are undefined and not susceptible to clear and common definition. These are not minor drafting issues but, rather, create uncertainty about the scope of the requirements, thereby allowing misunderstanding of the Tentative Order’s requirements and the possibility of implementation at levels that do not meet the MEP standard:

- The Tentative Order has not defined “land-disturbing activity,” yet this is a critical part of the criteria for determining when a redevelopment project is regulated.
- The Tentative Order has not defined “developed site,” yet this also is a critical part of the criteria for determining when a redevelopment project is regulated.
- Provision 5.E.III.1(d) defines how to render an impervious surface “ineffective,” but the methods outlined in this provision appear to conflict with Provisions 5.E.III.1(a) and (c)’s concepts of “percolation, infiltration, storage, or evapo-transpiration” and “infiltrate[ion] and stor[age] for beneficial reuse,” respectively, which are the acceptable methods (as NRDC supports) for reducing EIA; indeed, there is even a conflict between Provisions 5.E.III.1(a) and (c) insofar as percolation and evapotranspiration are included in one list and not in the other.
- Provision 5.E.III.1(b) mentions that “stormwater mitigation credits” may be used to meet the 5% EIA standard, but such credits are nowhere described in the Tentative Order.
- Provision 5.E.III.1(b) also states that exempt projects must meet the surface discharge requirements of 5.E.III.4, a section that does not exist in the Tentative Order (presumably, this refers to 5.E.III.3, the SUSMP treatment sizing criteria).
- The “Mitigation Funding” provision, 5.E.IV.4, requires the creation of a “management framework” for “regional or subregional solutions to storm water pollution,” but the four enumerated reasons for which such a framework is required of Permittees are never explained in the text of the Tentative

Order, and the descriptions of these four reasons leave the reader confused as to the requirements that trigger mitigation funding. This provision—and other related provisions—should be changed to reflect the necessity for offsite mitigation or in-lieu payments whenever a project cannot meet the 5% EIA limitation onsite. The other bases for mitigation funding need clarification.

In each of these respects, there is nothing to stop a Copermitee from “misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.” (*EDC*, 344 F.3d at 855.)

Second, the Tentative Order has given the Permittees discretion to develop many of the critical performance standards and BMP requirements that will apply to new development and redevelopment projects. The Tentative Order, for instance, requires the Permittees to participate in the Southern California Storm Water Monitoring Coalition’s Hydromodification Control Study, which will then become the hydromodification control requirements for Ventura County. (Tentative Order ¶ 5.E.III.2(a)(1)(E).) The Tentative Order also allows the Permittees to grant exemptions from hydromodification controls for a large set of projects—this section, as discussed, was in fact written by the Permittees and added to the permit in this draft. (Tentative Order ¶ 5.E.III.2(a)(2)(A).) The Tentative Order even enables the Permittees (in collaboration with project proponents, if they so wish) to develop their own interim hydromodification control requirements. (Tentative Order ¶ 5.E.III.2(a)(3)(A)(ii).)

Perhaps even more problematically, the Tentative Order does not require any Regional Board or public review *at all* of the many essential aspects of the Planning and Land Development Program section that have been left to the Permittees to determine. These aspects include: the abovementioned hydromodification provisions; the final hydromodification criteria to be developed by the Permittees (Tentative Order ¶ 5.E.III.2(a)(4)); the Mitigation Funding provisions (Tentative Order ¶ 5.E.III.4); and the Ventura County Technical Guidance Manual, which is to include “LID principles and specifications, including the objectives and specifications for integration of LID strategies” (Tentative Order ¶ 5.E.III.5).<sup>39</sup> These various documents and criteria are fundamentally necessary for assessing compliance with the permit, as well as the likely results of the permit’s requirements. Without subjecting them to Regional Board and public review, the Tentative Order fails to meet the requirements of federal law, as described in *EDC* and *Waterkeeper*.

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<sup>39</sup> Notably, the only provision that does require Regional Board and public review is the RPAMP provision, which has been revised pursuant to our suggestions. We appreciate this change and hope that the Regional Board will make similar, necessary revisions to the other provisions mentioned above.

**F. The Hydromodification Control Provisions Have Been Significantly Weakened in Key Respects that Fail to Protect Water Quality and Are Not Supported by Evidence in the Record**

**1. The Level of Protection Provided by the Hydromodification Control Criteria Has Been Weakened Arbitrarily and Is Not Scientifically or Technically Justifiable**

Previously, the hydromodification control criteria established the proper, scientifically defensible “pre-development” condition as the baseline for comparison. Pursuant to the Permittees’ comments, however, staff have changed this requirement to the “pre-project” condition. (Tentative Order ¶ 5.E.III.2(a).) The Tentative Order’s current standard is acceptable only for new development on land that has remained in its natural state until the time of construction, but it is wholly unacceptable for infill and redevelopment projects where the land has already been developed.

Because of the prevalence of now-antiquated stormwater management practices that focused on peak flow and not on matching discharge rates and durations, *pre-project* rates and durations for infill and redevelopment sites will almost always represent measurements that we now want to avoid. Imagine, for example, the redevelopment of a 1950s-era surface parking lot: under the Tentative Order’s standard, a developer could comply with the permit by doing essentially nothing to mitigate the effects of hydromodification—after all, a parking lot constructed in the 1950s would shunt all runoff directly to storm drains as rapidly as possible, resulting in the early, high peak flows that are at the root of the hydromodification problem. Nonetheless, under the Tentative Order, this unnatural hydrograph would be the standard against which the new project would be measured.

Instead of requiring projects not to exceed *pre-project* runoff rates and durations, the Tentative Order should require projects not to exceed *pre-development* runoff rates and durations. This will ensure that hydromodification criteria result in measurable progress and water quality benefits, rather than the institutionalization of detrimental, antiquated stormwater management practices. Technical experts have supported this type of standard. The Southern California Coastal Water Research Project, for instance, suggests that “attempting to have the post-development condition match *pre-development* runoff magnitude and duration should be an initial consideration for all circumstances.”<sup>40</sup> Dr. Horner has also recommended, for other MS4 permits, the following standard:

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<sup>40</sup> SCCWRP, *Managing Runoff to Protect Natural Streams: the Latest Developments on Investigation and Management of Hydromodification in California* (Dec. 2005), at 11 (emphasis added).

Post-development peak flow rates and volumes shall not exceed pre-development peak flow rates and volumes for all storms from the channel-forming event to the 100-year frequency stream flow.

Los Angeles County has implemented a standard of this sort: "Mimic undeveloped stormwater and urban runoff rates and volumes in any storm event up to and including the '50-year capital design storm event."<sup>41</sup>

The Tentative Order must be revised to reflect the hydromodification control baseline that was included in previous drafts of the permit. The backsliding that has taken place is ill-advised and unacceptable from the standpoint of stream ecology and geomorphology.

2. The Hydromodification Control Criteria Section Now Waives Compliance for Most Development Projects on an Interim Basis, With No Justification

As in the discussion above, Regional Board staff have heeded the suggestions of the Permittees and substantially weakened the interim hydromodification control criteria such that they are now far from meeting the MEP standard. While previous drafts of the permit imposed hydromodification requirements on projects disturbing less than 50 acres, the Tentative Order now would exempt all projects in this very large size range from hydromodification control altogether. (Tentative Order ¶ 5.E.III.2(a)(3).) Staff's apparent reasoning is that the LID and other control requirements are considered adequate to address hydromodification impacts. (*Id.*) This is an untenable proposition. First, as discussed in previous sections, LID BMPs are no longer required in the main, since they are not required for "redevelopment" projects. The hydromodification provision's reference, then, to LID BMPs when those BMPs are not required is a significant oversight, at best.

Second, even where sites do comply with the 5% EIA standard, the LID BMPs utilized for such compliance are not intended to prevent hydromodification and will not, in fact, serve that purpose. While LID BMPs, when required by the Tentative Order, may achieve some beneficial reduction in stormwater peak flows and volumes, their purpose is reducing pollution in stormwater runoff. As Dr. Mark Gold has observed, the LID approach is designed to capture and infiltrate or reuse the runoff generated by the 85<sup>th</sup> percentile storm. This approach will have negligible impact on flows generated by the 10 year, 50 year, or 100 year storms. These larger storms cause severe erosion, sedimentation and damage to riparian and wetland ecological communities. One only has to look at the sedimentation impairment of Mugu Lagoon to see a local example of the

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<sup>41</sup> Los Angeles County Department of Regional Planning, LID Ordinance (effective Jan. 1, 2009), amending Los Angeles County Code § 12.84.440.

need for a hydromodification provision that reduces peak flows during these large, intense storm conditions. The BMPs now relied on by the Tentative Order are simply not adequate or properly calibrated to allow complete exemptions from controlling adverse hydromodification on sites as large as 50 acres, especially since the Tentative Order, as mentioned above, does not even require many projects to meet more than the basic SUSMP treatment standards.

Nowhere else in the state are projects up to 50 acres in size exempted from hydromodification control criteria, as now proposed for Ventura County.<sup>42</sup> This very misguided revision in the Tentative Order must be reversed and a range of larger storms must be considered, as noted above, or else the threshold for exemption in Provision 5.E.III.2(a)(3)(A)(i) must be lowered by several orders of magnitude. Currently, the Tentative Order requires far less than MEP in this arena.

#### **IV. The Tentative Order Fails to State Explicitly that Waste Load Allocations from Applicable TMDLs Must be Enforceable Permit Limitations**

TMDLs establish WLAs—or the maximum amount of a pollutant that each point source discharger may release into a particular waterway—that constitute a form of water quality-based effluent limitation. (See 33 U.S.C. 1313(d)(4)(A); 40 C.F.R. § 130.2.) Once a TMDL has been adopted, NPDES permits are required to include WLAs and contain effluent limitations and conditions consistent with the assumptions and requirements of the TMDL from which they are derived. (40 C.F.R. § 122.44(d)(1)(vii)(B).)

The Tentative Order incorporates numeric WLAs for TMDLs applicable to the permittees in Part 6.V. Under Finding E.15, the Tentative Order identifies eight separate TMDLs that “have been or will be incorporated into the Basin Plan within the term of the Order.” (Tentative Order finding E.15.) TMDLs currently in effect in some Ventura County waters include those for toxicity, chlorpyrifos, and diazinon, for metals and selenium, and for organochlorine pesticides, PCBs and siltation in Calleguas Creek, its tributaries, and Mugu Lagoon; for trash in Revolon Slough and Beardsley Wash; and for bacteria in harbor beaches of Ventura County. (See Tentative Order ¶¶ 6.V.1 through 6.V.8.)

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<sup>42</sup> Tentative Order No. R8-2009-0030, NPDES Permit No. CAS618030, Orange County Draft MS4 Permit, ¶ XII.D; Order No. R9-2007-0001, NPDES No. CAS0108758, San Diego County MS4 Permit, ¶ D.1.g; Tentative Order R2-2009-00XX, NPDES Permit No. CAS612008, San Francisco Bay Draft MS4 Permit, ¶ C.3.g; Tentative Order No. R9-2009-0002, NPDES No. CAS0108740, South Orange County Draft MS4 Permit, ¶ F.1.h.; Los Angeles County Department of Regional Planning, LID Ordinance (effective Jan. 1, 2009), amending Los Angeles County Code § 12.84.

While the Tentative Order repeatedly states that it “incorporates provisions to assure that Ventura County MS4 permittees comply with WLAs and other requirements of TMDLs covering impaired waters impacted by the permittees’ discharges” (Tentative Order ¶ 6.I),<sup>43</sup> it seems to allow Permittees to “attain the storm water WLAs . . . by implementing BMPs in accordance with the MS4 effluent quality workplan and source identification approved by the Executive Officer.” (Tentative Order ¶ 6.II.) This appears to be a requirement not fully consistent with the basic requirement that a permit must assure the imposition of adopted WLAs and compliance therewith as a basic and clearly stated condition of the permit.

Further, while the Regional Board may view implementation of BMPs as a means of achieving WLAs, U.S. EPA policy requires that a permit “demonstrate that the BMPs are expected to be sufficient to comply with the WLAs.”<sup>44</sup> There is nothing in the Tentative Order or its supporting documents to demonstrate that the management practices it requires will result in compliance with the WLAs, or even that the practices were designed to do so or to address specific pollutants of concern.<sup>45</sup> Hence, even if the Regional Board means to require only compliance with specified management practices as a means of meeting a WLA (which we contend is a degree of separation that is flatly unlawful), it could in any case only do so based on evidence that it has not referenced and that does not exist regarding the expected control efficacy of the specifically required BMPs.

For example, the Tentative Order’s implementation of the TMDL for Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation for Calleguas Creek, its Tributaries, and Mugu Lagoon states only vaguely that Permittees “shall implement BMPs to achieve the interim WLAs” identified in the Tentative Order, and then requires only compliance monitoring, creation of a “Pesticide Collection

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<sup>43</sup> See also, Tentative Order finding F.2 (where adopted, “this Order requires Permittees to implement controls to achieve the WLAs within the compliance schedule provided in the TMDLs”); finding D.5 (“This Order incorporates applicable WLAs that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA. The TMDL WLAs in the Order are expressed as water quality-based effluent limits in a manner consistent with the assumptions and requirements of the TMDL from which they are derived.”)

<sup>44</sup> Letter from Douglas E. Eberhardt, U.S. EPA, to Dale Bowyer, San Francisco Regional Water Quality Control Board (April 3, 2009), at 6.

<sup>45</sup> To the extent that the Tentative Order intends to condition implementation of BMPs on meeting requirements of previously adopted TMDL workplans, the workplans are not incorporated in the Order, nor are they readily available for review on the Los Angeles Regional Board’s website.

Program,” and performance of a series of future studies targeted at the pollutants addressed by the TMDL. (Tentative Order ¶ 6.V.3.) The specific implementation provisions for the TMDL for Bacteria in Harbor Beaches of Ventura County require even less since, while compliance monitoring must be conducted by the permittees, “compliance with the TMDL may be either through structural and non-structural BMPs or implementation of other measures,” and “[s]pecial studies are not required . . . though conducting special studies is within the discretion of the responsible parties.” (Tentative Order ¶ 6.V.8.) For both TMDLs, the Permit requires only the use of further BMPs in the event that WLAs are not achieved, stating “[i]f any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports Implementation Plans or as identified in the Basin Plan Amendment.” The Permit must state that compliance with the WLAs is required. (Tentative Order ¶ 6.V.3.(b)(2); ¶ 6.V.8.(b)(2).)

The U.S. EPA has noted that, “given the uncertainties in the performance of many of the BMPs commonly used for stormwater pollution control, it is often difficult to make . . . a determination” that selected BMPs will comply with WLAs.<sup>46</sup> The Tentative Order, in setting out a program of poorly defined requirements for TMDL implementation, does not demonstrate that BMPs to be implemented by the Permittees will achieve such compliance. Thus, the Tentative Order must be revised to state explicitly that implementation of BMPs does not in itself constitute compliance with WLAs. Effectively, the Order should “explicitly state that the wasteload allocations (WLAs) established by . . . TMDLs are intended to be enforceable permit effluent limitations and that compliance is a permit requirement.”<sup>47</sup> The Tentative Order fails to meet this obligation, and should be revised accordingly.

**V. The Tentative Order Allows the Discharge of Pollutants from New Dischargers and Sources**

Approval of the Tentative Order will authorize the discharge of pollutants to impaired water bodies from “new sources” or “new dischargers” in violation of the CWA’s implementing regulations. 40 C.F.R. § 122.4(i) explicitly prohibits discharges from these sources, stating that:

No permit may be issued:

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<sup>46</sup> Letter from Douglas E. Eberhardt, U.S. EPA, to Dale Bowyer, San Francisco Regional Water Quality Control Board (April 3, 2009), at 6.

<sup>47</sup> Letter from Douglas E. Eberhardt, EPA, to Michael Adackapara, Santa Ana Regional Water Quality Control Board (February 13, 2009), at 3.

... (i) To a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards. The owner or operator of a new source or new discharger proposing to discharge into a water segment which does not meet applicable water quality standards or is not expected to meet those standards ... and for which the State or interstate agency has performed a pollutants load allocation for the pollutant to be discharged, must demonstrate, before the close of the public comment period, that:

(1) There are sufficient remaining pollutant load allocations to allow for the discharge; and

(2) The existing dischargers into that segment are subject to compliance schedules designed to bring the segment into compliance with applicable water quality standards.

(40 C.F.R. § 122.4(i).) Under 40 C.F.R. § 122.2, a “new discharger” is defined as “any building, structure, facility, or installation: (a) From which there is or may be a ‘discharge of pollutants;’ . . . (c) Which is not a ‘new source;’ and (d) Which has never received a finally effective NPDES permit for discharges at that ‘site.’” (40 C.F.R. § 122.2.) A “new source” is defined as “any building, structure, facility, or installation from which there is or may be a ‘discharge of pollutants . . .’” that may be subject to applicable standards of performance under section 306 of the Clean Water Act. (40 C.F.R. § 122.2.) Thus, the Tentative Order may not authorize the development or redevelopment of any building or structure, including, without limitation, a new subdivision, industrial facility, or commercial structure, within the Permittees’ jurisdiction, if runoff from the new discharge adds any pollutant to discharges from the MS4 that “will cause or contribute to the violation of water quality standards” for a water body impaired for that pollutant. Furthermore, the applicant for the permit must prove the availability of any exception to this provision, as set forth above.

In *Friends of Pinto Creek v. U.S. E.P.A.*, the Ninth Circuit Court of Appeals vacated an NPDES permit issued by the U.S. EPA to a new discharger on the grounds that the Permittees’ “discharge of dissolved copper into a waterway that is already impaired by an excess of the copper pollutant” would violate the CWA. ((9th Cir. 2007) 504 F.3d 1007, 1011.) Citing 40 C.F.R. § 122.4(i), the court stated that “The plain language of the first sentence of the regulation is very clear that no permit may be issued to a new discharger if the discharge will contribute to the violation of water quality standards.” (*Id.* at 1012.) The court noted that a single exception to this rule exists where a TMDL has been performed, and the “new source can demonstrate that, under the TMDL, the plan is designed to bring the waters into compliance with applicable water quality standards.” (*Id.*) Thus, where no TMDL has been completed for a specified water body and pollutant, new discharges that add pollutants that will cause or contribute to a violation of water quality standards are prohibited absolutely. Additionally, the court



in *Friends of Pinto Creek* observed that unless a TMDL explicitly provides that existing discharges into the impaired water body are "subject to *compliance schedules* designed to bring the segment into compliance with applicable water quality standards," issuance of a permit for new discharge is also prohibited under 40 C.F.R. § 122.4(i). (*Id.* at 1013.) In effect, a permit for new discharges may not be issued, even when a TMDL for the relevant pollutant exists, unless it firmly establishes that "there are sufficient remaining pollutant load allocations under existing circumstances." (*Id.* at 1012.)

For the reasons set forth, under the holding of *Friends of Pinto Creek*, the Regional Board is prohibited from approving a permit that allows new sources or dischargers of any pollutant to waterbodies already impaired by that pollutant, unless the Tentative Order demonstrates that an existing TMDL specifically provides sufficient waste load allocations for the discharge.

As of 2002, there were "in excess of 160" waterbodies that exceeded water quality standards for at least one pollutant within the jurisdiction of the Los Angeles Regional Board.<sup>48</sup> Many of these are located in jurisdictions and municipalities covered by the Tentative Order.<sup>49</sup> Water bodies within the Permittees' jurisdictions are impaired for, among other pollutants, PCBs, bacteria, nutrients, pesticides, and metals.<sup>50</sup> The Tentative Order acknowledges that "Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California," (Tentative Order finding B.3), and under finding B.1, states that "[b]ased on the Ventura Countywide Storm Water Monitoring Program's Water Quality Monitoring Reports . . . the dry weather and wet weather Pollutants of Concern (POC) in urban stormwater include an anion, bacteria, conventional pollutants, metals, a nutrient, organic compounds, and pesticides . . . Many of the POC listed are causing impairments identified on the federal Clean Water Act (CWA) § 303(d) list of impaired waterbodies." (Tentative Order finding B.1.)<sup>51</sup>

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<sup>48</sup> Los Angeles Regional Water Quality Control Board (December 2002) Draft Strategy for Developing TMDLs and Attaining Water Quality Standards in the Los Angeles Region, at 3.

[http://www.swrcb.ca.gov/rwqcb4/water\\_issues/programs/tmdl/02\\_1210\\_strategy%20121002.pdf](http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/tmdl/02_1210_strategy%20121002.pdf).

<sup>49</sup> See 2006 CWA Section 303(d) List of Water Quality Limited Segments. For example, in addition to the eight TMDLs identified in the Permit for Ventura MS4 permittees, the Ventura River and Ventura River Estuary are identified as impaired for algae, Calleguas Creek is identified as impaired for fecal coliform, and the Santa Clara River is identified as impaired for toxicity, bacteria, pesticides, chlorpyrifos and diazinon.

<sup>50</sup> *Id.*

<sup>51</sup> The Permit characterizes stormwater runoff generally under finding B.2., stating that

The Tentative Order Fact Sheet further elaborates on these concerns, stating that “[t]he water quality monitoring data submitted by the Ventura MS4 Permittees (Annual Monitoring Report 04-05) reveal that a number of constituents, such as metals, PAHs, [and] pesticides exceeded the receiving water quality standards during wet events.” (Tentative Order Fact Sheet at 27.) The 2008 Annual Monitoring Report for the Ventura MS4 Permittees stated that “[e]levated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events,” and at certain mass emission stations “during one or more dry weather events.”<sup>52</sup> The 2008 Annual Report identified “[c]onstituent concentrations above Los Angeles Region Basin Plan, California Toxics Rule, and/or California Ocean Plan water quality objectives” for pollutants including bacteria, metals, nutrients, PAHs and other organic compounds, PCBs and pesticides. (2008 Annual Report at 9-3 – 9-5.) The 2004-2005 Annual Report demonstrated that samples from land use monitoring sites specifically “designed to characterize stormwater discharges”<sup>53</sup> contained the same list of pollutants.<sup>54</sup> The adopted Basin Plan Amendment for the Calleguas Creek Watershed Metals TMDL specifically identifies urban runoff as a “significant source[] of metals and selenium.”<sup>55</sup>

These findings are further borne out by research that has consistently “identified stormwater runoff as a major contributor to water quality degradation in urbanizing watersheds.”<sup>56</sup> Studies have repeatedly shown that “[s]tormwater runoff typically

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“Common pollutants in urban storm water and their respective sources are: bacteria from animal droppings and illegal discharges; Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications and from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints and automotive parts; copper from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; and dioxins as products of combustion.” (Tentative Order finding B.2.)

<sup>52</sup> 2008 Annual Report at 9-3.

<sup>53</sup> 2008 Water Quality Monitoring Report at 2.

<sup>54</sup> 2004-2005 Annual Report at 9-5 – 9-6.

<sup>55</sup> Calleguas Metals TMDL at 4.

<sup>56</sup> Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*. North American Lake Management Society, at 3-46.

contains dozens of pollutants that are detectable at some concentration," including "sediment, nutrients, metals, hydrocarbons, bacteria and pathogens, organic carbon, MTBE, pesticides, and deicers."<sup>57</sup> In particular, studies show that "zinc, copper and cadmium pollution [were] found in urban runoff,"<sup>58</sup> that "[m]icrobial pollution" such as bacteria, protozoa, and viruses "is almost always found in stormwater runoff,"<sup>59</sup> that "cars and other vehicles contributed 75 percent of the total copper load to the lower San Francisco Bay through runoff,"<sup>60</sup> and that "insecticides such as diazinon and malathion were commonly found in surface water and stormwater in urban areas ... with urban runoff being the primary transport mechanism into urban streams."<sup>61</sup>

New discharges will only increase the mass of these pollutants entering impaired receiving waters. In fact, the Tentative Order explicitly acknowledges that "[d]evelopment and urbanization increase pollutant loads," and that "urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants." (Tentative Order finding B.16.) These conclusions are echoed by the U.S. EPA, which states that "the impacts of stormwater pollution are not static; they usually increase with more development and urbanization."<sup>62</sup>

There are water bodies in Ventura County identified by the Regional Board and U.S. EPA as impaired by pollutants including bacteria, nutrients, pesticides, PCBs and selenium, for which no TMDL has been adopted. Any new discharge of these pollutants to such a water body resulting from increased urbanization would violate the terms of 40 C.F.R. § 122.4(i) and the court's holding in *Friends of Pinto Creek*. Such discharges must be prohibited.

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<sup>57</sup> Center for Watershed Protection (March 2003) *Impacts of Impervious Cover on Aquatic Systems*, at 55.

<sup>58</sup> Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-48.

<sup>59</sup> *Id.* at 3-49.

<sup>60</sup> NRDC, *Stormwater Strategies: Community Responses to Runoff Pollution*, at Chapter 2, available at <http://www.nrdc.org/water/pollution/storm/stoinx.asp>.

<sup>61</sup> Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-54.

<sup>62</sup> U.S. Environmental Protection Agency (December 2007) *Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices*, at v.

Even where TMDLs have been adopted and are in effect for the Ventura MS4 Permittees, following the court's holding in *Friends of Pinto Creek*, a permit allowing new dischargers or sources of pollutants could be approved and issued only in the event that the applicable TMDL explicitly establishes that (1) existing discharges into the impaired water body are "subject to *compliance schedules* designed to bring the segment into compliance with applicable water quality standards," and (2) additional allocations are available for the specified water body. (*Friends of Pinto Creek*, 504 F.3d at 1013.) As the Tentative Order identifies, eight individual TMDLs "have been or will be incorporated into the Basin Plan within the term of the Order," including TMDLs for toxicity, chlorpyrifos, and diazinon, for metals and selenium, and for organochlorine pesticides, PCBs and siltation in Calleguas Creek, its tributaries, and Mugu Lagoon; for trash in Revolon Slough and Beardsley Wash; and for bacteria in harbor beaches of Ventura County. (See Tentative Order ¶¶ 6.V.1 through 6.V.8) However, the Tentative Order does not establish that additional allocations for pollutants addressed by these TMDLs exist and are available. As a result, new discharges to a waterbody impaired for these pollutants, or for any other contaminant for which a TMDL has been established, are prohibited and there is no authority for the Regional Board to issue the Tentative Order. In order to be lawful, the Tentative Order must establish measures to ensure that stormwater discharges, from existing or future sources, do not cause or contribute to such impairments, and the Tentative Order has not done so.

We stress that these concerns highlight the problems created by the Regional Board's weakening of key provisions of the Tentative Order pertaining to implementation of controls on stormwater. In order to ensure compliance with WLAs established by applicable TMDLs, the Tentative Order must require LID techniques to be implemented with clear performance metrics for both new development and redevelopment, including the imposition of a 3% EIA standard. The Tentative Order must further place strict limitations on the use of waivers or alternative compliance measures for addressing stormwater control. Mandating the proper implementation of LID practices is a critical means of ensuring that runoff from new sources or dischargers will not contribute additional pollutants to an impaired waterbody, and the Tentative Order must be revised to ensure that these practices are not rendered ineffectual.

**VI. The Tentative Order Fails to Include Provisions that Effectively Prohibit all Non-Stormwater Discharges, as Required by the Clean Water Act**

**A. The Tentative Order Is Inconsistent with the Clean Water Act and Regulations**

Federal law requires that MS4 permits "shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers." (33 U.S.C. § 1342(p)(3)(B)(ii).) However, the Tentative Order and Tentative Order Fact Sheet state that "the federal regulations . . . included a list of specific non-storm water discharges that 'need not be prohibited.'" (Tentative Order Fact Sheet at 15.) This exception violates

the clear language of the CWA and its implementing regulations. Section 402(p)(3)(B)(ii) of the CWA requires that permits for discharge from municipal sewers “effectively prohibit non-stormwater discharges,” 33 U.S.C. § 1342(p)(3)(B)(ii), and does not create any authorization for exemption of such discharges.

The Tentative Order states that “[t]he Permittees shall, within their respective jurisdictions, effectively prohibit non-storm discharges into the MS4 and watercourses, except where such discharges . . . (b) Are covered by a separate individual or general NPDES permit, or conditional waiver for irrigated lands; or (c) Fall within one of the categories [identified in the Tentative Order], are not a source of pollutants that exceed water quality standards, and meet all conditions where specified by the Regional Water Board Executive Officer.” (Tentative Order ¶ 1.A.1.) However, section 402(p) places a clear, mandatory duty on the Permittee to prohibit non-stormwater discharges to the MS4 system. The Permittee, or Regional Board, has no discretion to deviate from this requirement. In ascertaining the meaning of a statute, construction must begin with the text. (*Duncan v. Walker* (2001) 533 U.S. 167, 172.) “If there is no ambiguity, then we presume the lawmakers meant what they said, and the plain meaning of the language governs.” (*Day v. City of Fontana* (2001) 25 Cal.4th 268, 272.) There is no ambiguity present in the CWA’s requirement that a permit “effectively prohibit nonstormwater discharges,” and the Tentative Order’s provision of categorical exceptions stands in clear violation of its terms.

Further, the Tentative Order’s attempt to allow exemptions from the prohibition against non-stormwater discharges to MS4 systems is not supported by the CWA’s implementing regulations under 40 C.F.R. § 122.26(d)(2)(iv)(B)(1), as the Tentative Order Fact Sheet implies. This provision states the circumstances under which the Permittee must specifically design a program to prevent certain illicit discharges: “the following category of non-storm water discharges or flows shall be addressed where such discharges are identified by the municipality as sources of pollutants to waters of the United States.” The cited regulation, providing for an enforcement program to “prevent illicit discharges,” does not support the construction, seemingly implemented by the Tentative Order, that such non-stormwater discharges “need not be prohibited.” (Tentative Order Fact Sheet at 15.) Even if the regulations did allow some conditional exemption, they do not provide that non-stormwater discharges are permissible when they fall into a specified category and “are not a source of pollutants *that exceed water quality standards.*” (Tentative Order ¶ 1.A.1(c) (emphasis added).) The regulations explicitly state that the identified non-stormwater discharges “shall be addressed where such discharges are identified by the municipality *as sources of pollutants to waters of the United States*” in any quantity, whether or not they result in the exceedence of water quality standards. (40 C.F.R. 122.26(d)(2)(iv)(B)(1).)

Indeed, the interpretation adopted in the Tentative Order, allowing for categorical exemptions for non-stormwater discharges, is not found in the plain language of the regulation, and both the Tentative Order and staff’s gloss place the regulations in direct

conflict with the overlying statute. As written, the entire scheme in the Tentative Order is inconsistent with both the regulations and the statute that they purport to implement.

**B. The Tentative Order Is Also Inconsistent with Facts in the Record**

Even if the Tentative Order's non-stormwater scheme were conceptually lawful, the exemptions provided are unsupported because they contradict facts in the record evidencing the pernicious water quality impacts of some of the exempted discharges and fail to impose controls adequate to ameliorate those impacts. Of particular concern is the Tentative Order's exemption of "reclaimed and potable landscape irrigation runoff" even though pollutants from these sources are a known, significant source of impairment to waters in the Ventura region. A finding that these discharges are "not [] sources of pollutants to receiving waters," as required under 40 C.F.R. 122.26(d)(2)(iv)(B)(1), simply has not been and cannot be made here, as it would be inconsistent with facts in the record.

First, "a non-source of pollutants" finding would stand contrary to extensive research that has proved the opposite: studies have consistently shown that non-stormwater discharges from irrigation water or lawn water are a significant source of pollutants for which Ventura area waters are impaired. As the Calleguas Creek OC Pesticides & PCBs TMDL duly notes, "[u]rban runoff" is a "source[] of OC pesticides."<sup>63</sup> Though many of the listed pesticides have been banned, urban growth and use still remain a source of pesticide pollution and related toxicity. Further, garden use has been identified generally as one of the main sources of pesticides found in urban streams.<sup>64</sup> Lawns have further been identified as a "hot spot" for nutrient contamination in urban watersheds—lawns "contribute greater concentrations of Total N, Total P and dissolved phosphorus than other urban source areas ... source research suggests that nutrient concentrations in lawn runoff can be as much as four times greater than other urban sources such as streets, rooftops or driveways."<sup>65</sup> Thus, any claim that irrigation water is unequivocally not a source of pollutants to receiving waters cannot be sustained, and this exemption should be removed from the Tentative Order.

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<sup>63</sup> Calleguas Creek Pesticides TMDL, at 4.

<sup>64</sup> Earl Shaver et al. (2007) *Fundamentals of Urban Runoff Management: Technical and Institutional Issues*, North American Lake Management Society, at 3-54.

<sup>65</sup> Center for Watershed Protection (March 2003) *Impacts of Impervious Cover on Aquatic Systems* at 69; See also, H.S. Garn (2002) *Effects of lawn fertilizer on nutrient concentration in runoff from lakeshore lawns, Lauderdale Lakes, Wisconsin*. U.S. Geological Survey Water-Resources Investigations Report 02-4130. In an investigation of runoff from lawns in Wisconsin, runoff from fertilized lawns contained elevated concentrations of phosphorous and dissolved phosphorous.

Second, to the extent that the Tentative Order purports to allow the implementation of BMPs as a means of authorizing the conditional exemption of potentially, or in fact actually, polluted irrigation water,<sup>66</sup> there has been no showing that the BMPs required by the Tentative Order under Part 1.A., Table 1, are sufficient to meet the regulatory requirements of the CWA. The requirements of this section, such as the requirement that Permittees “[i]mplement conservation programs to minimize this type of discharge by using less water” (Tentative Order, ¶ 1.A., Table 1), are vague and fail to set out any measurable requirement, further underscoring that these provisions are not tantamount to actions that will result in non-stormwater irrigation flows free of pollutants as required under 40 C.F.R. § 122.26(d). Indeed, they echo proposals that have been introduced in previous permits throughout California and that have been tried—and failed—to prevent impacts to receiving waters from irrigation runoff.<sup>67</sup>

In total, the Tentative Order’s approach does not uphold the CWA’s mandate that Permittees “effectively prohibit non-stormwater discharges into the storm sewers.” (33 U.S.C. § 1342(p)(3)(B)(ii).) Given the overwhelming evidence that pollution from pesticides, nutrients, and other contaminants constitutes a serious and ongoing problem in receiving waters under the jurisdiction of the Permittees, the conditional exemption of irrigation or lawn watering from prohibitions against non-stormwater discharge violates the clear requirements of the CWA and its implementing regulations. As with our comments in Section III, we underscore that these concerns emphasize the need for LID-based, onsite stormwater retention requirements, since these approaches will reduce non-stormwater runoff from new development to zero when properly implemented.

#### **VII. The Permit Application Is Incomplete for Failure to Include an Assessment of Controls**

A permit application for discharge from a large- or medium-sized MS4 must contain an assessment of controls, including “[e]stimated reductions in loadings of pollutants from discharges of municipal storm sewer constituents from municipal storm sewer systems expected as the result of the municipal storm water quality management

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<sup>66</sup> The Tentative Order states that it “incorporates BMPs to ensure that authorized Non-Storm Water Discharges are not a source of pollutants to the MS4.” (Tentative Order finding F.18.)

<sup>67</sup> Order No. 00-108, NPDES Permit No. CAS004002, Ventura County MS4 Permit; *see also*, Letter from Douglas E. Eberhardt, U.S. EPA, to Dale Bowyer, San Francisco Regional Water Quality Control Board (April 3, 2009), at 6 (EPA has recently acknowledged that there are significant “uncertainties in the performance of many of the BMPs commonly used for stormwater pollution control,” which make it difficult to determine that BMPs will achieve compliance with WLAs or other standards.)

program.” (40 C.F.R. § 122.26(d)(2)(v).) While the Permit explicitly states that “[t]he Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by Permittees will meet the requirements of the federal NPDES regulations at 40 CFR 122.26,” (Tentative Order finding C.4.), neither the application, the Tentative Order, the Tentative Order Fact Sheet, nor other supporting documents include any required information or other discussion of the amount of pollution that will be reduced through its controls. The approval of the Tentative Order without this information fundamentally violates basic precepts of administrative procedure, not only because required evidence in the record is lacking, but also because the findings and related subfindings in the record are therefore devoid of necessary guideposts as to why and how provisions were included or rejected. The Tentative Order does not provide sufficient evidence to demonstrate that the management practices included in the Tentative Order are adequate to meet relevant requirements and water quality standards.

The U.S. EPA has previously released guidance purporting to “allow[] permitting authorities to develop flexible reapplication requirements that are site-specific.” (61 F.R. 41698.) However, nothing in the CWA’s implementing regulations permits such flexibility, and this or other guidance cannot reduce or remove the regulatory requirement that the Tentative Order include estimated reductions in pollutant loadings. It is axiomatic that where agency guidance is inconsistent with an unambiguous statutory scheme or its enabling regulations, the regulations must govern. (*See, e.g., Christensen v. Harris County* (2000) 529 U.S. 576, 588 (“To defer to the agency’s position would be to permit the agency, under the guise of interpreting a regulation, to create *de facto* a new regulation”); *Davis v. Florida Power & Light Co.* (11th Cir. 2000) 205 F.3d 1301, 1307 (rejecting agency policy guidance as inconsistent with its overlying statutory scheme).) In order for the Tentative Order application to meet the requirements of the CWA, the Tentative Order must include an estimate of the pollutant load reduction that it is expected to achieve.

Even if the guidance were not in direct conflict with the regulations, the guidance does not in itself specifically exempt permits from including this information. The guidance states that “as a practical matter, *most* first-time permit application requirements are unnecessary for purposes of second round MS4 permit application;” it does not state that all such information is unconditionally unnecessary. (61 F.R. 41698 (emphasis added).) The omitted pollutant reduction estimates represent a fundamentally different type of information from that required by *most* of the other provisions of 40 C.F.R. § 122.26(d)(2), such as identifying already identified “major outfalls,” for which repeating the exercise “would be needlessly redundant,” especially “where it has already been provided and has not changed.” (61 F.R. 41698.) Instead, the required pollutant load reduction estimates are self-evidently relevant to crafting and assessing the core requirements of the new permit. Such estimates are an essential means of determining whether or not the permit will ensure that water quality standards will be met and what improvements can be expected; they are not merely an administrative detail that has no effect on the permit’s functionality. Tellingly, these estimates are not found in the Report



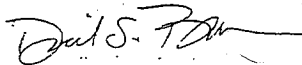
of Waste Discharge cited to in the Tentative Order as "partially complete" in their application process "under the reapplication policy for MS4s issued by the United States Environmental Protection Agency . . . (61 Fed. Reg: 41697)." (Tentative Order findings C.3-4.)

The missing information is further indispensable when, as here, the Tentative Order and the provisions included in it represent not only a substantial change from the previously adopted permit,<sup>68</sup> but also a substantially weakened version in comparison to prior drafts of the current Tentative Order. Given changes from both the prior Permit and prior drafts of this Tentative Order, the necessity of basing the Tentative Order on information about its estimated efficacy should be clear. The Tentative Order and application must be revised to include the required estimates.

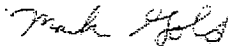
### XIII. Conclusion

For the many aforementioned reasons, the Tentative Order fails to meet the Clean Water Act's requirements and needs revision. We urge the Regional Board to improve the Tentative Order and provide staff with clear direction on the numerous modifications that are necessary, as discussed above.

Sincerely,



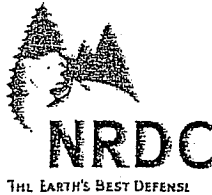
David S. Beckman  
Bart Lounsbury  
Noah Garrison  
Natural Resources Defense Council



Mark Gold  
Kirsten James  
Heal the Bay

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<sup>68</sup> Order No. 00-108, NPDES Permit No. CAS004002, Ventura County MS4 Permit.



RECEIVED

2009 APR 10 10:39 AM NATURAL RESOURCES DEFENSE COUNCIL

February 13, 2009

*Via U.S. Mail and electronic mail*

Ms. Carole H. Beswick and Members of the Board  
Santa Ana Regional Water Quality Control Board  
3737 Main Street, Suite 500  
Riverside, CA 92501-3348

**Re: Draft NPDES Stormwater Permit for the County of Orange, Tentative Order No. R8-2008-0030**

Dear Chair Beswick and Members of the Board:

We write on behalf of the Natural Resources Defense Council (“NRDC”) and Orange County Coastkeeper (“Coastkeeper”). NRDC is a national environmental advocacy organization with over 120,000 members in California and has been involved in MS4 permit matters across the state, with a focus on the implementation of low-impact development (“LID”) practices. Coastkeeper is a grassroots environmental organization with 17,000 members in the region, a decade’s worth of successful projects that have improved water quality, and a record of collaboration in developing solutions to the impacts of water pollution. As a general matter, we strongly support LID because it is the most effective means of addressing the water quality and quantity problems associated with urban runoff. LID practices seek to replicate pre-development hydrology through the deployment of measures that infiltrate or capture water onsite, thereby significantly reducing the amount of water and water-borne pollutants that drain from developed areas. Since urban runoff is the single greatest contributor to water pollution in California, widespread implementation of LID is vital to the health of our state’s renowned ecosystems.

We believe that LID techniques are required by the Clean Water Act’s “maximum extent practicable” (“MEP”) standard for pollution reduction because of their practicability, low cost, and superior performance relative to conventional BMPs. Additionally, LID practices generate significant ancillary benefits—such as cost savings, reduced need for imported water, and improved aesthetics—for developers, building owners, and city residents. For all of these reasons, we support the Santa Ana Regional Water Quality Control Board’s inclusion of LID practices in the Draft MS4 Permit (“Permit”) for the County of Orange, Orange County Flood Control District, and the Incorporated Cities of Orange County within the Santa Ana Region (Order No. R8-2008-0030; NPDES No. CAS618030).

NRDC has investigated the practicability of including specific, numeric metrics to guide LID implementation in MS4 permits in California. Working with national

storm water expert, Dr. Richard Horner, we have verified the feasibility of using the type of clear and transparent metrics that are appropriate for permits—and supported by EPA Region IX—to guide LID implementation. We have also quantified the range of pollution and water supply benefits that would accompany the use of these metrics in permits. The results of this California-focused technical work show that LID is a robust, pollution-reducing, water-supply enhancer. It is extremely cost-effective, as well, according to recent EPA evaluations.<sup>1</sup>

We have divided our comments into three sections that discuss:

- (1) The necessity for LID implementation through a numeric performance standard that is transparent and enforceable and represents the level of compliance required to meet the MEP standard;
- (2) Areas in which the Permit needs revision to clarify its requirements; and
- (3) Recent expert analyses of the feasibility of implementing LID features through the type of numeric performance standard established in the Permit.

#### I. LID Implementation and Numeric Performance Standards

There is an emergent consensus nationwide that LID practices are the most effective stormwater management techniques, besides providing many other benefits, such as reducing the need for imported water, increasing property values, mitigating the urban heat island effect, and creating aesthetically pleasing landscapes. In California, the Ocean Protection Council, for instance, strongly endorsed LID last year by “resolv[ing] to promote the policy that new developments and redevelopments should be designed consistent with LID principles” because “LID is a practicable and superior approach ... to minimize and mitigate increases in runoff and runoff pollutants and the resulting impacts on downstream uses, coastal resources and communities.”<sup>2</sup> EPA has also called upon Regional Boards across California to prioritize the implementation of LID, even “recommend[ing] that the [South Orange County draft] permit be revised to put more emphasis on LID [and to] require[] that LID be woven into the design of specified new development and redevelopment projects.”<sup>3</sup> In other MS4 permit contexts, EPA has also specifically endorsed the use of metrics, particularly the EIA approach in the Permit.

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<sup>1</sup> Environmental Protection Agency, *Reducing Stormwater Costs Through Low Impact Development (LID) Strategies and Practices* (Dec. 2007) (hereinafter “EPA LID Study”).

<sup>2</sup> California Ocean Protection Council, *Resolution of the California Ocean Protection Council Regarding Low Impact Development* (May 15, 2008). We have enclosed a CD that includes all of the documents referenced in our letter, as well as additional information regarding the benefits and implementation of LID.

<sup>3</sup> Environmental Protection Agency, Comments re Draft MS4 Permit for Southern Orange County (email from Eugene Bromley) (Jan. 24, 2008) (hereinafter “EPA South OC Comments”).

It is becoming clear that without requiring the implementation of LID practices designed to satisfy feasible and clear metrics, stormwater permits cannot meet the Clean Water Act's "maximum extent practicable" ("MEP") standard for pollution reduction. Critically, the prioritization of LID practices is insufficient by itself to meet the MEP standard and must be paired with a measurable requirement for the implementation of LID. Since its inception, the MS4 permitting program has been seriously hampered by a pervasive absence of numeric performance standards for the implementation of best management practices ("BMPs") such as LID. For this reason, in December 2007, the State Water Resources Control Board commissioned a report which found that "[t]he important concept across all of [the] approaches [described in the report] is that the regulations established a performance requirement to limit the volume of stormwater discharges."<sup>4</sup> The report also noted that "[m]unicipal permits have the standard of Maximum Extent Practicable (MEP) which lends itself more naturally to specifying and enforcing a level of compliance for low impact development."<sup>5</sup> EPA has highlighted similar but more specific concerns, remarking that subjective and imprecise language (such as requiring "a portion" of a site to address LID) is "vague" and that EPA recommends "more precise requirements."<sup>6</sup>

Various jurisdictions nationwide have begun adopting numeric performance standards for stormwater management, frequently pairing these with requirements to implement LID practices:

- **Pennsylvania:** Capture at least the first two inches of rainfall from all impervious surfaces and retain onsite (through reuse, evaporation, transpiration, and/or infiltration) at least the first one inch of runoff;<sup>7</sup>
- **Anacostia, Washington, D.C.:** Retain onsite the first one inch of rainfall and provide water quality treatment for rainfall up to the two-year storm volume;<sup>8</sup>
- **West Virginia:** Retain onsite the first one inch of rainfall from a 24-hour storm preceded by 48 hours of no measurable precipitation;<sup>9</sup>
- **Georgia:** Treat the runoff from 85% of the storms that occur in an average year (*i.e.*, provide treatment for the runoff that results from a rainfall depth of 1.2 inches);<sup>10</sup>

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<sup>4</sup> State Water Resources Control Board, *A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption* at 23 (Dec. 2007) (emphasis added) (hereinafter "SWRCB LID Report").

<sup>5</sup> *Id.* at 4.

<sup>6</sup> EPA South OC Comments.

<sup>7</sup> Pennsylvania Stormwater Best Management Practices Manual, Chapter 3 at 7 (Dec. 30, 2006).

<sup>8</sup> See SWRCB LID Report at 20-21.

<sup>9</sup> State of West Virginia, NPDES Permit No. WV0116025 at 13-14.

- **Central Coast, California (RWQCB, Phase II):** Limit effective impervious area ("EIA") at development projects to no more than 5% of total project area (interim criteria); establish an EIA limitation between 3% and 10% in local stormwater management plans (permanent criteria);<sup>11</sup>
- **All Federal Buildings over 5,000 square feet** (under EPA's draft guidance for implementation of the Energy Independence and Security Act of 2007): Manage onsite (*i.e.*, prevent the offsite discharge of) the 95<sup>th</sup> percentile storm through infiltration, harvesting, and/or evapotranspiration.

For these reasons, it is imperative that the Orange County Permit require new development and redevelopment projects to implement LID practices designed in accordance with a clear performance requirement. As detailed below, we support the Permit's use of an EIA limitation as this overall performance measure, teamed with a requirement to fulfill this obligation through appropriately sized LID features. These are critical elements of the Permit as a whole and assure that it is consistent with MEP and related requirements, as well as the mainstream of stormwater control across the country. However, as discussed below, some elements of the New Development section need revision. We also support the Permit's emphasis on LID and specifically agree with the findings on pages 19-20 of the Permit, which underscore the superiority of LID practices and the usefulness of establishing an EIA limitation.

## II. Suggested Revisions to the Permit's New Development Requirements

### A. EIA Should Be Defined to Require Full Onsite Retention of the Design Storm, and the Volumetric Requirement to Implement the EIA Limitation Should Be Defined as the Entirety of the Design Storm Volume.

As the overarching numeric performance standard for BMP implementation, the Permit imposes a mandatory 5% EIA limitation, based on the difference between the pre-development and post-development runoff ("delta volume") for the two-year design storm. Field-based studies have demonstrated that at 3 to 5% impervious area, watersheds begin to experience deleterious impacts from development, as noted in the attached reports by national stormwater expert Dr. Richard Horner.<sup>12</sup> For this reason, in other permitting contexts, we have

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<sup>10</sup> Georgia Stormwater Management Manual, Unified Stormwater Sizing Criteria at 1.3-1.

<sup>11</sup> Central Coast Regional Water Quality Control Board, Letter from Roger Briggs re Notification to Traditional, Small MS4s on Process for Enrolling under the State's General NPDES Permit for Storm Water Discharges (Feb. 15, 2008) (hereinafter "Central Coast Phase II Letter").

<sup>12</sup> Richard Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County*; Richard Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Diego Region*; Richard Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Francisco Bay Area*; Richard Horner, *Supplementary Investigation of the*

recommended the establishment of a 3% EIA requirement for new development and redevelopment projects, and we recommend the same for Orange County. Dr. Horner's studies have shown the attainment of this standard onsite to be feasible in southern California.

The critical factor in determining whether an EIA limitation will be effective at reducing stormwater pollution is how the Permit defines the concept of "disconnecting" impervious surfaces such that they are rendered "ineffective" and thus do not count toward the 5% EIA requirement. This involves two different elements: (1) the volume of water that must be accommodated through stormwater BMPs and (2) the processes through which impervious surfaces can be considered "disconnected" from the storm sewer system.

On the first issue, in the Permit, as mentioned above, the volume of water for which developers must design stormwater BMPs to meet the EIA limitation is the delta volume for the two-year design storm. (Permit at p.52, fn.49.) For several reasons—most notably, the potential for calculations of pre-development volume that inflate the quantity of runoff which exists under natural conditions—NRDC does not support the use of the "delta volume" calculation and instead supports the use of the entire design storm as the volumetric requirement. (Our reasons are detailed in the attached critique by Dr. Horner,<sup>13</sup> which analyzes the study by Geosyntec et al., discussed below.) Thus, we suggest that the volumetric requirement for meeting the EIA limitation be revised to the full volume of the two-year design storm and that, for the sake of clarity, this crucial volumetric requirement be moved out of the footnote section and into the main text of the Permit.<sup>14</sup>

On the second issue, the Permit requires that BMPs have the capacity to "percolate" the design volume in order for impervious surfaces to be considered "disconnected" and effectively pervious. (Permit at p.52-53.) "Percolate," however, is not defined in the permit, and its meaning is not readily apparent. For this reason, we recommend revising the Permit such that BMPs are required to have the capacity to "infiltrate, harvest for reuse, or evapotranspire" the design storm volume. This onsite retention requirement will eliminate any ambiguity and allow for greater flexibility, as well as clarity, in meeting the EIA limitation. This change will also bring the Permit into line with other stormwater regulations around the country, which require onsite retention and thereby eliminate the potential for any polluted runoff from the design storm since there is no discharge.<sup>15</sup>

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*Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for the San Francisco Bay Area.*

<sup>13</sup> Richard Horner, *Critique of Certain Elements of "Low Impact Development Metrics in Stormwater Permitting"* (Feb. 2009).

<sup>14</sup> We also recommend that footnote 43 on page 48 include a cross-reference to the relevant full definition of EIA later in the Permit so that footnote 43 is not misinterpreted as the controlling definition of EIA.

<sup>15</sup> See, e.g., requirements listed in section I, above, for Anacostia, the Energy Independence and Security Act of 2007, Pennsylvania, and West Virginia.

We would not support a definition of EIA that allows for onsite treatment and discharge to the storm sewer system, as this does not guarantee that pollutants will be removed from Orange County's receiving waters. Indeed, as further discussed below, the value of retention and reuse or infiltration is substantial, when measured both in terms of the ability to meet water quality standards and when measured in terms of other water resources imperatives, such as addressing drought and long-term reduction in water supply. Our analyses, presented as part of our submittal with this letter, document the extraordinary ability of LID to "create" new water supply, but this feature is operative only when water is retained and not discharged to surface waters.<sup>16</sup>

B. The Permit's Waiver Provision Must Require Offsite Compliance for Any Project that Cannot Meet the EIA Limitation Onsite and Must Set a Floor that All Developments Are Required to Meet.

The Permit, as currently written, would allow unfettered waivers for projects that can make an amorphous demonstration of disproportionate costs relative to the water quality benefits achieved. (Permit at p.55.) This loophole threatens to undermine the value of the EIA limitation and the entire New Development section. NRDC can support including flexibility in the permit's LID provisions to address true instances of technical infeasibility (and we detail below an appropriate scheme based on approaches taken in other jurisdictions). But the existing provision is overbroad, not supported by the facts, and is rife with the potential for abuse.

First, at a general level, this waiver provision is irreconcilable with the general findings of EPA and others that LID in most circumstances is *less* costly—often considerably so—than alternative building or stormwater management approaches. The provision, therefore, appears to be arbitrary and fundamentally counter-factual.

More specifically, the provision has a number of other fatal flaws as drafted. First, the LID requirements in the permit are based on addressing a *practicable* design storm, as discussed further in Dr. Horner's analysis, and this storm is well within the range of sizing requirements in place across the nation. Hence, the basic permit requirement already addresses and answers the question loosely posed by the waiver provision: the benefits and feasibility of the LID requirements are well-established generally and in reference to water quality improvements specifically. LID implemented across a watershed is far more capable of ensuring the attainment of water quality standards than traditional BMPs, and since ensuring compliance with standards is a fundamental requirement of the permit, LID is similarly a necessary element in new development and redevelopment.

Second, even if a waiver provision in general were appropriate, this one is not: the Permit does not define how these costs and benefits would be weighed against each other, and

<sup>16</sup> See, e.g., Letter from David Beckman and Noah Garrison, NRDC, to Mary Nichols, Chair, California Air Resources Board, re AB 32 Draft Scoping Plan and Appendices (Aug. 11, 2008).

while the installation of BMPs can be easily priced, the human and ecosystem benefits of reduced water pollution are much more difficult to monetize and likely to receive short shrift in any such comparison. Even using a cost-benefit approach where (as is the case in much of the Permit area) waters are impaired may have the effect of allowing new sources of pollution to contribute to existing impairments, which is not allowable legally.

Third, the waiver provision includes no limiting factors, such as a requirement that projects implement all feasible LID (or even conventional) BMPs. Fourth, the Permit does not mandate offsite mitigation for any stormwater volume that a project is unable to retain onsite. This is the most appropriate "waiver" provision, allowing offsite compliance when onsite compliance is truly technically infeasible.

To close the waiver provision's loopholes, we would recommend first that the cost-benefit calculation be changed to a requirement that project applicants demonstrate the technical infeasibility of complying with the EIA limitation. The Permit should then define technical infeasibility, which could include circumstances such as severe space constraints, underground pollutant plumes, and non-infiltrative soils. Additionally, the Permit should specify that the project applicant must implement all technically feasible BMPs to the maximum extent practicable—if infiltration is infeasible, then harvesting and evapotranspiration should be maximized. The Permit should also set a floor for compliance with the EIA limitation onsite (*i.e.*, X% of the design volume must be infiltrated, harvested, or evapotranspired at the project site) so that project applicants do not utilize the alternative compliance option for the entirety of the design volume. This is a typical requirement of similar regulations in other parts of the country and ensures better results because of the limitations of offsite mitigation.<sup>17</sup> Any onsite discharge up to the design storm volume should be treated for water quality purposes.

The project applicant should then be required to perform offsite mitigation for the difference in volume between what is achieved onsite and the otherwise applicable EIA requirement. This could be accomplished by rewriting the waiver provision such that it *requires* permittees to establish an "urban runoff fund" (or project applicants to construct their own offsite projects) within the same hydrologic unit. For the sake of water quality and overall programmatic equivalence, the monetary contributions required should be based not on the avoided cost for developers, but rather on the volume of stormwater that is not retained on a given site. This system should also be paired with an obligation to mitigate stormwater volume offsite at a higher ratio than 1:1, such as 1:1.5, given the generally weaker performance of offsite mitigation projects. Several jurisdictions, including West Virginia and Washington, D.C. (Anacostia), have instituted such ratios.

Finally, we note that the Permit imposes no time limitation on the expenditure of funds for offsite mitigation. We recommend that offsite mitigation projects, whether public or private, should be constructed within three years of final discretionary approval (of the original

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<sup>17</sup> See, *e.g.*, the requirements for West Virginia and Pennsylvania.



project) by the permittee. Additionally, the Permit should require project applicants to provide the necessary funds within one month to the permittee (for public mitigation projects) or to an escrow account (for private mitigation projects).

C. The Permit Must Impose Limits on "Water Quality Credit Systems" to Ensure that Equivalent Results Are Achieved on a Watershed Basis.

The Permit allows permittees to establish a "water quality credit system" that would waive LID, hydromodification, and infiltration requirements. (Permit at p.56.) While we agree that certain projects generate environmental benefits by the very nature of their circumstances, we also believe that waivers from otherwise applicable criteria should not be granted unless they are necessary and some nexus with water quality can be demonstrated. The fundamental requirements of the Clean Water Act include attainment of water quality standards. Without further specification, the approach taken in the permit effectively (and unlawfully) would delegate to those responsible for meeting the standards the ability to waive attainment through unilateral reductions in basic technological treatment requirements. This is unwarranted, poor policy, and in all eventualities, inconsistent with the text of the Act. For this reason, we suggest that the Permit impose certain restrictions on the water quality credit system.

First, the Permit should require that the permittees justify—scientifically and quantitatively—the stormwater volume and pollutant load reductions that accrue from a particular type of development granted "credit" under the system. These reductions should correlate with the amount of credit available for the project in question. Second, the Permit should set a maximum allowable credit amount for which a single project would be eligible. Other jurisdictions with such credit systems cap the allowable credit at half of the volumetric requirement or less, for instance, whereas the Permit currently includes no cap at all.<sup>18</sup> Without these changes, the water quality credit system could undermine the EIA numeric performance standard altogether by allowing projects blanket waivers without any specific demonstration of technical infeasibility or equivalent stormwater volume and pollutant load reduction—this would not meet the MEP standard. Moreover, it would not reduce pollution so as to reduce water quality impairment and, particularly in circumstances such as those in Orange County where many projects discharge to impaired waters, it is flatly inconsistent with the basic legal requirements that apply to protection and restoration of waters listed as impaired pursuant to 33 U.S.C. Section 1313(d) (including TMDL waste load allocations and requirements that pertain to additional sources of pollution discharged to waters listed as impaired).

D. Additional Concerns and Comments.

Below, we have listed some additional concerns and comments regarding specific provisions within the New Development section of the Permit.

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<sup>18</sup> See, e.g., the requirements for West Virginia.

- **Prioritization of LID:** In the LID section of the Permit, the language does not clearly state a hierarchy of stormwater management BMPs. (Permit at p.52.) It merely states that onsite implementation of LID principles is the “preferred approach.” Because proprietary BMPs and conventional stormwater management techniques have proven less effective than LID, this section of the Permit should clearly establish a hierarchy such that project applicants must prove the technical infeasibility of implementing LID BMPs before they resort to proprietary or conventional technologies.
- **Treatment Control BMPs:** The Permit allows project applicants to substitute “treatment control BMPs” for LID measures if certain conditions are met. (Permit at p.53.) These conditions include limiting EIA to 5% or less. However, this is antithetical to the Permit’s inchoate conception of EIA as onsite retention with no discharge, as we support. By definition, treatment control BMPs that discharge treated stormwater cannot render impervious areas “ineffective” for the purposes of meeting the 5% EIA limitation. For this reason, we recommend that any projects exercising this compliance option be required to retain the volume of their discharge (multiplied by our suggested 1:1.5 offsite mitigation ratio) elsewhere in the hydrologic unit.
- **Hydrologic Conditions of Concern:** We do not support the Permit’s waiver of hydromodification criteria for any project that discharges to engineered, hardened, and regularly maintained conveyance channels. (Permit at p.54.) The Clean Water Act is a restorative statute with a restorative purpose—by not subjecting a whole group of projects to hydromodification criteria, the Permit will heavily burden future restoration efforts. With stream daylighting and habitat restoration a reality nowadays, the Permit should not condemn all hardened conveyances to their present, unnatural state. Instead, it should effectuate the goal of the Clean Water Act and begin to restore natural conditions to even those streams that are most burdened by human engineering. It is also noteworthy that one outcome of hydrological controls is reduced flooding. With projections that the impacts of climate change in California will include more intense storms, it would be unwise in the extreme to allow a waiver of hydromodification requirements.
- **Applicability:** We support the applicability section’s establishment of a 5,000 square foot threshold for most projects (Permit at p.46-47), but the language in XII.B.2(a) for significant redevelopment projects needs to specify in the third and fourth sentences that the relevant question is how much impervious surface was added or replaced (not increased), consistent with the first sentence.
- **Depth to Groundwater:** The Permit states that infiltration BMPs must be at least 10 vertical feet above seasonal high groundwater. (Permit at 49.) However, recent studies and state and national standards demonstrate that five feet (or even less) is a

safe threshold, and the Permit's infiltration infeasibility criteria should be changed accordingly.<sup>19</sup>

### III. Case Studies and the Feasibility of LID Implementation

We have submitted, as attachments to this letter, several reports by Dr. Horner. These reports take into account local rainfall patterns and building typologies and demonstrate that a 3-5% EIA limitation can be feasibly implemented by various types of development projects in southern California. Dr. Horner's reports show that considerable reductions in pollutant loadings occur through the implementation of an EIA limitation with LID techniques. They also highlight that onsite retention of stormwater can result in significant water savings, as well, through infiltration and harvesting for in-building uses or landscape irrigation. Such water savings are an important ancillary benefit of LID implementation and can decrease our reliance on expensive, increasingly unreliable sources of imported water. These water savings also result in considerable greenhouse gas emission reductions because water importation machinery is the single largest user of electricity in California.<sup>20</sup> For these various reasons, as mentioned above, we strongly support the Permit's establishment of an EIA limitation that requires the implementation of LID practices because they are the most effective means of improving water quality while also generating other benefits.

Recently, another study (entitled "Low Impact Development Metrics in Stormwater Permitting," hereinafter "the report") of three specific existing or proposed development sites was completed by Geosyntec Consultants and Larry Walker Associates for the Counties of Orange and Ventura.<sup>21</sup> Despite several flaws in assumptions and methodology, as documented in the attached critique by Dr. Horner, the study in many regards bolsters the argument that implementing LID through a numerical performance standard, such as proposed in the Permit, is feasible. Regarding the 60 California project, for instance, the study remarks that "it was not exceedingly difficult to achieve less than 5% EIA." (Geosyntec et al. at p.55.) However, various supposed problems identified by the report deserve attention in this context because we feel that the EIA concept and LID practices have been mischaracterized and that the report unjustifiably condemns, or at least puts an inappropriately negative spin on, worthwhile aspects of the Orange County Draft Permit.

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<sup>19</sup> The Los Angeles Regional Water Quality Control Board, for instance, typically allows 5 feet of separation between onsite system leachfields and groundwater. See, e.g., Draft Waste Discharge Requirements for the Malibu Lumber Facility (requiring a 5-foot separation from groundwater). The AB 885 draft regulations (California's septic tank law) would allow dispersal systems of all conventional OWTS to have only 3 feet of separation. See 27 CCR § 30014 (draft).

<sup>20</sup> See, e.g., NRDC, *Energy Down the Drain* at v (Aug. 2004).

<sup>21</sup> Geosyntec Consultants et al., *Low Impact Development Metrics in Stormwater Permitting* (Jan. 2009).

A. The Report Relies on a Flawed Definition of EIA to Draw its Negative Conclusions about the EIA Concept Overall.

The authors base their definition of EIA on the flawed language of the current Ventura draft permit. (Geosyntec et al. at p.3.) NRDC and Heal the Bay have repeatedly commented on the lack of hydraulic sizing criteria that should apply to the EIA limitation in that permit, and we agree with the authors of the report that this loophole allows for manipulation of the EIA concept. (Geosyntec et al. at p.5.) However, by basing their analysis of EIA limitations, writ large, on a single flawed definition of the concept, the authors have compromised the applicability and usefulness of their study. They are, therefore, unable to address the true benefits of an EIA standard from a water quality perspective, benefits recognized by a wide range of agencies and experts, including Dr. Horner (in his California studies), Tetra-Tech (in a study for the Ocean Protection Council),<sup>22</sup> EPA (in its own comments on the South Orange County Permit and in other permit proceedings around the state),<sup>23</sup> and the Central Coast Regional Water Quality Control Board (which adopted a default 5% EIA standard for Phase I and Phase II communities).<sup>24</sup> In this sense, it is not an overstatement to suggest that by adopting something of a "straw man" and then knocking it over, the report does not credibly refute the effectiveness or practicability of EIA properly implemented. The Orange County Draft Permit does not contain the same loophole as the Ventura draft permit, and although we recommend certain changes to the Permit's definition of EIA, it can easily be insulated from the type of abuse envisioned by the authors of the report.

B. The Permit Does Incentivize Infill, Redevelopment, and Smart Growth.

The authors mistakenly claim that the Permit creates significant disincentives for infill, redevelopment, and smart growth. (Geosyntec et al. at p.5.) In truth, the permit accommodates these development typologies by enabling developers to comply with the Permit's EIA limitation through four different options at varying scales and by allowing the permittees to establish both alternative compliance measures (*i.e.*, in-lieu fees for offsite mitigation) and a water quality credit system that would lessen the requirements for the exact sites about which the authors are worried. (Permit at pp.51-53, 55-56.) The Permit has gone further than several other states in encouraging infill, redevelopment, and smart growth, and we stand behind the Regional Board's efforts to accommodate these concerns in a manner that is consistent with water quality protection.

The environmental community's willingness to accept permit requirements that can be satisfied in part offsite should not be taken for granted, as it constitutes an attempt to address other stakeholders' stated concerns and, in any case, fully addresses any reasonable concern about infill and redevelopment. We are willing to accept offsite mitigation notwithstanding the

<sup>22</sup> Oceans Protection Council of California, *State and Local Policies Encouraging or Requiring Low Impact Development in California* at 27 (Jan. 2008).

<sup>23</sup> EPA South OC Comments.

<sup>24</sup> Central Coast Phase II Letter.

lack of a clear need for this flexibility when the matter is analyzed objectively. For example, some of the most aggressive LID requirements have been imposed in ultra-urban environments, like Philadelphia, PA, and Anacostia, Washington, D.C., demonstrating that the supposed conflict between LID and infill and redevelopment appears to be largely rhetorical. Moreover, as noted in Dr. Horner's critique of the report (and further below), even those sites chosen to represent the most challenging circumstances for LID implementation can feasibly (and in some cases easily) implement LID as envisioned by the Permit. And of course, the record also contains Dr. Horner's analysis of the feasibility of LID implementation across a range of building typologies, showing that LID can be accommodated in virtually any building situation with robust numeric metrics.

C. With Our Recommended Revisions, the Permit Will Not Lead to Unnatural Levels of Infiltration.

The report states that the Permit's infiltration requirements could destabilize the water balance in certain locations. (Geosyntec et al. at p.5.) This might be true in some situations if the Permit required infiltration of the entire design volume; very large numbers of sites were affected; and the water balance in the affected area were otherwise undisturbed compared to natural conditions. However, none of these three factors is present and, in particular, those who would contend that the LID provisions regulating new development and redevelopment could significantly affect water balance have failed to recognize that, in most of urbanized Orange County, the natural rate of infiltration has been dramatically reduced by a century of development focused on impervious surface. While we believe that this issue is yet another poorly justified criticism of LID, we note that the permit in any case does not require infiltration, per se, but rather any of three techniques that retain water. To make this even clearer, we have recommended the inclusion of language to clarify that three techniques are allowed: infiltration, harvesting, and evapotranspiration. If infiltration is ill-advised and thus infeasible, then project applicants will simply use the other allowable techniques for retaining water onsite.

Moreover, the Technical Advisory Committee (mentioned on page 46 of the Permit) should develop criteria—for potential insertion into the DAMPs and/or guidance manuals—to determine when infiltration would be counter-productive. These criteria will guide developers in deciding whether to utilize infiltration, harvesting, or evapotranspiration, or some combination of the three, to meet the EIA limitation. Additionally, developers have the option under the Permit of paying in-lieu fees when it is infeasible to attain the Permit's otherwise applicable requirements, including the infiltration requirement. Thus, there is no reason to assume that the level of infiltration encouraged by the Permit will lead to hydrologic imbalances, and there is every reason to assume that this potential problem will be easily avoided.

D. The EIA Limitation in the Permit Is Not Intended to Function As a Hydromodification Standard, Nor Should It.

The authors of the report posit that the EIA metric does not reflect the current understanding of stream hydrology and geomorphology. (Geosyntec et al. at p.6.) It does not reflect these issues because it is not intended to, and any interpretation of the EIA limitation that transmutes it into a hydromodification standard is misguided. Limiting the effective impervious area of a site is a means of addressing water quality—not water quantity—concerns. The purpose of retaining water onsite and infiltrating, harvesting, or evapotranspiring it is to prevent all pollutant loads contained within the design storm volume from entering aquatic ecosystems. While such retention may aid projects in meeting hydromodification criteria, and does have the salutary effect of making new water supplies available, the EIA metric stands as a water quality-focused, technology-based performance standard required by the Clean Water Act. This is why the Permit also contains a section that establishes requirements for “hydrologic conditions of concern.” (Permit at p.54.) Any arguments about hydromodification should properly be addressed to this section. It also bears mention that even the report’s recommended performance standard suffers from the same exact “problem” as the EIA limitation, and the authors thus included a separate hydromodification control standard in their recommendation. The Permit is structured in exactly the same fashion.

E. The Report’s Case Studies Fail to Demonstrate that It Is Technically or Economically Infeasible to Implement a 5% EIA Standard.

The authors purport to prove through three case studies that the EIA concept is both difficult to implement and less protective of water quality than a volumetric reduction requirement. (Geosyntec et al. at p.16.) The principle failure of this analysis is, again, that the authors used a flawed definition of EIA (with no sizing requirement) as the basis for their analysis. They effectively seek to compare the function of two techniques, one of which they define nonsensically and one of which they define reasonably. This yields skewed analyses that, accordingly, run the risk of appearing to be results-oriented to support a predetermined perspective on the Permit. Moreover, the authors’ assertion that a volumetric reduction approach would be “more constructive than a % EIA standard” highlights the degree to which the inadequate language of the Ventura draft permit has biased various entities’ understanding of how an EIA limitation should operate. Ultimately, EIA limitations should be volumetric reduction approaches, as the authors of the report advocate. When EIA is properly defined as a requirement for onsite retention of a certain percentage of the design storm volume, it is literally a volumetric reduction requirement, and thus all of the report’s negative conclusions about EIA have no real bearing on the worth of a properly designed EIA standard. Indeed, if it is a volumetric reduction approach that the authors favor, they should support a properly designed EIA standard. With this in mind, we offer the following thoughts on the specific case studies.

## 1. Walnut Village

As noted by Dr. Horner in the attached letter, this case study suffers from several analytical flaws. Without repeating those flaws here, we will simply draw attention to the fact that the authors found it almost feasible (and had they used appropriate infiltration rates, it would have been entirely feasible) to meet even the most stringent of the standards they analyzed, characterizing options as merely "less feasible" and "more feasible" based on problematic assumptions described by Dr. Horner. (Geosyntec et al. at pp.8-11.) This most stringent standard—delta volume for the two-year design storm—is by definition only 5% different from the EIA standard in the Permit because the Permit bases its definition of EIA on the delta volume for the two-year design storm. Thus, the authors' third proposed standard—although nowhere described as EIA—is just 5% away from the EIA metric in the Permit. This case study, therefore, demonstrates in general terms the practicability of the Permit's approach even on a very challenging building site and even when technically unsupported limitations are assumed that make accomplishing Permit requirements more difficult than necessary.

## 2. 60 California

The same flaws apply to this case study analysis; however, here, the authors openly admit that the site could feasibly achieve any of the three standards they used. (Geosyntec et al. at pp.13-14.) Their sole bases for questioning the utility of apparently any LID requirement are that green roofs and cisterns are relatively new concepts and that green roofs (anecdotally) might not be climate-appropriate, hardly reasons for dismissing them out-of-hand.

The 60 California case study can in fact assist us in partially understanding the cost implications of the various performance standards analyzed by the report, although the authors themselves have performed no such economic analysis. The authors concluded that for the largest storm event analyzed (the two-year design storm, which is nearly four times the volume of the 85<sup>th</sup> percentile storm), a combination of green roof and cistern would meet the standard. This green roof would require 4,300 square feet of space (Geosyntec et al. at p.13) and need to retain at least two inches of water. Assuming that this would require an intensive green roof, which can typically hold 80-150 pounds per square foot and accommodate soil depths up to 24 inches, the roof itself would cost (at the high end) approximately \$25 per square foot, or almost \$108,000.<sup>25</sup> The accompanying cistern that would need to hold an additional 4,170 gallons would likely cost less than \$10,000, plus any plumbing necessary to carry stormwater from the roof to the cistern.<sup>26</sup> In all, the total cost of stormwater infrastructure would likely be less than

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<sup>25</sup> See, e.g., Great Lakes Water Institute, Green Roof Installation, at <http://www.glwi.uwm.edu/research/genomics/ecoli/greenroof/roofinstall.php>; Steven Peck and Monica Kuhn, *Design Guidelines for Green Roofs*, available at [http://egov.cityofchicago.org/webportal/COCWebPortal/COC\\_ATTACH/design\\_guidelines\\_for\\_green\\_roofs.pdf](http://egov.cityofchicago.org/webportal/COCWebPortal/COC_ATTACH/design_guidelines_for_green_roofs.pdf).

<sup>26</sup> See, e.g., Low Impact Development Center, Rain Barrels and Cisterns. at [http://www.lid-stormwater.net/raincist\\_cost.htm](http://www.lid-stormwater.net/raincist_cost.htm).

\$125,000. Of course, this does not take into account the costs of avoided conventional stormwater infrastructure, which would reduce the added cost of the LID infrastructure by some unknown but potentially substantial amount. Indeed, EPA found that at 11 out of 12 case study sites, LID infrastructure actually cost less than conventional stormwater management practices.<sup>27</sup>

The total development cost for this project was around \$4 million. Hence, even if conventional stormwater infrastructure cost nothing and the green roof fell in the upper range of expected costs, the ~\$125,000 stormwater compliance price-tag would be only 3% of total project cost. And this is supposedly one of the most constrained sites the authors could find where compliance would be the most technically and financially difficult. Hence, the best interpretation of the authors' analysis is that the upper limit of the cost to comply with the LID requirement—even assuming the most unfavorable conditions and without any credit for offsetting infrastructure cost savings that are clearly present—is only 3%. This is well within the accepted cost for compliance with existing MS4 requirements, such as the SUSMP provisions; the State Water Resources Control Board (in the *Bellflower* decision) already has determined in precedential orders that such provisions are reasonable and appropriate.

### 3. Kmart

The Kmart case study analysis is the most flawed of all from a methodological standpoint. Regardless of the LID techniques proposed, the report misconstrues the requirements of the Permit such that the conclusions vis-à-vis percentage of total project cost are entirely indefensible.

As a threshold matter, the authors misunderstood that an interior remodel that does not replace or add impervious surface would not trigger the Permit's requirements. Thus, the basis for their low-end estimate of redevelopment cost is a number far below any true redevelopment cost that would be associated with actually adding or replacing roof or other impervious surfaces. The applicability section of the Permit on page 46 specifies that redevelopments must comply with the Permit *only* when they result in the addition or replacement of impervious surface. An interior "remodel" would not add or replace impervious surface; only a demolition and reconstruction would do so. Consequently, the \$50 per square foot low-end estimate should be revised to a more reasonable reconstruction—not remodel—cost figure, so as to allow an accurate calculation of the relative cost of the LID features compared to total construction cost.

Typical commercial construction costs range from \$160 per square foot to \$350 or more per square foot.<sup>28</sup> The authors' high-end estimate of \$250 per square foot is, hence, an average cost figure for redevelopment. Using this more appropriate range, the total project cost (for the

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<sup>27</sup> EPA LID Study at 12.

<sup>28</sup> See, e.g., Saylor Publications, Inc., Square Foot Building Costs, at <http://www.saylor.com/lacosts>.



130,000 square foot building) is \$21 million to \$46 million. Just with this initial change in cost estimates, the “% of total redevelopment cost” figures given in the study changes from 4-22% to 3-6% for the “high volume interpretation” and from 1-3% to 0.5-1% for the “low volume interpretation.”

Digging further into the report’s assumptions, the authors once again misconstrued the applicability section of the permit. If the building alone were being redeveloped and the parking lot were left in its existing condition, the project would not be obligated to comply across the entire site because it would result in an alteration of less than 50% of the impervious surface, thus requiring that only the altered portion comply with the permit. As the building footprint is slightly less than 25% of the site (approximately three out of 12.4 acres), the stormwater infrastructure costs would thus drop to about \$300,000 or \$50,000, depending on the high vs. low volume interpretation; the “% of total redevelopment cost” figures given in the study, consequently, would drop to 0.7-1.5% or 0.1-0.2%, respectively.

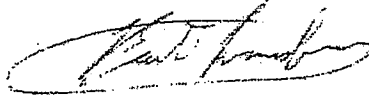
If the project altered more than three acres of the parking lot, as well as the entire building footprint, then the entire site would be required to comply with the Permit. However, in this situation, to find a meaningful value for the percentage of total redevelopment cost, one would have to calculate the costs of the stormwater infrastructure and landscaping that would otherwise be required by law or desired by the developer (for instance, the developer would surely include landscaping in the parking lot for aesthetic reasons, regardless of its stormwater functionality), and those costs would have to be deducted from the 3-6% or 0.5-1% of total redevelopment cost figures calculated above. It is thus impossible to draw any real conclusions from the study because of the lack of complete cost data. Without such data, even using correct redevelopment cost assumptions, the study actually tells us nothing that we want to know in terms of the marginal costs of complying with the permit vs. complying with requirements that would exist anyway in the absence of the permit.

#### IV. Conclusion

We commend the Regional Board staff’s efforts to prioritize LID stormwater management practices and to establish an EIA limitation as the performance standard for BMP implementation in the Permit. Studies have demonstrated that attainment of this standard is feasible, and even so, the Permit contains sufficient alternative compliance criteria that (once properly revised) should allow equivalent results while granting developers more flexibility. Nonetheless, we believe that the effectiveness of the Permit’s provisions could be compromised by various defects, especially the overbroad waiver language, the delta volume sizing criterion, and the Permit’s failure to specify clearly that onsite retention (and not simply capture and discharge) is required. We have recommended various ways to remedy these and other problems, and we strongly urge the Regional Board to adopt these revisions.

We look forward to working further with Regional Board staff on the Permit and encourage you to contact us with any questions regarding our suggestions or the documents we have provided.

Sincerely,



David Beckman  
Bart Lounsbury  
Natural Resources Defense Council

Garry Brown



Orange County Coastkeeper

*MJH*

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April 10, 2009

Chair Lutz and Board Members  
Los Angeles Regional Water Quality Control Board  
320 4th Street, Suite 200  
Los Angeles, CA 90013

2009 APR 10 PM 1  
RECEIVED  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

Dear Chair Lutz and Members of the Board:

I have previously submitted a study to the Los Angeles Regional Water Quality Control Board that reports on my findings regarding the feasibility and water quality benefits of Low Impact Development ("LID") implementation in Ventura County. LID is an extremely effective way of addressing a root cause of stormwater pollution: the unnaturally high degree of impervious surface in urban areas which not only conveys significant pollutant loadings to receiving waters, but also has related and deleterious water resources impacts. Because it addresses a root cause of stormwater pollution, LID is not merely one of many theoretically co-equal best management practices, but rather one that is central to stormwater pollution control today. For this reason, the technical adequacy of the Ventura County MS4 Permit's ("Ventura County Permit" or "Permit") new development and redevelopment provisions, and the degree to which they integrate clear LID requirements tied to numeric performance metrics, is essential to the function and success of the Permit.

Summary

By way of summary, my study, "Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County," provided to you when the Draft Permit was first issued in 2007, examined the practicability of retaining storm water onsite through LID BMPs based on a performance standard ("effective impervious area") that drafts of the Permit contained. My analysis took into account local soil and rainfall conditions and examined a range of development types. The analysis showed that by retaining water from the site to meet a 3% EIA standard, LID practices result in drastically less polluted runoff compared to conventional BMPs (reducing site runoff volume and pollutant loading to zero in many typical rainfall scenarios). Even treating stormwater with the best-performing conventional BMPs is much less effective than using LID practices to retain water with a strong numeric requirement like 3% EIA. Pollutant loads would also be significantly diminished through the use of these LID techniques, especially in comparison to conventional BMPs. Based on my analysis, LID implementation, anchored to an EIA or volume-based design storm, is both feasible and

far preferable to the use of conventional BMPs from a water quality and quantity perspective.

The Permit Omits Practicable Control Requirements and Would Impose Standards Weaker than Other Jurisdictions

Overall, the Permit's requirements are notable in that they do not adopt a 3% EIA standard, notwithstanding local technical verification of this approach, and also do not adopt another equivalent storm water retention requirement for all regulated development and redevelopment projects. This makes the permit's critical development and redevelopment provisions out-of-step with common approaches to LID implementation nationally and with recent studies in the field, in which I have participated. Many other stormwater management documents around the country have adopted onsite retention standards with larger design storm volumes than the Ventura County Permit. These precedents can be compared to conditions in Ventura County, which generally has rainfall patterns that make retention-based LID approaches even more practicable than many other regions. I have enclosed as Attachment A my analysis ("Assessment of Evaporation Potential with Low-Impact Development Practices") of how these other examples from around the country support similar or stronger requirement in Southern California.

The Exemption from EIA for All Redevelopment is Unjustified Technically

Of particular significance, in reviewing the new draft of the Ventura County Permit, I note that its provisions appear to allow the use of conventional BMPs on any redevelopment site. As I demonstrated in my studies, LID implementation focused on onsite retention is feasible in a wide range of development typologies, and the pollution-reducing and volume-reducing benefits of LID practices far exceed conventional BMPs. In cases where retention of the design storm is not possible, standard practice in the field today offers a development applicant the opportunity to achieve the same performance in part offsite, which permits flexibility but returns predictable, superior water quality performance in the watershed or subwatershed. The Permit, however, dispenses with prior requirements to meet an EIA standard in redevelopment contexts, unless doing so can be shown by rigorous analysis to be technically infeasible.

There is no technical justification in the Permit for this exemption for redevelopment from meeting the EIA requirements. This exemption is, at minimum, substantially overbroad as now formulated. My research has shown that there is, in fact, no need for such blanket exemptions at all. Thus, from a technical standpoint, in this way also the Permit would require a level of performance considerably inferior to that which my Ventura County analysis demonstrated is feasible.<sup>1</sup>

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<sup>1</sup> The authors of "Low Impact Development Metrics in Stormwater Permitting" ("the report") drew certain negative (and not always well-founded, as explained in Attachment

This conclusion based on specific Ventura County analysis is bolstered also by my work and that of my colleagues, including the Regional Board's Xavier Swamikannu, who participated in the preparation of an expert report for the National Academy of Sciences. We found that LID techniques must be a top priority for implementation at new development *and* redevelopment projects covered by stormwater permits, unless their use can be formally and convincingly demonstrated to be infeasible. In keeping with the NAS report and my research, the Ventura County Permit should recognize the critical importance of using LID not only in "green field" applications, but also during redevelopment, so as to address urbanized landscapes that are today the chief source of storm water pollution and associated hydromodification of local streams. Based both on local work, work elsewhere in the field, and my investigations as part of the NAS team, I believe the exemption for redevelopment from a technical standpoint simply cannot be squared with technical practicability or what the best science tells us is necessary to address both polluted runoff and broad-scale changes to hydrogeology as a result of the current level of urban development.

#### Hydromodification

The Permit now waives interim hydromodification requirements for all projects under 50 acres, thereby excluding a great majority of the development and redevelopment activity in Ventura County. As a technical matter, this risks degradation to Ventura County watersheds because hydromodification is not just caused by a few large projects, but typically (more typically) by many smaller ones. Moreover, most LID BMPs are not sufficient to attenuate the peak storms that cause a great deal of hydromodification. Thus, the Permit's reliance on LID provisions is not a technically adequate solution to the hydromodification problem and appears to be based on a misunderstanding of the role and function of LID BMPs sized and designed to reduce pollution generated through smaller storms, on the one hand, and the approaches necessary to address watershed scale hydromodification, on the other hand. I note also that since the LID approach in the Permit does not actually require LID BMPs for redevelopment projects, let alone those

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B) conclusions about a maximum 3-5 percent effective impervious area ("EIA") site design criterion. However, notably the results of the report's analysis overall contribute to the growing consensus that implementing LID according to a numeric metric is technically feasible in both new development and redevelopment contexts. The results thus buttress my findings in analyses performed earlier for San Diego and Ventura Counties and for the San Francisco Bay Area and support the feasibility of meeting a 3-5% EIA standard in southern California. However, the report's suggestion that a "delta volume" standard be adopted would depart from standard and well-accepted practice in the United States, resulting in significantly greater volumes of stormwater with concomitant, significant increases in the mass volume of a range of pollutants in stormwater.

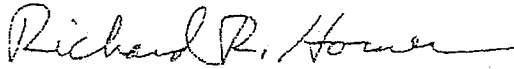
Chair Lutz  
Los Angeles RWQCB  
April 10, 2009  
Page 4

sized to address the water quality design storm, the approach of relying on LID BMPs to address hydromodification is further unjustified (and, in this instance, illusory).

Conclusion

In summary, based on my Ventura County-specific study, my work in the field, and my knowledge of the state of practice in California and nationally, I conclude that the Permit's current scheme will not result in effective, feasible mitigation of the various problems caused by stormwater runoff, and it will certainly allow a significant amount of pollution, which could feasibly be reduced through LID techniques, to be discharged to receiving waters.

Sincerely,



Dr. Richard Horner

# ASSESSMENT OF EVAPORATION POTENTIAL WITH LOW-IMPACT DEVELOPMENT PRACTICES

RECEIVED

RICHARD R. HORNER

2005 APR 10 PM 2 13

CALIFORNIA WATER BOARD  
CENTRAL REGION  
LOS ANGELES REGION

## BACKGROUND

Low-impact development ("LID") stormwater management practices are designed to capture and retain (i.e., not discharge) stormwater runoff through infiltrating water into the soil, vaporizing it to the atmosphere via transpiration from vegetation and evaporation, and harvesting to put rainwater to a beneficial use like irrigation or gray water supply. Jurisdictions in various locations around the United States have adopted stormwater management regulations requiring elimination of surface runoff discharge in storms up to specified sizes, and hence in effect requiring application of LID methods. An issue raised in California regarding such requirements is the potential of the evapotranspiration component of runoff attenuation, in the event infiltration is limited by soil, high groundwater, or subsurface contamination and insufficient demand exists for harvested water. The opinion has been advanced that evapotranspiration potential must be low, because most California rainfall occurs in the months with least evaporation. To explore this issue the author compared rainfall and evaporation at five California locations and four sites elsewhere in the nation where limitations on urban stormwater discharge are in effect.

## METHODS OF ANALYSIS

Examples of surface discharge limitations are found, or are being considered by regulatory authorities, in the states of Georgia, Tennessee, West Virginia, Pennsylvania, and New Jersey and the cities of Philadelphia and Washington, DC (Anacostia River watershed). Data from long-term evaporation pan measuring devices are available for Georgia, Tennessee, and Pennsylvania (including Philadelphia), as well as for California. In the analysis Georgia was represented by Atlanta, Tennessee by Nashville, and Pennsylvania by State College in central PA (Centre County), as well as Philadelphia. Evaporation data were not found for New Jersey, Washington, DC, and West Virginia. However, Philadelphia is adjacent or very close to New Jersey and Washington and represents those locations well. Fayette County in southwestern Pennsylvania has such data and is very close to Morgantown, WV; this location represented a West Virginia case. Precipitation data were readily available for all of the locales offering evaporation data. Table 1 presents data sources.

**Table 1. Sources of Precipitation and Evaporation Data**

Location	Data <sup>a</sup>	Source
Atlanta	Evaporation	<a href="http://climate.engr.uga.edu/evaporation.html">http://climate.engr.uga.edu/evaporation.html</a>
Nashville	Evaporation	<a href="http://www.nashville.gov/stormwater/docs/pdfs/stw/vol2/swmanual12_vol2_chapter8.pdf">http://www.nashville.gov/stormwater/docs/pdfs/stw/vol2/swmanual12_vol2_chapter8.pdf</a>
Philadelphia, Central PA, Fayette County (for Morgantown, WV)	Precipitation, evaporation	<a href="http://www.pa.nrcs.usda.gov/technical/Engineering/PaRainEvapRunoff.pdf">http://www.pa.nrcs.usda.gov/technical/Engineering/PaRainEvapRunoff.pdf</a>
California cities except Ventura	Evaporation	<a href="http://www.caicim.dri.edu/ccda/comparative/avgpan.htm">http://www.caicim.dri.edu/ccda/comparative/avgpan.htm</a>
Ventura	Precipitation, evaporation	<a href="http://portal.countyofventura.org/portal/page?_pageid=876.1686932&amp;_dad=portal&amp;_schema=PORTAL">http://portal.countyofventura.org/portal/page?_pageid=876.1686932&amp;_dad=portal&amp;_schema=PORTAL</a> (El Rio - UWCD Spreading Grounds [Revolon Slough])

<sup>a</sup> Precipitation data are from <http://www.met.utah.edu/jhorel/html/wxlclimate/normrain.html> except as noted.

Rainfall and evaporation were tabulated for the three highest and six highest months of precipitation at each location. The excess or deficit of evaporation for these periods was then calculated as the difference between evaporation and precipitation.

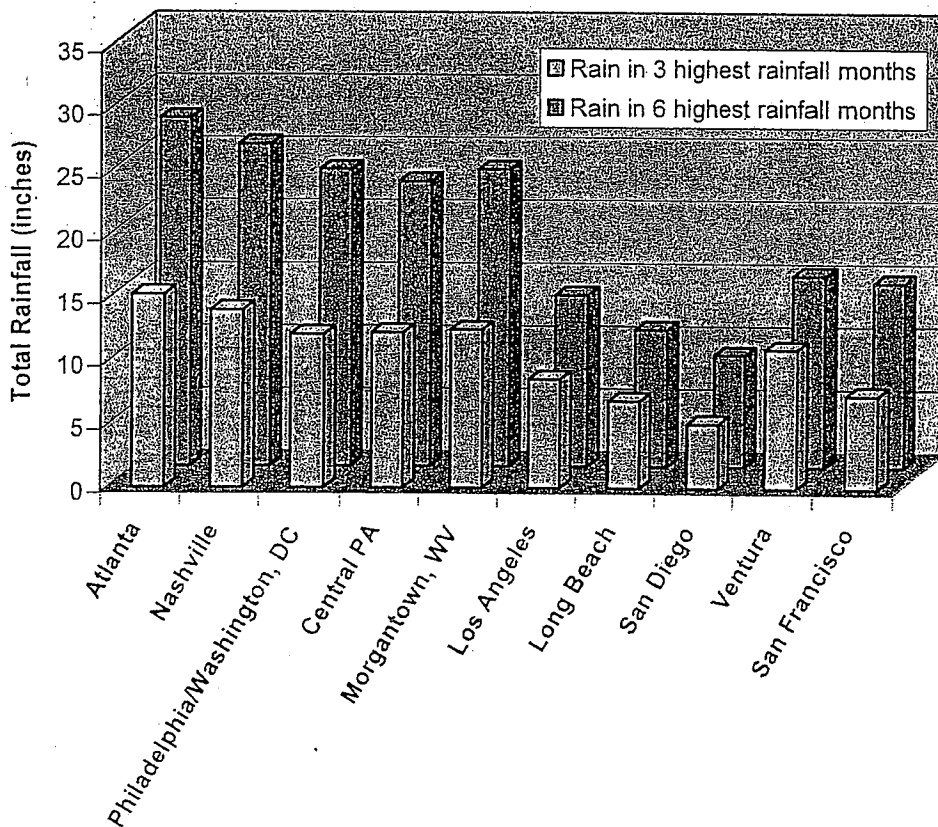
**RESULTS**

Table 2 shows the three highest and six highest months of precipitation for each location assessed. The southern cities experience their highest precipitation in the earlier months of the year, the northeastern locations in the warmest months, and the California cities during the winter and just before and after it. Snow is not a factor in any location, in that the California cities receive no snow, and snow in the southern cities comes rarely and in small quantities in the months of high precipitation.

**Table 2. Months with the Highest Precipitation/Totals**

Location	Three Highest Months of Precipitation	Six Highest Months of Precipitation
Atlanta	January-March	February-July
Nashville	March-May	December-May
Philadelphia	May-July	April-September
Central PA	May-July	April-September
Morgantown, WV	May-July	March-August
Los Angeles	December-February	November-April
Long Beach	December-February	November-April
San Diego	December-February	November-April
Ventura	January-March	November-April
San Francisco	November-January	November-April

Figures 1 and 2 exhibit the rainfall and evaporation totals, respectively, in the three and six highest rainfall months. The southern cities receive the most rain in these periods, the northeastern locations slightly less, and the California cities roughly half of the southern totals. Evaporation does not differ much among the sites in the three highest rainfall months, excepting San Francisco's somewhat lower amount. Philadelphia and environs and southern California are very similar in evaporation in their respective six highest months of precipitation. During this period, evaporation at San Francisco and Nashville is somewhat lower than in southern California and Philadelphia, and Atlanta has the highest quantity.



**Figure 1. Rain in Highest Rainfall Months**



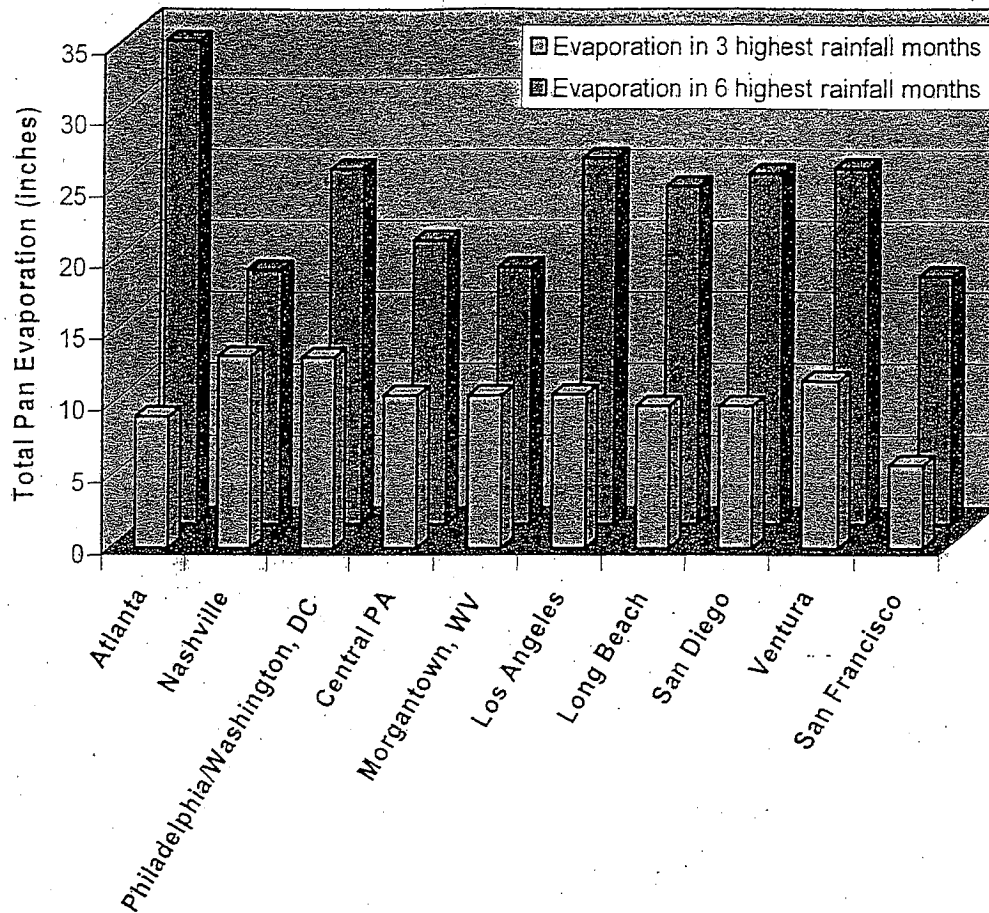


Figure 2. Evaporation in Highest Rainfall Months

Figure 3 offers the most telling portrait of the potential of evaporation to cut surface runoff discharge using LID techniques in California. Southern California locations exhibit a substantial excess of evaporation over precipitation in the six highest months of precipitation. Only Philadelphia has any excess in the three highest rainfall months, and the southern California cities' excess is about two to four times as large as Philadelphia's in these months. Therefore, even though southern California's wet season coincides with its period of lowest evaporation, its generally warm, sunny winters give it an advantage over other locations in the nation that have adopted runoff retentive LID measures. San Francisco has an evaporation excess in its six rainiest months, although a small deficit in its three wettest ones. Atlanta has a much larger deficit in this period. Inland areas in the San Francisco Bay region are generally warmer than the city itself and likely have somewhat higher evaporation. However, data were not available to verify this hypothesis. Ventura is represented by the place closest to the main urban concentration in the county offering evaporation data, the El-Rio – UWCD Spreading Grounds. As one illustration of the potential offered by LID, Berghage et al. (2007) performed green roof research at Pennsylvania State University, located in State College, PA. They found over 50 percent of annual stormwater volume to be retained and not discharged, even with as little as 20 mm (under 1 inch) of storage capacity, and peak discharge rate attenuation to no more than the pre-development level for the 2-, 25-, and 100-year frequency events. Figure 3 shows that all of the California cities assessed are in a more favorable position than State College in implementing green roofs, and hence would be expected to increase runoff retention to well over 50 percent with this LID technique.

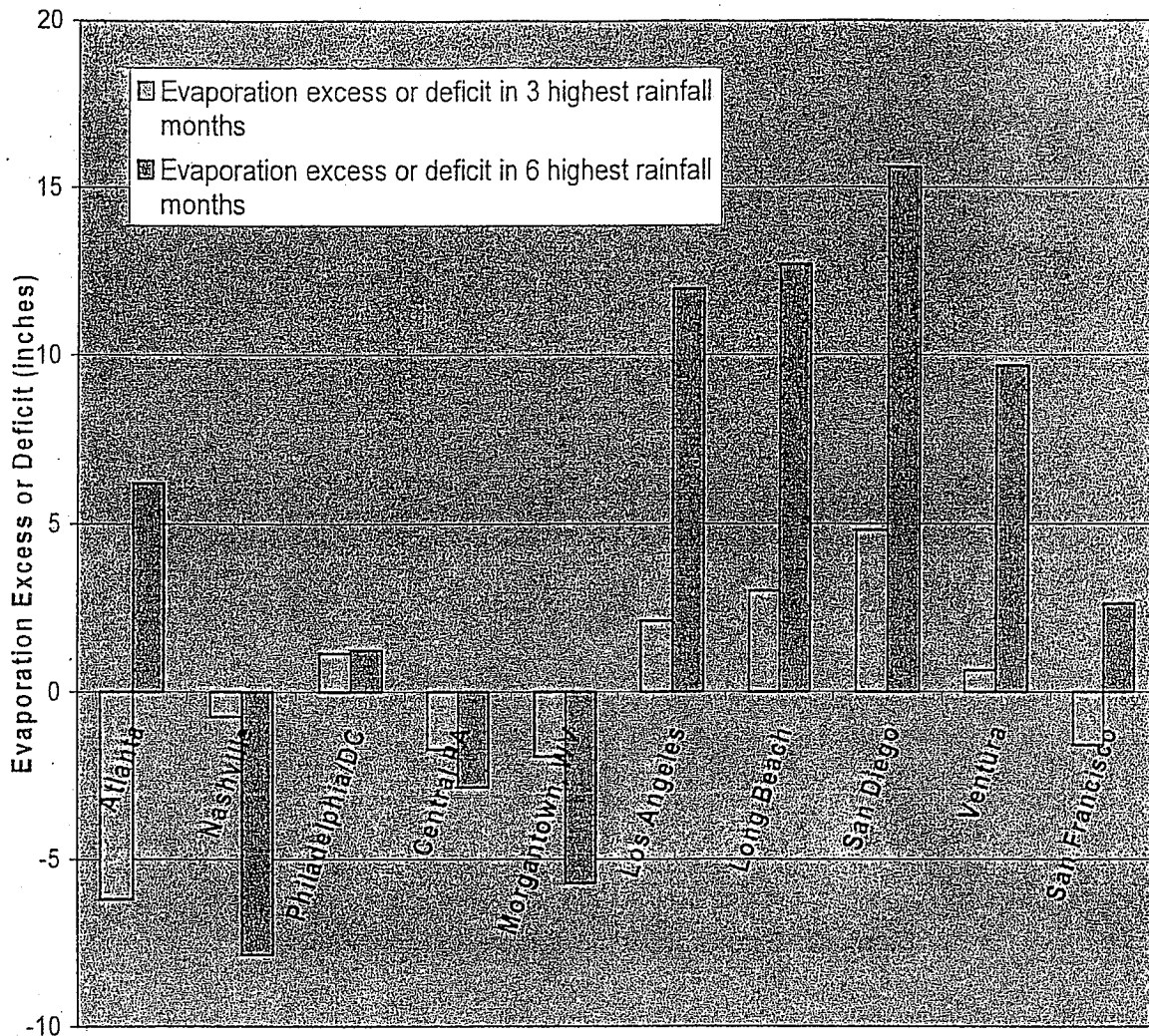


Figure 3. Evaporation Excess or Deficit in Highest Rainfall Months

## CONCLUSIONS AND RECOMMENDATIONS

Southern California has considerably greater potential to reduce the discharge of contaminated urban runoff through evaporation in LID stormwater management practices than other locations in the United States that have already adopted and mandated those practices or are considering regulatory proposals to do so. The San Francisco Bay Area's potential to utilize evaporation in LID stormwater management is equal to or higher than those other locations in the U.S. Furthermore, most locations can infiltrate much or even all runoff produced by typical water quality design storms and need not rely on evaporation. In addition, harvesting rainwater for beneficial uses can further subtract from surface discharge. California is unique among the locations considered in this analysis in having some reclaimed water distribution systems in place. These systems could be expanded to take harvested rainwater, and many unexplored opportunities exist to put runoff to good purposes to help solve the state's water supply problems. Recognizing all these points, the fact that California experiences most of its nominal annual rainfall during winter months is not a factor that technically justifies imposing relatively weaker runoff retention requirements than other jurisdictions nationally, such as West Virginia or Anacostia, Washington, D.C. Instead, in a number of California cities, evaporation potential, all things being equal, actually feasibly enables stronger requirements. For all of these reasons, California Regional Water Quality Control Boards feasibly can require capture and full retention of stormwater runoff produced by design events in new developments and redevelopments through LID methods. Boards should set thorough, objective

criteria that a development project proponent must use to demonstrate inability to satisfy these requirements on-site. For those cases where such a demonstration can be convincingly made, the Boards should require and provide for installing compensating, equivalent LID works off-site, so as to ensure that practicable storm water pollution reduction is achieved on a watershed or sub-watershed basis in those circumstances when it cannot be achieved fully on-site.

#### REFERENCE

Berghage, R., A. Jarrett, D. Beattie, K. Kelley, S. Husain, F. Rezai, B. Long, A. Negassi, and R. Cameron. 2007. Quantifying Evaporation and Transpirational Water Losses from Green Roofs and Green Roof Media Capacity for Neutralizing Acid Rain. Pennsylvania State University, University Park; PA.

# Critique of Certain Elements of "Low Impact Development Metrics in Stormwater Permitting"

2006 APR 10 PM 1 39

By Richard Horner

SAN FRANCISCO REGIONAL WATER

LOS ANGELES REGION

## GENERAL CONCLUSION

While the authors drew certain negative (and not always well-founded, as explained below) conclusions about a maximum 3-5 percent effective impervious area ("EIA") site design criterion, the results of the report's analysis overall contribute to the growing consensus that implementing LID according to a numeric metric is technically feasible in both new development and redevelopment contexts. The results thus buttress my findings in analyses performed earlier for San Diego and Ventura Counties and for the San Francisco Bay Area (Horner 2006; 2007a, b) and support the feasibility of meeting a 5% EIA standard in southern California. However, the report's suggestion that a "delta volume" standard be adopted would depart from standard and well-accepted practice in the United States, resulting in significantly greater volumes of stormwater with concomitant, significant increases in the mass volume of a range of pollutants in stormwater.

## CRITIQUE OF WATER QUALITY TREATMENT DESIGN BASIS

The authors of Low Impact Development Metrics in Stormwater Permitting ("the report") propose and employ in their case studies a quantity they term "excess stormwater runoff," which forms the basis for their sizing and designing of low impact development ("LID") facilities to treat stormwater runoff. In footnote 21 on page 31, the authors have defined "excess stormwater runoff" as the volume of post-development runoff minus pre-development runoff for the 85<sup>th</sup> percentile storm event (or for an equivalent water quality design event). However, using the differential volume ("delta volume") between pre- and post-development conditions breaks the long-standing national and state precedent of using the full volume of stormwater discharged from the developed site as the basis for stormwater best management practices ("BMPs") that store runoff for longer than a few minutes.

The virtually universal adoption (see examples below) of the full water quality volume instead of the delta volume occurred for good reasons. The total runoff volume from the 85<sup>th</sup> percentile event—the prevailing design standard in southern California—was determined through objective analysis to represent the point above which substantially diminishing returns in water quality improvement would accompany considerable size enlargement and, therefore, cost (Guo and Urbonas 1996). The analysis identified the *full* volume generated by the 85<sup>th</sup> percentile event—not some lesser quantity like the delta volume—as the appropriate threshold at which the decrease in benefits accelerates.

The use of a differential hydrologic measure that compares pre- and post-development states is common in the management of storm runoff quantity (i.e., hydromodification). The pre- vs. post-development measure is appropriate in that situation because successfully matching pre-

and post-development hydrologic characteristics causes no modification in the hydrologic status of the receiving water and, hence, no negative physical effects. When managing water quality, in contrast, any untreated volume (in the delta volume scenario, this would be the amount that originally flowed from the undeveloped land) would deliver to the receiving water the many pollutants characteristic of urban runoff. There, these pollutants would create negative physical, chemical, and biological effects. On the other hand, if the appropriate water quality volume is used (i.e., no less than the full volume of the 85<sup>th</sup> percentile event), the LID-based stormwater management BMPs should deliver no pollutants to the receiving water, since the retention and reuse or infiltration of that volume is practicable and achievable, as I have demonstrated separately by analyzing a range of development scenarios in southern California.

The loss in treatment capacity from using the delta volume measure, and hence the loss in water quality protection, would vary depending on climatology and the characteristics of the undeveloped parcel and the developed site (type of pervious and impervious land cover, soil, slope, etc.). In the Walnut Village and 60 California case studies presented in the report, the difference ranged from 15 to 20 percent and could be higher in different scenarios. This difference is not small, considering that the National Stormwater Quality Database (Pitt, Maestre, and Morquecho 2004) shows that pollutants like solids, metals, nutrients, and bacteria are typically present in urban runoff at concentrations two to five times as high as in storm flow from undeveloped land. Discharging the pre-development volume, contaminated by urban pollutants without any water quality treatment, would subject human users and aquatic life to substantial runoff quantities with pollutant mass loadings and potentially acutely toxic pollutant concentrations. These loadings and concentrations would be increased by factors of approximately two to five, compared to the pre-development state, thus compromising the beneficial uses of the water body that existed before development. It is essential for resource protection that the full post-development volume be retained onsite through infiltration, evapotranspiration, and/or harvesting for reuse.

As pointed out above, adopting a volumetric basis for stormwater treatment design and then subjecting that full volume to onsite retention or treatment has been the rule in the United States. Jurisdictions take differing approaches to defining that volume, but, once it is set, they utilize the entire quantity as the basis for BMP design. Common approaches include the storm percentile method: a storm event of selected frequency and duration is chosen, which correlates to a certain depth of precipitation spread over a watershed area. In addition to southern California, Georgia provides an example of the first approach (<http://www.georgiastormwater.com/vol2/1-3.pdf> at 1.3-1):

Treat the runoff from 85% of the storms that occur in an average year. For Georgia, this equates to providing water quality treatment for the runoff resulting from a rainfall depth of 1.2 inches.

The state of Washington employs a second approach, actually in relation to a storm percentile analysis (<http://www.ecv.wa.gov/pubs/0510029.pdf> at 2-28):

Water Quality Design Storm Volume: The volume of runoff predicted from a 24-hour storm with a 6-month return frequency (a.k.a., 6-month, 24-hour storm). Wetpool

facilities are sized based upon the volume of runoff predicted through use of the Natural Resource Conservation Service curve number equations in Chapter 2 of Volume III, for the 6-month, 24-hour storm. Alternatively, the 91<sup>st</sup> percentile, 24-hour runoff volume indicated by an approved continuous runoff model may be used.

Numerous jurisdictions, such as Maine, use the precipitation depth approach (<http://www.maine.gov/dep/blwq/docstand/stormwater/stormwaterbmmps/vol3/chapter2.pdf> at 2-12):

Stormwater management facilities must be designed to treat the first 1 inch of runoff ...

Maryland (<http://www.mde.state.md.us/assets/document/chapter2.pdf> at 2.1):

P= rainfall depth in inches and is equal to 1.0" in the Eastern Rainfall Zone and 0.9" in the Western Rainfall Zone ...

Pennsylvania

(<http://www.depweb.state.pa.us/watershedmgmt/cwp/view.asp?a=1437&q=529063&watershedmgmtNav=> at 3.3.4):

- Stormwater facilities shall be sized to capture at least the first two inches (2") of runoff from all contributing impervious surfaces.
- At least the first one inch (1.0") of runoff from new impervious surfaces shall be permanently removed from the runoff flow – i.e., it shall not be released into the surface Waters of this Commonwealth. Removal options include reuse, evaporation, transpiration, and infiltration.

and North Carolina

([http://h2o.enr.state.nc.us/su/documents/BMPManual\\_WholeDocument\\_CoverRevisedDec2007.pdf](http://h2o.enr.state.nc.us/su/documents/BMPManual_WholeDocument_CoverRevisedDec2007.pdf) at 2-2):

Non-coastal counties: Control and treat the first 1.0" of rain. (Note: a more complex basis applies to coastal counties.)

In none of these cases does the stormwater treatment design basis involve a delta volume computation such as advocated by the authors of the report.

## CRITIQUE OF CASE STUDIES

Even though the report forthrightly demonstrates technical feasibility, it nonetheless takes a somewhat negative stance by overemphasizing difficulties and high costs, both of which are poorly justified. The report, moreover, is devoid of estimates of the benefits that accrue from reducing the discharge of pollutants to receiving waters, recharging groundwater through infiltration, conserving water through harvesting and reuse, and decreasing hydromodification of

receiving waters. I made such estimates in my previous reports, and these benefits are very significant. For example, I concluded that (Horner 2007a):

Draining impervious surfaces onto the loam soils typical of Ventura County, in connection with limiting directly connected impervious area to three percent of the site total area, should eliminate storm runoff from some development types and greatly reduce it from more highly impervious types. Adding roof runoff elimination to the LID approach (by harvesting or directing it to downspout infiltration trenches) should eliminate runoff from all but mostly impervious developments. Even in the development scenario involving the highest relative proportion of impervious surface, losses of rainfall capture for beneficial uses could be reduced from more than 85 to less than 40 percent, and pollutant mass loadings would fall by 83-95 percent from the untreated scenario when draining to pervious areas was supplemented with water harvesting.

Failure to include a discussion of such important benefits inappropriately biases the report against feasible LID numeric performance standards such as an EIA limitation. There is a somewhat grudging admission that LID based on an EIA limitation can be implemented, but this is countered with assertions that doing so will take some extra work and cost too much. Both of these negative claims should not be given much weight for the reasons stated below. Furthermore, neglecting the aforementioned very real and important benefits of robust LID implementation omits the counterbalancing consideration that the aquatic environment will be better protected with an improved site design paradigm.

Additionally, the report fails to take into account two aspects of LID that are at least relatively cost-neutral or, in many configurations, even cost-saving. First, landscaping is a normal part of developed and redeveloped sites and can serve stormwater management purposes, as well as aesthetic purposes, with little or no extra cost. Second, most LID practices primarily utilize soft infrastructure instead of more expensive hard infrastructure like extensive piping and concrete. While the cost analyses presented in the report were poorly detailed in the first place, as discussed in greater depth below, it appears that these financially mitigating factors were not even considered.

#### Walnut Village

The report's presentation of the multi-family residential Walnut Village redevelopment project reflects the general criticisms noted above. It demonstrates the technical feasibility of implementing LID practices according to an EIA limitation (in fact, the authors achieved an EIA of zero), stating, "this result ... illustrates that LID benefits can be achieved by both extensive implementation (i.e., routing of runoff to vegetated systems) and more intensive design of active landscaping (i.e., greater retention depth) where opportunities exist."

Nevertheless, the authors put a negative spin—unjustified, in my opinion—on this success. In one negative passage the report declares, "the 14-17 inches of retention required to capture the delta 2-year volume is much less feasible, as it would require a combination of fairly deep amended soils and significant surface storage." I contend that providing 14-17 inches of storage in surface ponding and soil pores is entirely feasible. For instance, 18 inches of amended soils

with 33 percent porosity would provide 6 inches of storage, which could be supplemented by 8-11 inches of above-grounded temporarily ponded volume, a thoroughly feasible design. Elsewhere, the report characterizes decreasing ELA from 18 to 0 percent as “difficult,” although this decrease merely involves converting non-essential hardscape to landscaping. The reader is left to wonder why any developer would choose to buy and install *non-essential* asphalt or concrete (almost certainly more expensive than LID landscaping) rather than constructing vegetated BMPs that would be an asset in more ways than one. In my opinion, it is more “difficult” from fiscal and marketing perspectives to justify the use of pavement for no reason. In any case, whatever impression one has of this issue, from a technical, objective perspective, the report does not contain a reasonably complete and even-handed assessment of costs, significantly undercutting its claims of infeasibility. Likewise, subjective and undefined assertions regarding the “difficulty” of meeting even relatively high volumes (such as the two-year storm) are presented without supporting analysis or justification which, once again, limits the utility of the report.

Further, with regard to landscaping, the final sentence in the case study states, “landscape plans typically include features that restrict usage of landscaping for runoff control (e.g., tree choice can limit inundation depths and duration), therefore, it is unreasonable to assume that all landscaping may be available.” There is no reason why landscaping plans should be incompatible with vegetative LID practices, however. Bioretention cells and similar LID features routinely include trees, which serve several important hydrologic roles (rainfall interception, advancing infiltration by opening conveyance pathways through soil, water storage in tissues, and transpiration). It is no challenge for landscape designers to select trees that are not limited by moisture conditions in such BMPs.

The Walnut Village site has hydrologic group B soils, to which the authors assigned an infiltration rate of 0.2 inch/hour, assuming that the soils would be “compacted”. They thereby ignore a fundamental LID practice: guarding against the removal and compaction of soils outside the active building area during construction (Hinman 2005). While infiltration rates vary depending on the specific soil type within a hydrologic soil group, B soils overall have rates much above the authors’ assumption; i.e., 0.5-1 inch/hour (<http://www.vcstormwater.org/documents/workproducts/landuseguidelines/appC.pdf>). The National Resource Conservation Service (2007) observes that, “Soils that are deeper than 100 centimeters [40 inches] to a water impermeable layer or water table are in Group B if the saturated hydraulic conductivity of all soil layers within 100 centimeters [40 inches] of the surface exceeds 4.0 micrometers per second (0.57 inches per hour) but is less than 10.0 micrometers per second (1.42 inches per hour).” It would be irresponsible building practice anywhere, and certainly in a development that is implementing LID practices, to permit such indiscriminant soil disturbance that across the landscape the infiltration rate is decreased to as little as 15 percent of its natural magnitude.

The infiltration rate assumption has consequences for the analysis and the authors’ interpretation of their results. While the report shows that adequate volume attenuation could be accomplished to meet the case study’s stated objectives, with the 0.2 inch/hour infiltration rate, active landscaping drain times could exceed the recommended 72-hour maximum and approach 83 hours. If the infiltration rate were just slightly higher at 0.3 inch/hour, though, drawdown would



occur 50 percent faster and easily lower the drain time beneath the maximum. Avoiding the drastic diminution in hydraulic conductivity that the authors have assumed is eminently achievable on the site's B soils and would produce an even more optimistic picture than the already successful Walnut Village hypothetical design.

The authors observe that imposing a fixed EIA standard alone promotes the routing of runoff to vegetated systems but does not boost the companion strategy of pursuing more intensive design of active landscaping. In so doing, the authors provide a valuable service in pointing out that a design basis must accompany the EIA limitation for real effectiveness. An example of such a comprehensive standard is:

Limit effective impervious area to 3 percent. Impervious surfaces can qualify as "ineffective" only when the entire volume of runoff (based on the design storm) from those areas is captured onsite through infiltration, evapotranspiration, and/or harvesting for beneficial use. In the rare circumstance in which onsite compliance is infeasible according to established criteria, the permittee or developer shall identify opportunities for off-site mitigation in the same sub-watershed that will achieve the overall goal of reducing effective impervious area to no more than the 3 percent design standard.

#### 60 California

Like the Walnut Village case study, the authors' presentation of the 60 California multi-use commercial/retail redevelopment project also tends in an overall manner to support my own analyses and conclusions regarding the practicability of meeting the 5% EIA standard. This case study, too, demonstrates the technical feasibility of meeting a maximum 5 percent EIA standard, in this case by employing a green roof and water harvesting on a highly constrained site. Once again, though, the authors put forth some negative interpretations that are, in my opinion, unjustified.

One such claim is that green roofs and cisterns are generally beyond the level of BMP implementation in common practice in the United States nowadays. In fact, both practices are no longer at all unusual. Without attempting any comprehensive literature review of applications, I would note that Chicago has numerous green roofs in place, most prominently on its city hall ([http://www.artic.edu/webspaces/greeninitiatives/greenroofs/main\\_map.htm](http://www.artic.edu/webspaces/greeninitiatives/greenroofs/main_map.htm)). In Seattle, green roofs top a growing number of public and private buildings ([http://www.seattle.gov/DPD/GreenBuilding/OurProgram/Resources/TechnicalBriefs/DPDS\\_009485.asp#case](http://www.seattle.gov/DPD/GreenBuilding/OurProgram/Resources/TechnicalBriefs/DPDS_009485.asp#case)). Seattle's city hall also harvests rain for graywater supply and irrigation, as does the county administration building and a neighborhood environmental education center (<http://www.harvesth2o.com/seattle.shtml>). The Texas Water Development Board (2005) prepared an excellent, practical manual on water harvesting at all scales, complete with examples in place and design calculations. The manual covers the entire state of Texas, whose western areas have rainfall conditions very much like southern California's. Hence, little adaptation is needed to use the manual's recommendations here.

The report also claims that the suitability of green roofs for southern California is not well understood and that, "during the rainiest times of the year in southern California, the potential

evapotranspiration is the lowest, meaning that the ability to regenerate storage capacity between storms is low.” It is true that the potential is lowest during the wettest season, but, given the frequent sun and relative warmth during dry intervals in the southern California winter, the regenerative ability is still not “low.” Berghage et al. (2007) performed green roof research at Pennsylvania State University (PSU). They found that over 50 percent of annual stormwater volume was retained and not discharged, even with as little as 20 mm (under 1 inch) of storage capacity, and the site reduced peak discharge rates to no more than the pre-development level for the 2-, 25-, and 100-year frequency events. PSU is located in Centre County, PA, where precipitation is not highly seasonal but tends to be slightly greater in the summer, compared to other months. Pan evaporation rates there range from 3.3 to 4.2 inches/month during June-September (<http://www.pa.nrcs.usda.gov/technical/Engineering/PaRainEvapRunoff.pdf>). The November-February Los Angeles pan evaporation range is 3.5 to 4.0 inches (<http://www.calclim.dri.edu/ccda/comparative/avgpan.html>). Therefore, Los Angeles has as much evaporation potential in the months when it most needs that potential as locations with successful green roofs elsewhere. Similar research should be performed in California, but enough encouraging evidence exists to begin establishing full-scale projects, which can be monitored to confirm performance and refine design guidance for the region.

A final negative point made by the report is that green roofs and water harvesting may conflict with existing building and health codes. Codes should not be regarded as an unbending constraint on moving to new, more environmentally beneficial technologies. As experience in the growing number of applications of both practices shows, building safety and health are not being compromised. If constraints do exist in a jurisdiction’s codes, they should be examined to assess their justification and revised if no overriding reasons exist to maintain them. Indeed, it is my understanding that municipal separate storm sewer permits often if not always require that local codes be amended to support implementation of programs and approaches to reduce stormwater pollution.

#### Redevelopment of Kmart Site

The Kmart site redevelopment case study was based on the use of vegetated filter strips and infiltration trenches. Its primary purpose was to estimate costs for these practices by apparently taking a challenging site with relatively poor soils. As an initial manner, the decision to evaluate only one site to reach a conclusion about costs of LID practices is suspect. This is particularly the case when, as here, the report’s conclusions tend to contradict mainstream evaluations of the cost of implementing LID. Such studies, including an analysis of several projects by the U.S. Environmental Protection Agency, report significant cost savings compared to traditional water quality approaches across the vast majority of building sites.

More specifically, there are several flaws in the foundation of this case study. The authors developed estimates of runoff volume in pre-development and post-development conditions by using the Natural Resources Conservation Service’s Curve Number Method, which is well-known to overestimate the pre-development hydrologic characteristics and thus set the wrong targets for post-construction designs. The site has hydrologic group C soils. The authors performed calculations assuming an infiltration rate of 0.5 inch/hour, higher than the rate used for B soils in the Walnut Village case study (an unexplained discrepancy). There appears to

have been no consideration of organically amending soils to increase water storage and improve infiltration. Soil amendment for these purposes is a very common LID practice, especially in group C soils. The authors appear to have given some thought to other LID practices (tree boxes, bioretention, pervious pavement, green roofs, and water harvesting) but rejected all of them for unexplained reasons. Failure to use a broader pallet of alternatives and soil amendment indicates that the case study may not have been based on the most technically effective and/or cost-effective choices.

This case study fails to convincingly meet its objective of demonstrating what the LID designs would cost, in large part because the authors give no detail whatsoever regarding how the cost figures were derived. The per-acre and percentage-of-redevelopment costs are simply not credible unless their derivation can be traced and confirmed. The cost analysis also suffers from the general criticisms stated above regarding costs: it implicitly assigns all landscaping costs to the filter strips, although these areas would be landscaped anyway at roughly the same cost; the analysis further fails to recognize that stormwater runoff must be conveyed and managed in some way, and those obligations carry costs, which are probably higher if performed conventionally through the use of large quantities of piping and concrete. With these shortcomings in analysis, it is assuredly not justified to say, as the case study conclusions do, that, “[i]t is clear from the Kmart case study cost estimates that the proposed draft permit requirements would significantly increase the drainage costs of urban redevelopment projects.” And although more difficult to monetize, environmental benefits—and their economic value to society—are entirely neglected in this case study, as in the others.

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Comments From Businesses/Companies

Tentative Ventura County  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002





TECS Environmental Compliance Services

106 South Mentor Avenue – 125 • Pasadena, CA 91106

Tel: 626.396.9424/Fax: 626.396.1916/email: rtahir@tecsenv.com

**E-memo**

Date	April 9, 2009
To	Sam Unger, LARWQCB
From	Ray Tahir
Subject	Revised Ventura MS4 Permit Comments

Please disregard the previous comments bearing the date of April 7, 2009 and replace with ones provided below. There is one révision (I), in blue and one added (III), also in blue.

I. Receiving Water Limitations

• Issue

The draft Ventura Permit – and Los Angeles County MS4 Permit – should revise its receiving water limitation provisions. RWL provisions in both permits prohibit water quality standard violations, but not exceedances. The problem with RWL in general is that prohibits discharges that cause or contribute to a water quality standards violation. It is a problem because it also seems to assume that permittees are in constant violation of Part 3.1 because under Part 3.3, permittees are required to comply with Part 3.1, which requires:

*through timely implementation of control measures and other actions to reduce pollutants in the storm water discharges in accordance with the requirements of this Order including and modifications.*

To complicate matters, the RWL provision goes on to say that:

*If **exceedance(s)** of water quality objectives or water quality standards (collectively WQS) persist, notwithstanding implementation of this permit, the Permittees shall ensure compliance with Receiving Water Limitations 1 and 2 by comply with the following procedure ...*

You will note that the issue here is not a water quality standard **violation** but rather a water quality standard **exceedance**. These are different issues. A violation connotes non-compliance while an exceedance suggests that a violation may be occurring, which cannot known until a determination is made, presumably by the permittee or the Regional Board, that the permittee caused or contributed to it. In other words, in one breath the RWL provision assumes that permittees are constantly violating water quality standards but do not have to worry about it as long control measures and other actions in keeping with the permit as being implemented. However, if the exceedance – not violation –

persists, despite implementing the permit, the affected permittee is required to submit a report specifying new BMPs to address the exceedance – but not the violation. DO YOU SEE INCONGRUENCY HERE AND THE CONFUSION IT CAUSES? Things would be simpler BY changing violation to exceedance as in the case with Orange County MS4 permits. If a an exceedance persists and the affected permittee does not follow proper corrective procedure (through the iterative process) then a violation would arise.

There is still yet another problem requiring correction: Water quality objectives and water quality standards can be interpreted to mean that they are the same thing. The RWL provision as mentioned above refers to a water quality standard as being a combination of water quality standard and water quality objective, which could mean the same thing. But they can't be. The Los Angeles Basin Plan defines a *water quality standard as a combination of beneficial uses and water quality objectives (see Los Angeles Basin Plan, page 3-1)*. What's missing is the beneficial use piece. The Orange County MS4 permit RWL language addresses this problem.

Why is this important? If an exceedance of water quality objective occurs but no beneficial use is being impaired, then there should be no exceedance and therefore no violation for that matter. It is especially important now given that the NRDC/Baykeeper are suing the County of Los Angeles for allegedly not complying with RWL provisions (thought it's not exactly clear as which ones).

Lastly, the Regional Board should give consideration to eliminating RWL provision 3.2. The way a nuisance is defined it is almost impossible to prove that a permittee has caused or contributed to one.

### III. Post-Construction Runoff Mitigation Requirements from Streets, Roads, and Highways

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- Issue

The proposed Ventura MS4 permit calls for requiring post-construction runoff mitigation for additional project categories, including streets, roads, highways, and freeway construction of 10,000 square or more of impervious surface. Such projects are required to incorporate USEPA guidance in re: *Managing Wet Weather with Green Infrastructure* – albeit to the maximum extent practicable (MEP). This requirement, notwithstanding the MEP qualifier, really requires much more discussion before it can be written into any MS4 permit. Given the current design wisdom relating to street and road design, which is based on cost, performance, and safety, it is not a good idea to require infiltration technologies without doing a study and piloting some of the controls that are discussed in the USEPA's guidance document on this subject. In theory such controls appear to be feasible but may not be practical in the real world; and may event result

unintended environmental consequences (which supports the need for a CEQA review).

- Recommendation

Require a study and pilot projects for testing green technologies for streets. This task could be assigned exclusively to CalTrans and/or Ventura County.

### III. The MS4 Permit Should Have a Provision to Enable a Permittee to Ask for Clarification

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- Issue

Since the municipal NPDES program began in Los Angeles County, each permit has had issues with clarity, conflicting requirements, and just plain old mistakes. When these issues were brought to the Regional Board – and even to the Principal Permittee – they were not acted on except through the administrative appeal process initiated by permittees.

- Recommendation

The permit, therefore, should contain a provision that allows a permittee to ask for clarification as to the meaning a permit requirement that may not be clear, confusing, or in error. The first step in that process would be to ask Regional Board staff for such a determination. Staff should be compelled within 30 days to provide such a response. If, however, staff chooses not to respond, the affected permittee should be able to ask the Regional Board to review the matter. If it chooses not to, then the issue could be appealed to the State Water Resources Control Board through an administrative appeal.

This recommendation is made in consideration of the NRDC/Baykeeper litigation against the County of Los Angeles over RWL compliance. As has been noted above under the RWL issue, the RWL provision is extremely unclear and confusing, and can be rise to multiple interpretations.



Comments From Residents

Tentative Ventura County  
Municipal Separate Storm Sewer System (MS4) Permit

NPDES Permit No. CAS004002

April 2, 2009  
Executive Officer  
Ms. Tracy Egoscue  
Los Angeles Regional Quality Control Board  
320 4<sup>th</sup> Street, Suite 200  
Los Angeles California  
90013  
Fax no. 213/ 576-6640

2009 APR 14 PM 2:01  
LOS ANGELES REGIONAL WATER BOARD

RE: The Ventura County Wide Ms4 Tentative NPEDS

Dear Ms. Egoscue,

I am of the opinion that The Los Angeles Regional Water Boards non-compliance is due in large part to Cities and Counties adopted Water programs -through the State -aren't following the States guidelines for; (1) Drinking Water purification, and or (2) enforcement of keeping contaminates from entering the water bodies of the State.

- . How as residents of Ventura County can we bring compliance to California, without sacrificing further delays and expenses?
- . How do we get back on track enforcing Statues, Laws and State Water Regulations, when there is such wide spread "non-compliance" throughout the State more specificity Ventura County ?
- . But more to the point; how has the non-compliance been allowed to reach such proportions?

As a layperson it would appear to me that besides the obvious; (1) The Los Angeles Water Boards being under staffed, (2) and or unequipped to require or carry out enforce compliance when a violation does occur, would be the fact that I see no follow through. It's not that Statues, Laws and Regulation aren't on the books, it's that there is no continuity between action and the consequence. I've personally been involved, reporting the noncompliance since 1988, watching as Cities and Counties dictate policy to the State and Federal Government.

When the laws and Statues enacted to protect the resident of California's drinking water are sidestepped in order to keep the defense industry humming, while the private corporations get rich someone has dropped the ball. Clearly, I don't advocate that the Los Angeles Regional Water Board is facing an easy task. What I am saying is that it's time to take back the Los Angeles Regional Water Board from the bureaucrats, and start enforcing the States "**Clean Water Act**".

When are you going to stop dragging your feet? Tell me how many citizens have to die from cancer before the laws are enforced?

Sincerely

cc; State Water Resources Board

Ginn Doose, c/o P.O. box 2310, Clearlake, CA. 95422

E001332

8-578

June 20, 2007

fax. No. 916/341-5284

State Water Resources Control Board  
Mr. Jeff Barnickol, and or  
Ms. Zori Lozano-Frudrick  
1001 I Street  
Sacramento, Ca. 95814

Re: The 2007 Strategic Plan Up-Date out reach Work Book

Dear Zori Lozano-frudrick, or Jeff Barnickol,

I've submitted my comments to State Water Resources Control Boards attention the past several months on each of the Work Shops being conducted. I am elated that the SWRCB is becoming more in tune to the publics concerns. Issues that are near and dear to me are addressed in my comments dated ;

- . **May 23, 2007**, Water Rights Enforcement Work Shop,
- . **June 12, 2007**, Public Work Shop to receive information regarding policy direction on, Water Quality Enforcement.

Other related issues filed in oppositions were:

- . **March 6, 2007**, to the WDR for Municipal Storm Water Discharge, (within the Ventura County Water Protection District, ((NPDES)) No. CAS 004).
- . **June 11, 2007**, Item 4A and 4D Agenda Summary City Council Ventura County Water Works District No. 8 Simi Valley Community Development Agenda Regular Meeting .

**My concerns stem from knowledge of violations with;**

- . Federal Regulations that protect residents under "Health and Safety".
- . Drinking Water contamination
- . Taking a more active role in resolving "Noncompliance" by Communities and Cities within the State of California.
- . Stronger enforcement of Statues, Laws and Regulations already adopted, and the filing of criminal suites against violators.

A review of the June 14, 2007 Work Shop Up-Date list eight /trends topics that the June 28th Summit Meeting will be addressing. I take personal issue with;

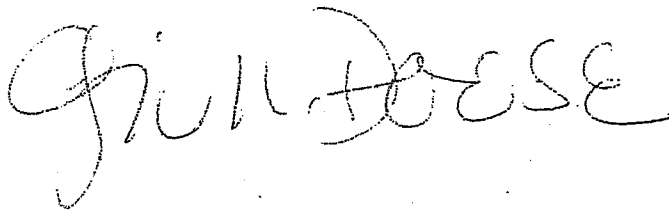
- . Changing political reality/greater awareness of the public involvement, and public process.

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June 20, 2007  
SWRCB/Doose

- Toxic chemicals /hazard waste in Drinking Water.
  
- Environmental stress/impact from contaminates on communities. Contaminates influence air, water quality, and caused by potential hazards when not reported to public. If, the Environmental Impact Report's weren't done, or the hazards have been removed from EIR's it placed the public at risk.  
An example is;  
(1) The Rocketdyne Missile Site where no EIR's were ever done for that site even though three melt down took place.  
(2) Shale from the alluvia debris of the Las Llajas and Chivo's Canyons, and their tributaries impact the down stream waters.
  
- Riparian Rights/ water being illegally diverted for Cities/Communities own personal gain. The falsifying of Federal and State documents by Cities and Communities to appear in compliance.

Enclosed for your review are the sited comments and opposition.  
Sincerely,

Ginn Doose  
4922 Alta Street  
Simi valley, Ca.  
93063  
c/o P.O.Box.2310  
Clearlake, Ca.  
95422



cc; Mr. Dennis White DHS/ IGO      fax. 202/ 254-4294  
Miss Song Her, Clerk of the Board      fax.916/ 341-5620

August 31, 2007  
NPEDS  
Attn; Mrs. Cassandra Ownes  
Permit Industrial Unit/sect.  
Cal. EPA-LARWQCB  
Region 4, Suite 200  
320 West 4<sup>th</sup> Street  
Los Angeles, California  
90013

Fax. No. 213/ 576-6640  
Tel. 213/ 576-6600

Copy of hand written  
Opposition, (1) faxed 9/4/07  
proof, and (2) 8/10/07 filing  
To Ms. Rainey, D.T.S.C.P.C.A.U.

RE: The Boeing Company Santa Susana Field Laboratory National Pollution  
Discharge Elimination System Permit Amendment (Proposed Order No.  
R4-2007-OXXX), and Water Discharge Requirements.

Dear Mrs Ownes,

When I first started to review the documents listed below;

- The Proposed Order R4-2007-OXXX,
- The Fact Sheet,
- The Administration Civil Liberty Complaint, and
- The Consent Order for Corrective Action.

I felt we were off to a good start, making progress of;

**Identifying, Addressing, and Containing**

the toxic contamination that has spewed carcinogens into the Air and Water Supply for the  
Ventura and Los Angeles areas for 57 years now.

I appreciate the efforts that went into assisting the formulation of this order. But in all  
honesty, I was hoping to see stronger wording/language. I am of the opinion that some of the  
statements are misleading and somewhat contradictory. I refer to;

- "Transported using piping to a Natural Drainage Channel", P. 9 Fact Sheet.
- "Provide a significant portion of the Headwater", P.28 Order/No. R4-2007-OXXX.

Page 2  
NPEDS/Proposed Order  
Mrs. Ownes /Doose

. "Discharge is located in Arroyo Simi and the sediment contraction at the Arroyo Simi East of Hitch Blvd., or at Simi Valley Water Quality Control Plant should not exceed the interim effluent limitation. Since these facilities are located near the top of the Water Shed, The Discharger may choose to collect sediment samples closer to the facility"  
P. 55, of Order No. R4-2007-OXXX.

This statement bothers me, it would appear that the effluent will be piped passed Simi Valley, and dumped the effluent in a down stream Community, still flowing towards the Pacific Ocean.

In other words Boeing isn't changing the amount of effluent discharged, it's just being dumped in some one else's "back yard" using the **Band Aid** approach. I question if you are not testing missals any longer (MWH-2006 Report SSFL Area 6) as of 1992, what is all the effluent from? Remember the Simi Arroyo flows into the Cajaguas Creek than to the down stream Communities.

. "Boeing operation at the SSFL since 1950" Doc. The Consent Order for Correction Action, P. 2, 2<sup>nd</sup> Pf., 2-3 sentence.

. "DTSC issued Post Closure Permits for Area's I, and III on May 11, 1995. The Post Closure Permit for Area's I, and III was issued to [The Boeing Co. Rocketdyne Pollution And Power]", as owner and operator". The wording tells me that Boeing and Rocketdyne are held by the same Parent Corp. that just appear to be two different no related Corporations, when actually they are one in the same.

. "The Discharge is Storm Water and it is near the top of the Water Shed, the Discharger may utilize the option of Sampling the OC Pesticides and PCB's or Sampling the receiving Water. The Discharger may also choose to join the Cajaguas Creek Water Shed, TSDL Monitoring Program and Monitor at an Established Compliance Sampling location in the Simi Arroyo", P. 28 Fact Sheet.

I'm concerned, I could go on but there are too many items that don't make sense. I've tried to list a few discrepancies that are being overlooked. With the on going violations to the Public's Drinking Water for 57 years now, I'm disappointed that the language / wording wasn't "Stronger".

**I'm in favor of asking for an investigation by the State Attorney General.** Let's take this back to the (State Water) Board and work on making this "Fool-Proof". It's criminal what has taken place here in Los Angeles and Simi Valley. And, I'm told that in Washington State near where Boeing has its headquarters there has been reported violations from that plant.  
Sincerely,

Ginn Doose, P.O.Box 2310, Clearlake, Ca. 95422



E001336

8-562



June 12, 2007

State Water resources Control Board  
Miss Song Her, Clerk to the Board  
1001 I Street, 24<sup>th</sup> Floor  
Sacramento, Ca. 95814  
Fax No. 916/ 341-5620

Re; Revised Public Workshop to receive information regarding policy direction on,  
Water Quality Enforcement. Comments on items 1-6 for discussion in the Workshop,  
on June 28, 2007, participants comments due on June 14, 2007.

My comments will address items 1-6, detailed suggestions on stronger enforcement tools will be lengthier and more direct.

**1. Recommendations on modifications are;**

- Adopt stronger wording for all State Water Resource Project/programs, to include the National Flood Insurance Program, (NFIP) within the State of California.
- Enact and enforce legal consequences for violations of; Title 42 U.S.C. sec. 4001-4128 under the Authority of the Executive Order no.12127 issued March 31, 1979 Title 44, CFR, Ch.1 sec.59-77 of the NFIP.

In particular an example would be; "violations of any, or part of the adopted Water Ways/Flood Plains, or Flood Ways SHALL cause litigation to be filed on behalf of the Federal Government, and its citizens, or a citizen of the State who has been harmed or property damaged by the violation". Authority under Title 44 CFR, sec. 60.25 duty of State coordinating agency.

**2. Suggestions on factors to consider in prioritizing enforcement would be;**

- Any reported violations, and or detected violations of any kind,[no matter how controversy] should be the SWR top priority.
- Enforcement must be your first consideration, under adopted Waters within the State of California.
- Human safety , public loss from damages caused by noncompliance as sighted under; Title 44,CFR, sec 60.3 (a)(2)which speaks directly to the cover-up at the Rocketdyne Missal site, that the City of Simi Valley is and was responsible to monitor as Water Works no. 8 (Previously no. 17) as overseers.
- Enforce Authority under sec. 404 of the Federal Water Pollution Control Act, Amendment of 1972, 33 U.S.C. 1334, and (3) review "ALL" permits to assure site is safe from flooding.

**3. Red flags to look for in measuring the effectiveness of the Water Quality Enforcement Program are as follows;**

- Report noncompliance, especially incidences that have gone on undetected/covered-up by the Communities/Cities, or State Agencies for their own personal gain.

An example is the Rocketdyne facility/site where the three melt downs weren't made public until; a) the 1959 melt down in October of 2005, b) the 1963, and the 1969 melt downs on April 9, 2007 at the public Rocketdyne meeting in Simi Valley, Ca.

- The State, and or the Federal Government needs to take action filing a criminal suit against the City of Simi Valley, and the owners of the Rocketdyne Missal site, under sec. 404 of the Federal Water Pollution Control Act on behalf of the citizens of the San Fernando Valley and Ventura County. As dictated under Title 44, CFR, Ch.1, sec. 60.3 (a)(2) of the NFIP.

#### **4. Steps to achieving a better informed public, regarding enforcement of Statues and State Water Resources Regulations.**

- To set up and utilize a community "Watch Dog", (as we are commonly called), that would be required to attend City Council Meeting, etc., who would be the community voice who would report on information acquired from the public input on proposed projects/ or violations on existing sites.
- Written reports would go directly to the SWRB, regarding violations of Statues, Laws and adopted Regulations.
- Make all Laws, Statues and Adopted Regulations available to the public on line that are germaine /relevant to proposed projects for review. As sited under the E.O. 12127 of March 31, 1979 under Title 44, FR 19367, 3 CFR 1979.

#### **5. Suggestions on becoming a more effective Water Quality Board.**

- Stronger enforcement of the adopted Statues, Regulations and Laws on violations, and criminal acts committed against the public.
- File suit on behalf of the citizens of the State/Community who has suffered damages by the noncompliance of the Cities/Communities who have failed to enforce and have dropped the ball in their failure to administer the State Water Recourses and National Flood Insurance programs with the State.
- Take an active role in assisting in resolving the violation.

#### **6. Your NONCOMPLIANCE, is the most "significant inconsistence" of the State Water Resources Board.**

- The SWRCB failure to administer and enforce the NFIP, The Clean Water Act, Federal Funded Programs, within the designated flood way/ flood plain etc., for Low Income Residents under the authority of Title 44, and 42 Health and Safety.
- The failure to enforce Housing and Urban Development Act of 1969, approved Dec. 1969, and Title XIII of the Housing and Urban Development Act of 1968, allows noncompliance to fester and develop into further violations.



P. 3

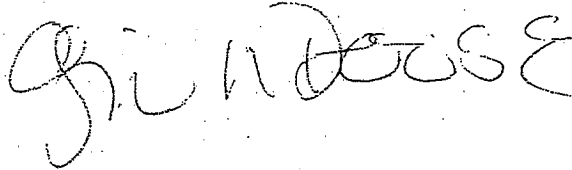
June 12, 2007

SWRCB

P.7, item III entitled, Determining "Priority" Violations states; "all violations subject to mandatory minimum penalties pursuant to California Water Code 13385". Clearly with Statues, Regulations and Laws having been adopted the Rocketdyne fiascos should never have taken place.

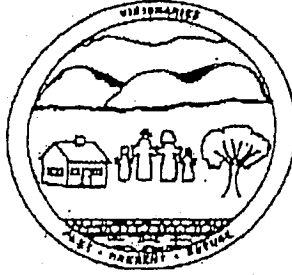
The State Water Resources failure to step up to the plate has violated its own Statues, Laws and regulations adopted to prevent Water contamination of its drinking water. Please refer to May 23, 2007 comments, as well as the June 4, 2007 comments regarding Riparian Rights. Attachments enclosed to provide assistance.

Sincerely,



Ginn Doose  
4922 Alta Street  
Simi Valley, Ca.  
93063  
c/o P.O.Box 2310  
Clearlake, Ca.  
95422

cc; Mr. Dennis White, IGO DHS/FEMA



TERESA JORDAN  
3152 SHAD COURT  
SIMI VALLEY, CA 93063  
TELEPHONE NO. (805) 522-5016

TO: Ms. Tracy Woods  
LARWQCB  
320 West 4th Street, Suite 200  
Los Angeles, CA 90013

FAX NO.: (213) 576-6640

DATE: April 8, 2009

NO. OF PAGES: 4 (includes cover sheet)

RE: NPDES Amendment for the County of  
Ventura Watershed Protection District  
the County of Ventura and Incorporated  
Cities Therein (Municipal Separate Storm  
Sewer System).

3152 Shad Court  
Simi Valley, CA 93063  
April 8, 2009

Ms. Tracy Woods  
LARWQCB  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Re: NATIONAL POLLUTANT DISCHARGE ELIMINATION PERMIT  
AMENDMENT for THE COUNTY OF VENTURA WATERSHED  
PROTECTION DISTRICT THE COUNTY OF VENTURA AND  
INCORPORATED CITIES THERIN (Municipal Separate  
Storm Sewer System).\*

Dear Ms. Woods:

After reading all of the 2009 Tentative Ventura  
Countywide MS4 NPDES Permit related documents; the Los  
Angeles Regional Water Quality Control Board's April 2,  
2009 Basin Plan Triennial Review Workshop's Inventory of  
Basin Plan Issues Raised by Stakeholders in Fall 2008; the  
State Water Resources Control Board's 2008 ACCOMPLISHMENTS  
REPORT (February 2009) and Draft Annual Enforcement Report  
for Fiscal Year 2007-2008; the Ventura County Watershed  
Protection District's Board of Supervisors' March 3, 2009  
approved Ventura Countywide Stormwater Quality Management  
Program, NPDES Permit NO. CAS004002, Annual Report; the  
released Boeing Santa Susana Field Laboratory RCRA RFI  
Groups' Reports, and the SSFL's pending NPDES Permit  
Tentative Order; and various other tentative NPDES permits  
related documents, as well as taking into consideration my  
concerns expressed in former letters submitted on this  
subject, I am opposed to this Amendment for the reasons  
stated in my letters and evidentiary materials previously  
submitted, and for the following reasons.

TENTATIVE ORDER 09-XXXX DOCUMENTS

#1 - While the Tentative Order's cover page states  
ORDER 09-xxx (an error), Page 1 of 121 states  
"ORDER 08-xxx"!!!

- #2 - The Public Notice misspelled "THEREIN" \*.
- #3 - The February 24, 2009 letter from the LARWQCB Chief Deputy to Mr. Jeff Pratt, was addressed to him as Director of the "Ventura Watershed Protection District", not the Ventura County Watershed Protection District (legal name) which confuses matters with the City of Buena Ventura.

TENTATIVE ORDER 09-XXXX

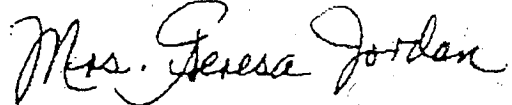
- #1 - Page 12 of 121, it is stated under the "Third" paragraph that "the local agency Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution..." No where in the Order, not on Pages 27 (number 19), 28 (number 22), 38 (Section C.1. (a)), and 39 (Section E.1. (h)) are the fraudulent existing Ventura County Watershed Protection District (formerly the Ventura County Flood Control District) Benefit Assessment Program NPDES fees mentioned. These fees have not been rescinded, and if anything the bill (Nava) authorizing the Ventura County Watershed Protection District to levy property-related fees is deficient.
- #2 - Page 22 of 121, it is stated under "2." that "The objective of this Order is to ensure that discharges from the MS4 in Ventura County comply with water quality standards, including protecting the beneficial uses of receiving waters." Reading The Boeing Company's comments in the Basin Plan Triennial Review's Inventory, and the possibility of the DTSC allowing a Permit-by-Rule mitigating activity, this Ventura Countywide NPDES Permit will not "ensure" that discharges from the MS4 in Ventura County comply with water quality standards, including protecting the beneficial uses of receiving waters". Contamination from the SSFL has for years impacted the "Calleguas MS4 permittees" and the "Malibu MS4 permittees" (Pages 85 to 92, PART 6 - TOTAL MAXIMUM DAILY LOAD PROVISIONS)

NPDES Permit program costs to comply with the Clean Water Act standards, and if The Boeing Company's proposed Basin Plan changes, and the DTSC non-RCRA mitigating activity are implemented, these entities and their constituents will be burdened forever in order to comply because of this discharger's impacts.

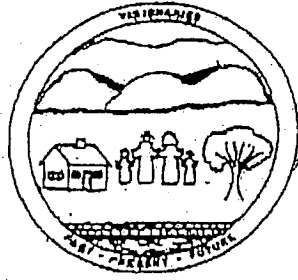
- #3 - Page 24 of 121, under number 9, it is stated that "This Order also provides flexibility for Permittees to seek authorization from the Regional Water Board Executive Officer to substitute a BMP under this Order with an alternative BMP..."
- #4 - Page 115 of 121, under Section H. Signatory Requirements 1, it is stated "Except as otherwise provided in this Order all applications, reports, or information submitted to the Regional Water Board shall be signed by the City Manager or Mayor, or authorized designee and certified as set forth in 40 CFR 122.22."

Ms. Woods, I will submit the rest of my comments on this Amended Ventura Countywide MS4 NPDES Permit Tentative Order in a follow-up letter.

Sincerely,



Mrs. Teresa Jordan



TERESA JORDAN  
3152 SHAD COURT  
SIMI VALLEY, CA 93063  
TELEPHONE NO. (805) 522-5016

TO: Ms. Tracy Woods  
LARWQCB  
320 West 4th Street, Suite 200  
Los Angeles, CA 90013

FAX NO.: (213) 576-6640

DATE: April 9, 2009

NO. OF PAGES: 21 (includes cover sheet)

RE: Amended Tentative Order for the Ventura  
Countywide Municipal Separate Storm Sewer  
System (MSS) NPDES No. CA5004002 Permit.

3152 Shad Court  
Simi Valley, CA 93063  
April 9, 2009

Ms. Tracy Woods  
LARWQCB  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Re: Amended Tentative Order for the Ventura Countywide  
Municipal Separate Storm Sewer System (MS4) NPDES  
No. CAS004002 Permit.

Dear Ms. Woods:

This letter is a follow-up to my April 8, 2009 letter on  
the aforementioned subject.

TENTATIVE ORDER 09-XXXX (Continued)

#5 - Page 14 of 121, number 13, it is stated "The following beneficial uses identified in the Basin Plan apply to all or portions of each watershed covered by this Order:..." When the April 2, 2009 Board Triennial Review Workshop information was posted on the Website (March 2, 2009), my comments were excluded from the original "Attachment to Notice: Inventory of Basin Plan Issues Raised by Stakeholders in Fall 2008 Solicitation". My comments were finally included in the Revised Document (Inventory) -- posted on the Website March 27, 2009.

#6 - Page 23 of 121, number 6, it is stated "This Order promotes land development and redevelopment strategies that consider water quality and water management benefits associated with smart growth techniques. Such measures may include hydromodification mitigation requirements, minimization of impervious surfaces, integrated water resources planning, and low impact development guidelines..." Yet under number 9, on Page 24 of 121, it is stated "This Order contemplates that the Permittees are responsible

for considering potential storm water impacts when making planning decisions in order to fulfill the Permittees' CWA requirement to reduce the discharge of pollutants in municipal storm water to the MEP and attain water quality objectives from new development and redevelopment activities." These statements are contradictory.

It is stated under number 2, on Page 65 of 121, that "General Plan Update (a) Each Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended: (1) Land Use (2) Housing (3) Conservation (4) Open Space (b) Each Permittee shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 et seq."

According to the March 3, 2009 Ventura County Watershed Protection District Board of Supervisors' meeting approved Ventura Countywide Stormwater Quality Management Program, NPDES Permit NO. CAS004002, Annual Report, Page 5-6 --General Plan Revisions chart:

<u>CO-PERMITTEE</u>	<u>GP DATE</u>	<u>GP REWRITE</u>
Camarillo	10/2003	*
Ventura County	10/1997	Blank
Fillmore	4/2003	*
Moorpark	1/1984	N/A
Ojai	5/1997	*
Oxnard	1/1990	2009
Port Hueneme	8/1997	2015
Ventura	8/2005	*
Santa Paula	1/1998	2009
Simi Valley	10/1988	12/1/2009
Thousand Oaks	7/1996	2019 *

\* "Plan already updated to include stormwater".



California Government Code Section 65040.5(a) states "The office shall notify a city or county with a general plan that has not been revised within eight years". Clearly, the Governor's Office of Planning and Research(OPR) has violated State law.

California Government Code Section 65040.5(b) states "The office shall notify the Attorney General if a general plan of a city or county has not been revised within ten years". The Governor's Office of Planning and Research(OPR) has clearly violated State law.

Therefore, I do not believe that what is stated in the Section E. Planning and Land Development Program pages will be accomplished.

#7 - Page 33 of 121, PART 2 - MUNICIPAL ACTION LEVELS, numbers "1.", "2.", and "3." sound great until read "4." (Page 34 of 121) which says "Beginning Year 3 after Order adoption date, each Permittees shall submit a MAL Action Plan with the Annual Report (first MAL Action Plan due with Dec. 15, 2011 Annual Report) to the Executive Officer, for those subwatersheds with a running average of twenty percent or greater of exceedances of the MALs in any discharge of storm water from the MS4 to waters of the U.S." Year 1!!!

It is stated on Page 10 of 64, of the January 30, 2009 Boeing submitted ROWD documentation, that "The Expert Panel has been convened and has recommended a system of natural and engineered BMPs for both outfalls. Some of the BMPs are now in construction but others cannot be completed at this time due to the need to obtain a modification to the Special Use Permit for SSFL from the County of Ventura. Ventura County has determined that the modification of the Special Use Permit is an action subject to review pursuant to the California Environmental Quality Act(CEQA). Boeing is proceeding with an application for the Special Use Permit modification required for the ENTS project and Ventura County will be conducting the appropriate CEQA review." Outfalls 008 and 009

were "grouped" with outfalls 003 through 010 in order to use outfalls 003 through 007 (Arroyo Simi is the receiving waterbody)'s effluent limits benchmarks until "June 14, 2009" (Boeing's current NPDES permit expiration date).

The August 11, 2008 City of Simi Valley's Board of Directors of the Ventura County Waterworks District No. 8 meeting staff report for the agenda item Approval of Payment to the Watersheds Coalition of Ventura County stated on Page 1 "The agencies have been negotiating a Memorandum of Agreement (MOA) to formalize the WCVC. While the MOA is not ready to be recommended for Board consideration, the WCVC has continued to work on the tasks provided in the budget, and the costs share request is appropriate."

The October 28, 2008 Ventura County Watershed Protection District Board of Supervisors' meeting staff report on the Memorandum of Understanding between Ventura County and the County Watershed Protection District to participate in the WCVC's IRWMP efforts states "The Watersheds Coalition of Ventura County has been operating since April of 2006 as the 'regional water management group' overseeing and coordinating the ongoing IRWMP process. However, many of the partnering agencies, including the Watershed Protection District were still participating under the previous MOU for the former Ventura Countywide IRWMP." The October 28, 2008 Ventura County Waterworks District No. 16 Board of Supervisors' meeting staff report on the Memorandum of Understanding between the County of Ventura and Ventura County Waterworks District No. 16 to participate in the WCVC's IRWMP efforts states "The WCVC has been operating since April of 2006 as the 'regional water management group' overseeing and coordinating the ongoing IRWMP process. However, many of the partnering agencies, including Ventura County Waterworks District Nos. 1, 16, and 19, were still participating under the previous MOU for the former Ventura Countywide IRWMP."

This participation by many of the partnering agencies under the former Ventura Countywide IRWMP is inexcusable, and it is mind boggling that the County Counsel, County Auditor-Controller's Office, and Office of the County Executive Officer, as well as the law firm providing legal services on the District's Ventura Countywide Stormwater Program Permit didn't have this matter dealt with ASAP in light of the millions of dollars in State IRWM Grant Program funds allocated toward local projects. This is oversight, whether deliberate or not was unfair to other entities whose projects were turned down at the funding round as the WCVV application was submitted and approved. This matter also impacts the submittal process for the State Department of Water Resources Final Integrated Regional Water Management Region Acceptance Process submittals since this involves "Region Water Management Groups" (DWR March 11, 2009 Press Release)

#8 - Page 23 of 121, number 7, it is stated "The implementation of an effective Public Information and Participation Program is a critical component of a storm water management program...the general public, in comparison, receives significantly less education in environmental protection. An effective Public Information and Participation Program is required because: (a) Activities conducted by the public such as vehicle maintenance, improper household waste materials disposal, improper pet waste disposal and the improper application of fertilizers and pesticides have the potential to generate a significant amount of pollutants that could be discharged in storm water. (b) An increase in public knowledge of storm water regulations, proper storage and disposal of household wastes, proper disposal of pet wastes and appropriate home vehicle maintenance practices can lead to a significant reduction of pollutants discharged in storm water." I agree, but more needs to be done such as holding workshops on vehicle maintenance good housekeeping--men and women, no matter the age love their automobiles and

love to maintain them since trust of repair shops (independent or auto dealers) is lacking.

Also, on Page 41 of 121, under Section C. Public Information and Participation Program (PIPP) add Section "(d)" requiring that all Permittees hold public hearings on amendments to the 1992 NPDES

Permit Implementation Agreement, Legislative actions to amend the Ventura County Watershed Protection District (formerly Ventura County Flood Control District) Act, and all future proposed Prop 218 NPDES program permit fee related initiatives. Biased newspaper stories serve the purpose to generate fear instead of disclosing all of the facts. Also if a Prop 218 voter initiative is issued if the issuer is a government entity, or member of the WCVC, or the WCVC itself, ballot language must disclose the existing fraudulent assessment fees since public hearings at the cities level did not take place back in 1992, and the 2008 and 2009 amendments have also not gone through public hearings. I make the request in light of Section (8), on Page 43 of 121, which states "The Permittees shall develop and implement a behavioral change assessment strategy no later than (365 days after the Order adoption date), in order to determine whether the PIPP is demonstrably effective in changing the behavior of the public. The strategy shall be developed based on current sociological data and studies." that behavioral change can be taken as making real positive changes to people's activities, or to generate support in order to cover up any discharger's illegal activities--funding, projects, back door deals, etceteras.

- #9 - Pages 51 and 52 of 121, to Section 4. Interagency Coordination add something to the effect of "Investigation of Complaints Regarding Permittees".
- #10 - Page 52 of 121, to Section 4. Interagency Coordination add Section "(f)" Coordinate or Host a General Industrial Permit Training Workshop. The Permittees shall work with the

RWQCB staff--this information was included on Page 4-5 of the March 3, 2009 Ventura County Watershed Protection District Board of Supervisors' Ventura Countywide Stormwater Quality Management Program, NPDES Permit NO. CAS004002, Annual Report: Permit Year 8/ Reporting Year 14 and Implications of Future Stormwater Requirements.

- #11 - Throughout the draft amended Ventura Countywide MS4 NPDES permit, the Board's Executive Officer makes determinations, changes, etceteras. To date the Board Website Calendar's Agenda and Meetings sections have not been updated to reflect Year 2009 items. The Meetings Website section does not include the Board's February 2009 meeting--when new Chair and Vice Chair were voted in. The Agenda Website section does not include the 2009 Calendar. The "Ex Parte Communications" State law that the Executive Officer said in her February 9, 2009 letter said I flagrantly and improperly disregarded with my 2008 and 2009 letters on the draft Tentative Waste Discharge Requirements-General NPDES Permit for Discharges from Potable Water Distribution and Water Supply Systems to Surface Waters in Coastal Watersheds of Los Angeles and Ventura Counties is perplexing in light of the fact that dischargers communicate with Board members. For example: the November 13, 2008 (NOTE: the original letter is erroneously dated 2009) from former Chairperson Francine Diamond to Ventura County Board of Supervisors' Chairman Peter Foy on postponement of the December 10, 2008 workshop on the draft municipal stormwater permit for Ventura County (NPDES No. CAS004002). Thus, all of my comments in my letters on this subject should have been responded to and included in the staff's responses posted on the Board's Website due to Permit deficiencies.

- #12 - To date the Tentative Orders for the Cities of Thousand Oaks, and the Camarillo Sanitary District WDRs have not been rescheduled for a Board meeting, nor have the submitted comments, and responses on the Draft documents been posted on the Board's Website.

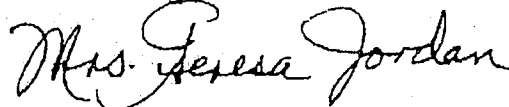
Ms. Woods, please note that on Page 2 (TENTATIVE ORDER 09-XXXX, Comment #2) of my April 8, 2009 letter the Boeing "Permit-by-Rule" information is found in the currently proposed Amended NPDES No. CA0001309 (ORDER No. R4-2009-00XX Tentative Order document), number 16, on bottom of Page 4 and top of Page 5--"In the future, Boeing plans to treat effluent from SSFL groundwater remediation operations in either a mobile or fixed hazardous waste treatment unit operating under DTSC Permit-by-Rule requirements". Please note that "of" is in error. The correction is "or".

Ms. Woods, please note that on Page 1, end of paragraph, of my April 8, 2009 letter my "former letters submitted on this subject" on the Ventura Countywide MS4 NPDES permit are dated September 17, 2007, and May 27 and May 28, 2008.

Ms. Woods, please note that on Page 2 (TENTATIVE ORDER 09-XXXX, Comment #1) of my April 8, 2009 letter the "Nava" bill information is AB 554 (Karnette/Nava, signed by Governor Schwarzenegger on October 4, 2005), and AB 1003 (Nava, vetoed by Governor Schwarzenegger on July 26, 2005).

Ms. Woods, I still have a considerable amount of comments to submit on the amended Tentative Order and related NPDES Permit documents. I will be forwarding a follow-up letter ASAP to meet the deadline.

Sincerely,



Mrs. Teresa Jordan

Enclosures:

April 2, 2009, Teresa Jordan Summary of December 29, 2008 Letter on TENTATIVE WASTE DISCHARGE REQUIREMENTS-GENERAL NPDES PERMIT FOR DISCHARGES FROM POTABLE WATER DISTRIBUTION AND WATER SUPPLY SYSTEMS TO SURFACE WATERS IN COASTAL WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES (GENERAL NPDES NO. CAG994005). (4 Pages).

April 2, 2009, Teresa Jordan Summary of January 2, 2009 Letter on GENERAL NPDES PERMIT NO. CAG994005

(Waste Discharge Requirements for Discharges from Potable Water Distribution and Water Supply Systems to Surface Waters in Coastal Watersheds of Los Angeles & Ventura Counties Watersheds).  
(4 Pages)

April 2, 2009, Teresa Jordan Summary of January 28, 2009 Letter on ORDER NO. R4-2009-XXX, WDRs FOR DISCHARGES FROM POTABLE WATER DISTRIBUTION AND WATER SUPPLY SYSTEMS TO SURFACE WATERS IN COASTAL WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES (GENERAL NPDES PERMIT NO. CAG994005). (3 Pages)

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD  
TENTATIVE WASTE DISCHARGE REQUIREMENTS - GENERAL  
NPDES PERMIT FOR DISCHARGES FROM POTABLE WATER  
DISTRIBUTION AND WATER SUPPLY SYSTEMS TO SURFACE  
WATERS IN COASTAL WATERSHEDS OF LOS ANGELES AND  
VENTURA COUNTIES (GENERAL NPDES NO. CAG994005)

Summary of Terasa Jordan Comments

Letter Submitted on December 29, 2008

[Public Comments Deadline: January 30, 2009]

DECEMBER 24, 2008 NOTICE TO ALL INTERESTED PARTIES

- #1 - The pages are not numbered.
- #2 - Page 2, "cc" list, the name of the entity "Ventura County Department of Public Works, Flood Control and Drainage" is incorrect. The correction is the Ventura County Watershed Protection District. For months, I have tried to have Board staff make the corrections, but for whatever reason this inaccuracy keeps popping up in the "Mailing List" for Board agendized issues.
- #3 - Pages 2 through 4, the Ventura County Cities of Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Santa Paula, Simi Valley, and San Buenaventura (Ventura are not included on the "cc" list.
- #4 - Page 4, "All enrollees under the general NPDES permit for Discharge of Groundwater from Potable Water Supply Wells to Surface Waters" must be named in the "cc" list, not lumped this way.
- #5 - Pages 2 and 3, the entity Calleguas Municipal Water District is listed twice under "cc" (Page 2, Donald R. Kendall; and Page 3, Don Kendall).

ATTACHMENT F - FACT SHEET

- #1 - Page F-34, Section IX. PUBLIC PARTICIPATION, B. Written Comments, all submittal tools were not



included. Facsimile, e-mail, and courier service submittals must also be accepted. Otherwise, the public participation process is being limited.

- #2 - Page F-35, Section F Public Comments and Submittal of Evidence, "." is missing after "F".
- #3 - Page F-35, Section F. Public Comments and Submittal of Evidence, last sentence, I am opposed to the statement "...if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony".

#### ATTACHMENT B - WATERSHED/STREAM WASTEWATER DISCHARGE

- #1 - Page 1, number 7 (Los Angeles River Watershed), "a" is separated from "b" through "e" with the words Los Angeles River Watershed(continued).
- #2 - Page 1, number 5, it is stated under Miscellaneous Los Angeles County Coastal Streams that "no waterbody specific limits", yet under "a" (Malibu Creek Watershed) specific limits are given for TDS, Sulfate, Chloride, Boron, and Nitrogen.

#### ATTACHMENT D - FEDERAL STANDARD PROVISIONS

- #1 - Page 2, Section G.1, "Definitions" indent error.
- #2 - Page 2, Section G.1.a, indent error.
- #3 - Page 3, Section G.5, "Notice" indent error.
- #4 - Page 4, "Provisions - Reporting V.E. below..." indent error.
- #5 - Page 5, Section III, "STANDARD" indent error.
- #6 - Page 5, Section III.A and B, spacing error.

- #7 - Page 6, Section IV.A, spacing error between "five" and "years".
- #8 - Page 6, Sections IV.A and B, spacing error.
- #9 - Page 6, Sections IV.B.3, 4, and 5, "The" indent errors.
- #10 - Page 6, Section IV.C and 1, spacing error.
- #11 - Page 6, Section V.A, "Duty" spacing error.
- #12 - Page 7, Section V.B.2, "All" indent error.
- #13 - Page 7, Section V.B.2.c, I disagree with the either/or option for the Signatory and Certification requirement for a municipality. Due to the Ventura Countywide 1992 NPDES Permit 1992 Implementation Agreement(s) and 2008 amendment debacle (no public hearings on assessment fees), the ranking elected official must sign all permit applications.
- #14 - Page 8, Section V.B.5, "5" indent error.
- #15 - Page 11, Section VI, "STANDARD" indent error.
- #16 - Page 12, Section VI, spacing errors between "A" and "B", "B" and "C", and "C" and "D".
- #17 - Page 13, Section VII.A.1.a, "100" indent error.
- #18 - Page 13, Section VII.A.1.c, indent error.
- #19 - Page 13, Section VII.A.2.a, "500" indent error.
- #20 - Page 13, Section VII.A.a, error. It is # "3".
- #21 - Page 13, "Publicly-Owned Treatment Works (POTWs) (Not Applicable) is Section VII.B.

ATTACHMENT E - SAMPLE MONITORING AND REPORTING PROGRAM

- #1 - The statement "The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge"

is premature in light of the Boeing Company's (formerly Rockwell International) Santa Susana Field Laboratory (SSFL) property--formerly the Rocketdyne site--ground contamination which impacts the Calleguas Creek Watershed area, the City of Simi Valley's Municipal NPDES permit, and the Ventura Countywide MS4 NPDES permit.

According to SECTION 1.c of AB 1842 (Smyth, Amended)--the proposed Santa Susana State Park on the Santa Susana Field Laboratory (SSFL) area-- "Testing done at the site had the great misfortune of contaminating the ground, causing the property to become a source of regional controversy..." According to SECTION 1.d of Amended AB 1842, "...the importance of applying appropriate land use protocols in order to avoid contamination of sensitive ecosystems in the future".

[NOTE: Compiled by Teresa Jordan on April 2, 2009.]

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD  
GENERAL NPDES PERMIT NO. CAG994005 (Waste Discharge  
Requirements for Discharges from Potable Water  
Distribution and Water Supply Systems to Surface  
Waters in Coastal Watersheds of Los Angeles and  
Ventura Counties)

Summary of Teresa Jordan Comments

Letter Submitted on January 2, 2009

[Public Comments Deadline: January 30, 2009]

Follow-up letter to my December 29, 2008 letter.

ATTACHMENT E - SAMPLE MONITORING AND REPORTING PROGRAM  
(Continued)

- #1 - Page 1, TABLE OF CONTENTS, Roman numeral II,  
the "DISCHARGES" line is not indented correctly.
- #2 - Page 1, TABLE OF CONTENTS, Roman numeral II,  
Sections "A.", "B.", and "C." must be indented  
the same as the "EFFLUENT" line.
- #3 - Page 1, TABLE OF CONTENTS, Roman numeral III,  
"Effluent Monitoring Requirement FOR WATER  
SUPPLY SYSTEM DISCHARGES" must have "Effluent  
Monitoring Requirement" capitalized.
- #4 - Page 1, TABLE OF CONTENTS, Roman numeral III,  
Sections "A.", "B.", and "C." must be indented  
the same as the "Effluent" (EFFLUENT) line.
- #5 - Page 1, TABLE OF CONTENTS, Roman numeral IV,  
the "SYSTEM" line is not indented correctly.
- #6 - Page 1, TABLE OF CONTENTS, Roman numeral IV,  
Sections "A.", "B.", and "C." must be indented  
the same as the "WHOLE" line.
- #7 - Page 1, TABLE OF CONTENTS, Roman numeral VI,  
the "RECLAMATION" line is not indented correctly.

- #8 - Page 1, TABLE OF CONTENTS, Roman numeral VII, the "GROUNDWATER" line is not indented correctly.
- #9 - Page 1, TABLE OF CONTENTS, Roman numeral IX, Sections "A.", "B.", and "C." must be indented the same as the "REPORTING" line.
- #10 - Page 1, LIST OF TABLES, center for consistency purposes as was done with TABLE OF CONTENTS.
- #11 - Page 1, LIST OF TABLES, Table 2 is missing a ".".
- #12 - Page 1, LIST OF TABLES, indent the subjects in Tables 1 to 5 to align with each other.
- #13 - Pages 2 to 5, "A." through "S.", print in bold letters to be consistent with the rest of the document.
- #14 - Page 5, "R.", have "SAMPLE COLLECTION REQUIREMENTS (AS APPROPRIATE)" in lower case lettering, and in bold print.
- #15 - Page 5, Section II.B. Table 1, indent the title to be consistent with the other Tables.
- #16 - Page 6, Section II.C, Table 2 is missing a ".".
- #17 - Page 6, Section III.A, indent Table 3 to be consistent with the other Tables.
- #18 - Page 12, Section C, indent the sentence "No discharge of such chemical shall be made prior to obtaining the Executive Officer's approval" to be consistent with the sentence under "1."

#### TENTATIVE ORDER

- #1 - Page with Executive Officer Egoscue's statement; the Order adoption, effectiveness, and Report filing timelines; and the USEPA and Regional Water Board "minor discharge" statement; is the only page out of 33 posted that has the "I" in TENTATIVE aligned correctly.

- #2 - Page 1, TABLE OF CONTENTS, center for consistency purposes as was done with LIST OF TABLES and LIST OF ATTACHMENTS (Page 2).
- #3 - Page 2, Section VII.C, indent "Special" the same as the "Discharges" and "Monitoring" lines.
- #4 - Page 2, Section VIII.C, indent "Average" the same as the "Multiple" and "General" lines.
- #5 - Page 4, Section B, indent the "Water Supply Systems Discharge Enrollment Criteria" line with the "Water Supply Systems Discharge" line.
- #6 - Page 4, Section B, indent the paragraph that follows the "Water Supply Systems Discharge Enrollment Criteria" line with the "Water Supply Systems Discharge" line.
- #7 - Pages 4 and 5, Section B, change the "1." after the Water Supply Systems Enrollment Criteria paragraph to "a.", "2." to "b.", "3." to "c", "a)" to "i.", "b)" to "ii.", and "4" to "d.", and indent the lines accordingly.
- #8 - Page 6, Section III, indent the "Water Board), finds:" line the same as "The California" line.
- #9 - Page 7, Sections 5, 6, and 7, are incorrect. The correct numbering sequence is "4.", "5.", and "6.". Number 4 was skipped over.
- #10 - Page 12, Section E, add numbers "1." through "7." to differentiate the documents that are listed.
- #11 - Page 22, Section VII.A.2, "h." is incorrect. The correct lettering sequence is "g."
- #12 - Page 23, Section "i." is incorrect. The correct lettering sequence is "h."
- #13 - Page 24, the spacing is off between Sections "2." and "3."
- #14 - Page 25, the spacing is off between Sections "VIII" and "A.", "B.2" and "C.", and "C." and C's paragraph.

#15 - Page 26, the spacing is off between Sections "D." and "E.", and "F." and F's "Not Applicable" line.

It is mind boggling that Regional Water Board staff continues to make formatting errors when templates have been around for years to just simply follow through with. There simply are no excuses to have Regional Water Board Website visitors take precious time out to deal with formatting issues instead of what is being proposed. This simply shows that the Board is not wholeheartedly committed to the public participation process, or to training Water Board staff properly.

When a proposed NPDES permit is posted, have posted on the Board's Website the existing documentation for comparison purposes. A Website visitor must not have to search high and wide for the information elsewhere.

[NOTE: Compiled by Teresa Jordan on April 2, 2009.]

## LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

ORDER NO. R4-2009-XXXX, WASTE DISCHARGE REQUIREMENTS  
FOR DISCHARGES FROM POTABLE WATER DISTRIBUTION AND  
WATER SUPPLY SYSTEMS TO SURFACE WATERS IN COASTAL  
WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES  
(GENERAL NPDES PERMIT NO. CAG994005)

Summary of Teresa Jordan Comments

Letter Submitted on January 28, 2009

[Public Comments Deadline: January 30, 2009]

Follow-up letter to my December 29, 2009, and January 2,  
2009 letters. Opposed to Tentative Order No. R4-2009-XXXX  
(General NPDES Permit No. CAG994004).

TENTATIVE ORDER R4-2009-XXXX

#1 - Page 6, it is stated in Section III.A.1,  
Background, that "On August 7, 2003, the Regional  
Water Board adopted Order No. R4-2003-0108  
General NPDES Permit No. CAG994005,  
Waste Discharge Requirements for Discharge of  
Groundwater from Potable Water Supply Wells to  
Surface Waters. This General Permit expired on  
August 11, 2008, but is administratively extended  
until rescinded. Approximately 120 dischargers  
are enrolled under the General Permit. This  
Order now renews the requirements of this General  
Permit". Because the titles of ORDER NO. R4-2003  
-0108 (WASTE DISCHARGE REQUIREMENTS for  
DISCHARGES OF GROUNDWATER FROM POTABLE WATER  
SUPPLY WELLS TO SURFACE WATERS IN COASTAL  
WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES),  
and Tentative Order No. R4-2009-XXXX (WASTE  
DISCHARGE REQUIREMENTS FOR DISCHARGES FROM  
POTABLE WATER DISTRIBUTION AND WATER SUPPLY  
SYSTEMS TO SURFACE WATERS IN COASTAL WATERSHEDS  
OF LOS ANGELES AND VENTURA COUNTIES) are  
different, this is not the same General NPDES



Permit No. CAG994005. Thus, this is not a permit renewal, but a new permit.

- #2 - Page 7, while it is stated in Section III.A.5 that "General waste discharge requirements and NPDES permits enable Regional Water Board staff to expedite the processing of requirements, simplify the application process for dischargers, better utilize limited staff resources, and avoid" expenses, the real purpose of this proposed Tentative Order is to circumvent the "public noticing, hearings, and permit adoptions" process!!!
- #3 - Page 7, the source of information is not given for the statement "Potable water has not been shown to be a source of pollution that would threaten or contribute to excursions above narrative and numeric water quality objectives contained in state and federal regulations. Potable water is considered to be a de minimus source of pollution".
- #4 - Groundwater, and Potable Water are not defined.
- #5 - Page 9, Section III.B.7, dischargers are exempt from effluent sampling requirements "during unplanned discharges where circumstances are beyond the Dischargers control".
- #6 - Page 9, Section III.B.8, "Planned potable water discharges of less than 100,000 gpd and unplanned discharges are exempt from sampling requirements if all of the following are met:..."
- #7 - Page 9, Section III.B.9, "Low volume discharge of potable water for the purpose of this permit less than 25,000 gallons per discharge event at a location is considered insignificant discharge and can proceed without coverage under the NPDES permit or a need to submit monitoring report..."
- #8 - Page 9, Section III.B.6(continuation), periodical calibration of chlorine measuring instruments and field test kits is being emphasized, not real statistical timelines.

- #9 - This Order is not intended to "protect the most protective water quality objectives for the surface water beneficial uses in the Los Angeles Region" (Page 11, Section III.C.8).
- #10 - Page 3, Section I, "minor reservoir releases" and "minor well releases" are not clarified.

#### DELETIONS

1. Page 5, Section II.C.1, delete the word "highly" from the "Groundwater highly contaminated with drilling mud and/or well completion fluids" statement.
2. Page 5, Section II.C.1, delete the word "should" from the "Such contaminated water should be disposed separately at appropriate location" statement, and change it to "must".
3. Page 5, Section II.C.1, delete the word "appropriate" from the "Such contaminated water must be disposed separately at appropriate location" statement, and change it to "permitted".
4. Page 6, Section II.D, delete "30 days" from the "Coverage under this Order...statement and change it to "45 days".
5. Page 9, top of page, delete the word "filed" from the "Chlorine measuring instruments and filed test kits shall be calibrated periodically to assure accuracy of measurements" statement, and change it to "field".

[NOTE: Compiled by Teresa Jordan on April 2, 2009.]



TERESA JORDAN  
3152 SHAD COURT  
SIMI VALLEY, CA 93063  
TELEPHONE NO. (805) 522-5016

TO: Ms. Tracy Woods  
LAW@B  
320 West 4th Street, Suite 200  
Los Angeles, CA 90013

FAX NO.: (213) 576-6640

DATE: April 10, 2009

NO. OF PAGES: 9 (includes cover sheet)

RE: MUNICIPAL STORM WATER AND URBAN RUNOFF  
DISCHARGES WITHIN VENTURA COUNTY ~~WATERSHED~~  
PROTECTION DISTRICT, COUNTY OF VENTURA, AND THE  
CITIES OF VENTURA COUNTY NPDES PERMIT  
(CA5004002).

3152 Shad Court  
Simi Valley, CA 93063  
April 10, 2009

Ms. Tracy Woods  
LARWQCB  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Re: MUNICIPAL STORM WATER AND URBAN RUNOFF DISCHARGES  
WITHIN ENTURA COUNTY FLOOD CONTROL DISTRICT, COUNTY  
OF VENTURA, AND THE CITIES OF VENTURA COUNTY NPDES  
PERMIT (CAS004002).\*

Dear Ms. Woods:

This letter is a follow-up to my April 8, 2009, and  
April 9, 2009 letters.

TENTATIVE ORDER 09-XXXX (Continued)

- #13 - Page 89 of 121, under Section (c)(3), give the date instead of stating "to be completed based on the schedule provided in the workplan, submitted in March, 2007".
- #14 - Page 91 of 121, under Section (c)(8), give the date instead of stating "Special Study is to be completed within one year of the approval of the workplan".
- #15 - Page 91 of 121, under Section (c)(9), give the date instead of stating "This special study is to be completed within 2 years of the approval of the workplan".
- #16 - Page 92 of 121, under Section 5.(1), "(1)" is located incorrectly.
- #17 - Under PART 8 - STANDARD PROVISIONS, include a "Section" that states to the effect of "Duty to be Honest" in order to keep local governments from conspiring, committing or continuing fraudulent activities, and stop the culture of

generating public fear to raise taxpayers fees at the voting booth.

- #18 - Page 118 of 121, Section P. Enforcement, it is stated on Page 6-4 of the March 2, 2009 Ventura County Watershed Protection District Ventura Countywide Stormwater Quality Management Program NPDES Permit Annual Report that "There were 294 total enforcement actions countywide this year, overall that is significantly less than in previous years, but the use of notices of violation has increased as percentage of enforcement actions from 7% to 40%" (Figure 6-3 paragraph, last sentence). It is stated on Page 8-13, under the Figure 8-B "\*" "Note" that "Due to the wide range of number of discharges across the different Co-permittees it was necessary to present this on a logarithmic scale. This does not allow accurate representation of values of one or zero" (March 3, 2009 Ventura Countywide Stormwater Quality Management Program NPDES Permit Annual Report).
- #19 - Page 119 of 121, Section (4) False Statement does not go far enough in penalizing the culture of silence or conspiracy to keep fraudulent activities under wraps by the local governments.
- #20 - Page 121 of 121, the end of the statement states "on mm dd, 2009". This means that the Board's May 7, 2009 Ventura Countywide MS4 NPDES Permit hearing may be postponed. Otherwise, the date on Attachments "A" through "E", "G", and "I", and Tentative Figure - 1 would reflect the same Tentative Order, Attachments "F" and "H" date of February 24, 2009.
- #21 - Page 1 of 121, the Order No. 08-xxx is incorrect. Must be corrected to "09-xxxx".
- #22 - Cover (first) Page, the Order No. 09-xxx is missing an "x".
- #23 - Pages i to iv, the Order No. 09-xxx at the top of the pages is missing an "x".

#24 - Pages 2 of 121 through 121 of 121, the Order No. 09-xxx at the top of the pages is missing an "x".

FACT SHEET/STAFF REPORT

#1 - Cover, Page 1, the title "...WITHIN ENTURA COUNTY..."(letter subject \*) is incorrect. Must be corrected to "VENTURA".

#2 - Cover, Page 1, the title "...COUNTY FLOOD CONTROL DISTRICT..." is incorrect. Must be corrected to "...COUNTY WATERSHED PROTECTION DISTRICT".

#3 - Page 2, "F. Reporting Program" is incorrect. Must be corrected to "I.".

#4 - Page 2, page numbers 3 to 76 are missing:

PURPOSE . . . . .	"3"
A. Impacts . . . . .	"3"
INTRODUCTION . . . . .	"6"
STATUTORY...PROGRAM . . . . .	"9"
DISCUSSION...PROVISIONS . . . . .	"15"
A. General Requirements . . . . .	"15"
B. Watershed...Participation . . . . .	"18"
C. Public Information...Program . . . . .	"19"
D. Industrial/Commercial...Program . . . . .	"22"
E. Planning and Land...Program . . . . .	"36"
F. Development...Program . . . . .	"44"
G. Public Agency...Program . . . . .	"57"
H. Illicit Connections...Program . . . . .	"69"
"I." Reporting Program . . . . .	"72"
MONITORING PROGRAM . . . . .	"73"
FINAL QUESTIONS AND CHANGES . . . . .	"76"

#5 - Most of the pages have a lot of wasted empty space. Reducing this spacing will cut down on the number of total pages.

#6 - Page 3, need(more) spacing between "A. Impacts" and the first sentence.

#7 - Page 15, need less spacing between Section "V. DISCUSSION OF SPECIAL PROVISIONS" and "Non Storm Water Discharges".

- #8 - Page 20, first paragraph, last sentence, "because it allows for:" is separated from "program".
- #9 - Page 27, the footnote, bottom of page, is missing a "." after 1997.
- #10 - Page 29, the footnote is missing after the chart to explain the footnote for Rank (pollution potential) 1.
- #11 - Page 31, second paragraph, last sentence, "BMPs;" is separated from "performance of an inspection", and "with the municipal ordinances; and" is separated from "assist the Regional Board".
- #12 - Page 32, sentence after bullet points, spell out "RB".
- #13 - Page 38, first paragraph, first sentence, the footnote "1" is not the correct font size.
- #14 - Page 38, first paragraph, since utility fees are a type of financing mechanism being suggested, then the Tentative Order must include a provision to rescind the fraudulent existing assessment fees, as well as AB 554 (Karnette/Nava) must be amended to correct the deficiencies. Also, the Tentative Order's Section H. Signatory Requirements 1 must be changed to "shall be signed by the City Mayor, the County Board of Supervisors Chairperson, and the County Watershed Protection District Board of Supervisors Chairperson". Same comment for Page 51, section "(iii)"--an elected official (County, Cities, and District).
- #15 - Page 41, footnote "3", bottom of page, is not the correct font size.
- #16 - Page 48, bottom of page, spacing error between "4." and "Construction".

TENTATIVE FIGURE - 1 (Ventura County Land Jurisdictions Map)

- #1 - The Order No. 09-xxx at the top of the sideways page is missing an "x".

ATTACHMENT A (Watershed Management Areas)

#1 - Pages A-1 to 4 of 4, the Order No. 09-xxx at the top of the sideways pages is missing an "x".

ATTACHMENT B (3 Watersheds Pollutants of Concern, 2003-2007)

#1 - Pages B-1 to 3 of 3, the Order No. 09-xxx at the top of the pages is missing an "x".

ATTACHMENT C (MALs/Treatment BMP Performance Standards)

#1 - Pages C-1 to 2 of 2, the Order No. 09-xxx at the top of the pages is missing an "x".

ATTACHMENT D (Critical Sources Categories)

#1 - Pages D-1 to 2 of 2, the Order No. 09-xxx at the top of the pages is missing an "x".

ATTACHMENT E (Determination of Erosion Potential)

#1 - Page E-1 of 1, the Order No. 09-xxx at the top of the page is missing an "x".

ATTACHMENT F (Monitoring Program)

#1 - Page i, the subject heading "NPDES No. CAS004002 draft Tentative Order Ventura County Municipal Separate Storm Sewer System Permit Attachment F - Monitoring Program No. CI 7388", and Order No. 09-xxxx are missing at the top of the page.

#2 - Pages F-1 to F-21, the Order No. 08-xxx at the top of the pages is incorrect. Must be corrected to "09-xxxx".

ATTACHMENT G (SWMP's Constituents with Associated MLs)

#1 - Pages G-1 to 4 of 4, the Order No. 09-xxx at the top of the pages is missing an "x".



ATTACHMENT H (Reporting Program)

- #1 - Page i, there are two pages labeled "i". The first page is correct, but the second page must be corrected to "ii".
- #2 - Page H-10, there are two pages labeled "H-10". The first page is correct, but the second sideways page must be corrected to "H-11".
- #3 - Pages i and "ii", the Order No. 09-xxx at the top of the pages is missing an "x".
- #4 - Pages H-1 to H-13, "of 30" at the bottom of the pages is incorrect. Must be corrected to "of 31" to match pages H-14 to H-31 of 31.
- #5 - Pages H-1 to H-10 and H-14 to H-31, the Order No. 09-xxx at the top of the pages is missing an "x".
- #6 - Pages "H-11" to H-13, the Order No. 08-xxx at the top of the sideways pages is incorrect. Must be corrected to "09-xxxx".

ATTACHMENT I (SWMP's Major Outfall Stations)

- #1 - Page I-1 of 1, the Order No. 09-xxx at the top of the page is missing an "x".

TENTATIVE TRANSMITTAL LETTER (To Jeff Pratt, Director VCWPD)

- #1 - Page 2, the page number is missing.
- #2 - Page 2, top of page states Ventura Watershed Protection District instead of Ventura County Watershed Protection District; confusing since there is a City of Ventura.

PUBLIC NOTICE

- #1 - Page 3 of 5, under PUBLIC COMMENTS AND SUBMITTAL OF EVIDENCE section, a facsimile number was not included. Since the State Water Resources

Control Board's public notices include facsimile numbers so must the Regional Water Board's.

#### QUESTIONS

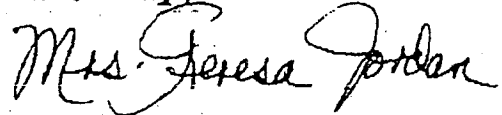
1. It is stated on Page 52 of 121 (Tentative Order) under Section (a), top of page, that "Participation in a Task Force: The Permittees shall participate with the Regional Water Board, and other public agencies on an enforcement task force such as the Storm Water Task Force, to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action." Will the meetings be open to the public?
2. It is stated on Page 91 of 121 (Tentative Order) under Section (c) (1) that "Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium. Complete by March 26, 2009." Was the UWQMP completed by March 26, 2009?
3. It is stated on Page 120 of 121 (Tentative Order) under Section R. Termination of Board Order 1 that "Regional Water Board Order No. 00-108 is hereby terminated". Why are "Rescission" and "rescinded" being replaced?
4. Section IV. STATUTOR AND REGULATORY HISTORY OF THE STORMWATER PROGRAM, Pages 9 to 15 (Fact Sheet/Staff Report), the text is spaced differently from the rest of the document's pages. Is this correct, or a spacing error?
5. It is stated on Page 24 (Fact Sheet/Staff Report), first paragraph, first sentence, that "The types of activities proposed in the new Ventura MS4 permit are similar with the conditions currently found in the Los Angeles MS4 permit". I cannot find the document and page, but somewhere it is stated to the effect that the Ventura Countywide MS4 Permittees are a step behind the Los Angeles Countywide MS4 Permittees. Does the statement on Page 24 mean that the Ventura Countywide MS4

Permittees will be in step with the Los Angeles Countywide MS4 Permittees?

6. Page C-1 of 2 (Attachment) is titled "Municipal Action Levels". Page C-2 of 2 is titled "Treatment BMP Performance Standards". Is the title on Page C-2 of 2 correct or is this an error --the other Attachments pages titles are all consistent?

Ms. Woods, since the proposed Ventura Countywide MS4 NPDES Permit's documents' pages Order No. is written with capitalized X's and a lower case letter(x), which size is legally acceptable?

Sincerely,



Mrs. Teresa Jordan

**Comments Received Late  
After April 10, 2009, 1700 Deadline**

**Tentative Ventura County MS4 Permit  
Municipal Separate Storm Sewer System (MS4) Permit**

**NPDES Permit No. CAS004002**

From: "Nancy Jordan" <njordan@bialav.org>  
 To: <VenturaMS4Comments041009@waterboards.ca.gov>  
 Date: 4/10/2009 5:01 PM  
 Subject: VENTURA MS4 PERMIT

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

- \* all Los Angeles Regional Water Quality Control Board staff
- \* all representatives of business entities, interests and organizations
- \* all representatives of construction and building related entities and industries and industry organizations
- \* all permittee public works staff and technical staff
- \* all engineers and other technical staff.

Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Nancy L. Jordan  
 Director, Marketing & Member Services  
 Building Industry Association of Southern California  
 Los Angeles/Ventura Chapter  
 Mobile 661-877-8617  
 Office 661-257-5046 ext. 221  
 www.bialav.org <<http://www.bialav.org/>>  
 "Building Homes...Building Communities"

REGISTER TODAY for MARGARITA MADNESS! Don't miss THE networking opportunity of the year!  
 April 22, 2009 - Register online [www.bialav.org](http://www.bialav.org) <<http://www.bialav.org/>>

From: "Coffee, Mary Lynn" <mlcoffee@Nossaman.com>  
 To: <VenturaMS4Comments041009@waterboards.ca.gov>  
 CC: "Holly Schroeder" <hschroeder@bialav.org>, "Andrew Henderson" <ANDREW@bi...>  
 Date: 4/10/2009 5:02 PM

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

- \* all Los Angeles Regional Water Quality Control Board staff
- \* all representatives of business entities, interests and organizations
- \* all representatives of construction and building related entities and industries and industry organizations
- \* all permittee public works staff and technical staff
- \* all engineers and other technical staff.

Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected without further consideration. The Building Industry and other interested parties would certainly have participated in any meetings to reach a consensus agreement if they had been invited. In fact, when participation was requested, the Building Industry and other interested parties were precluded from participation on the grounds that permittees, Heal the Bay and NRDC had entered into a confidentiality agreement that precluded the sharing of information regarding agreed upon storm water control requirements with the very parties that would be most affected by those requirements—builders; developers, engineers, water quality consultants, and other interested parties.

Thank you,

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**From:** "Tim Honadel" <tim@honadel.com>  
**To:** <VenturaMS4Comments041009@waterboards.ca.gov>  
**Date:** 4/10/2009 5:02 PM

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

all Los Angeles Regional Water Quality Control Board staffall representatives of business entities, interests and organizationsall representatives of construction and building related entities and industries and industry organizationsall permittee public works staff and technical staffall engineers and other technical staff. Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Tim Honadel, MS, REHS  
24585 Town Center Drive  
Santa Clarita, CA



**From:** Jeffrey McConnell <jsmmsj@earthlink.net>  
**To:** <VenturaMS4Comments041009@waterboards.ca.gov>  
**Date:** 4/10/2009 5:05 PM  
**Subject:** April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4Permit

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

- all Los Angeles Regional Water Quality Control Board staff
- all representatives of business entities, interests and organizations
- all representatives of construction and building related entities and industries and industry organizations
- all permittee public works staff and technical staff
- all engineers and other technical staff.

Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Jeff McConnell  
President  
Graceful Development, LLC  
10637 Mount Gleason Ave.  
Sunland, CA 91040  
Tel. 310-210-0806

**From:** Joe Cadelago <jcadelago@gmail.com>  
**To:** <VenturaMS4Comments041009@waterboards.ca.gov>  
**Date:** 4/10/2009 5:06 PM  
**Subject:** MS4 permit

Dear Ms. Egoscue,

I literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: \*Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. \*As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

- all Los Angeles Regional Water Quality Control Board staff
- all representatives of business entities, interests and organizations
- all representatives of construction and building related entities and industries and industry organizations
- all permittee public works staff and technical staff
- all engineers and other technical staff.

Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Sincerely,

Joe Cadelago



Received 1710

April 10, 2009

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: *Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees*. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

1. all Los Angeles Regional Water Quality Control Board staff
2. all representatives of business entities, interests and organizations
3. all representatives of construction and building related entities and industries and industry organizations
4. all permittee public works staff and technical staff
5. all engineers and other technical staff.

Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Sincerely,

Matthew Breiner  
Vice President  
Oro Vista Corp.

**From:** "Rochelle Ayars" <rochelle.ayars@gmail.com>  
**To:** <VenturaMS4Comments041009@waterboards.ca.gov>  
**Date:** 4/10/2009 5:11 PM

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons: • all Los Angeles Regional Water Quality Control Board staff • all representatives of business entities, interests and organizations • all representatives of construction and building related entities and industries and industry organizations • all permittee public works staff and technical staff • all engineers and other technical staff. Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Sincerely,

Rochelle Ayars  
President  
West Coast Products

Sent from my Verizon Wireless BlackBerry

**From:** "Soudani, Sara" <ssoudani@ltic.com>  
**To:** <VenturaMS4Comments041009@waterboards.ca.gov>  
**CC:** <hschroeder@biaglav.org>  
**Date:** 4/10/2009 5:15 PM

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

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- \*all representatives of business entities, interests and organizations
- \*all representatives of construction and building related entities and industries and industry organizations
- \*all permittee public works staff and technical staff
- \*all engineers and other technical staff.

Because the process to reach the agreement excluded critical interested persons entitled to notice and participation in the development of MS4 permit requirements, and failed to take into account any available information regarding technical feasibility of requested regulatory storm water control provisions, including provisions requested regarding low impact development requirements, MALs for treatment BMPs, and elimination from permissible use entire category of biotreatment LID BMPs, the agreed upon requirements do not constitute practicable, or even feasible storm water control requirements. In addition, the process used to reach agreement on the inappropriate requirements is not consistent with public participation requirements governing adoption of MS4 permits, or with the Regional Board's public participation process, which was set up to include all interested parties and stakeholders in development of new MS4 permit requirements. The resulting "consensus agreement" is inappropriate, does not represent the best interests of the stakeholders the permittees purport to represent, and should be rejected.

Sara Soudani  
Vice President, National Sales  
Lawyers Title Company  
A Division of Fidelity National Financial  
805-766-3835 cell or 800-432-0706 phone  
ssoudani@ltic.com

From: "Eileen Merino" <EileenM@CDSInsurance.com>  
 To: <VenturaMS4Comments041009@waterboards.ca.gov>  
 Date: 4/10/2009 5:18:PM  
 Subject: Ventura MS4 Permit

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No.CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

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- \* all representatives of business entities, interests and organizations
- \* all representatives of construction and building related entitles and industries and industry organizations
- \* all permittee public works staff and technical staff
- \* all engineers and other technical staff.

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Eileen Merino

Account Executive

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A Member of United Valley Insurance Services

437 S. Cataract Avenue, Suite 101

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**From:** "Scott Uhles" <suhles@rbf.com>  
**To:** <VenturaMS4Comments041009@waterboards.ca.gov>  
**Date:** 4/10/2009 5:20 PM  
**Subject:** Ventura MS4 Permit

Dear Ms. Egoscue,

We literally just received a copy of a comment letter submitted to the Los Angeles Regional Board regarding the April 2008 Draft Tentative NPDES Permit No. CAS004002-Ventura MS4 Permit regarding: Consensus on Stormwater Permit Language Between the Natural Resources Defense Counsel, Heal the Bay, and the Ventura County Stormwater Permittees. As indicated in that letter itself, the process used to reach a so-called "consensus agreement" excluded the following stakeholders, regulators and interested persons:

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- \* all engineers and other technical staff.

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Scott Uhles  
Project Engineer  
RBF Consulting  
Phone (805) 383-3373  
Fax (805) 383-3371





# California Regional Water Quality Control Board

## Los Angeles Region



Linda S. Adams  
Cal/EPA Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.waterboards.ca.gov/losangeles>

Arnold Schwarzenegger  
Governor

**TO:** Stakeholders/Interested Parties

**FROM:** Samuel Unger, P.E. *SU*  
Section Chief, Regional Programs

**DATE:** May 4, 2009

**SUBJECT:** TYPOGRAPHICAL ERROR – REVISED TENTATIVE VENTURA MS4 PERMIT

We recently became aware of a typographical error in the Revised Tentative Ventura MS4 Permit that was posted on our website on April 30, 2009:

Error: On page 64 of the Revised Tentative Order, under New Development/Redevelopment, Paragraph 5.(E).IV.4.(5) states “a project is infeasible in accordance with 5.(E).III.(1)(c)”

Correction: The correct reference is to section “5.(E).III.(1)(b)”

We apologize for any confusion and inconvenience. If there are any questions, please email to the dedicated e-mail account for this matter:

[VenturaMS4Comments041009@waterboards.ca.gov](mailto:VenturaMS4Comments041009@waterboards.ca.gov).

or contact Tracy Woods at (213) 620-2095 or via email at [twoods@waterboards.ca.gov](mailto:twoods@waterboards.ca.gov).

*California Environmental Protection Agency*



*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*

**E001387**

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1/28/2008 12:48 DianaE@lwa.com	Diana Engle
12/20/2005 20:14 DnLranch@adelphia.net	Doug Archibald
10/21/2005 6:54 Gary_Garofalo@dot.ca.gov	Gary Garofalo
11/2/2005 14:00 Gerhardt.Hubner@ventura.org	Gerhardt Hubner
12/1/2004 14:54 JEndicott@aei-casc.com	Jeff Endicott
1/26/2009 14:31 Jeanine.Hutton@ci.oxnard.ca.us	Jeanine Hutton
1/15/2003 0:00 JohnB648@AOL.com	John Bullington
10/29/2008 3:05 Johnrdarnell@yahoo.com	John R. Darnell II
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1/16/2007 8:05	gvillarreal@rbf.com	Gian Villarreal
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6/5/2008 11:06	hwylie1@hotmail.com	Heather Wylie
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3/8/2005 10:51 jreinhardt@lvnmwd.com	Jeff Reinhardt
1/7/2009 14:08 jrp@astound.net	John Peterson
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4/21/2009 21:02 jweiner.venturacoastkeeper@wishtoyo.org	Jason Weiner
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 4/4/2007 9:11 mpf@stateside.com  
 3/4/2005 14:59 mrnolan@socal.rr.com  
 9/23/2004 12:04 mtaylor@bna.com  
 10/31/2006 10:24 mvoong@waterboards.ca.gov  
 3/1/2005 13:01 mzirbel@atozlaw.com  
 5/7/2007 16:55 nancyf@rinconconsultants.com  
 12/18/2008 8:10 nisheeth.kakarala@gmail.com  
 6/17/2008 13:55 nmartorano@waterboards.ca.gov  
 12/1/2005 15:43 patrick.kelley@farmcreditwest.com  
 10/14/2008 11:33 patrick.vowell@gswater.com  
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 5/9/2006 13:52 pjenkin@sbcglobal.net  
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 8/16/2005 14:27 pmcgaw@archernorris.com  
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 8/26/2008 13:58 prandall@envirosolve.com  
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 10/23/2008 12:47 r.glaubitz@yahoo.com  
 2/16/2009 13:00 ralph2ortega@yahoo.com  
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 1/27/2006 11:04 rchristmann@waterboards.ca.gov  
 9/5/2007 9:04 rebeccaw@lwa.com  
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 4/28/2006 8:51 richard.a.haimann@mwhglobal.com  
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 8/15/2002 0:00 robert\_wu@dot.ca.gov  
 3/7/2005 7:30 roger.james@worldnet.att.net  
 2/15/2008 20:35 rosanna@augeas.com  
 5/15/2006 15:56 rovinco@aol.com  
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 7/11/2006 15:55 rsams@waterboards.ca.gov  
 4/18/2008 13:18 sallycoleman@vrsd.com  
 4/2/2009 9:58 sarahd@nautilusenvironmental.com  
 3/10/2005 11:15 scottquady@vrsd.com  
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 Mark Zirbel  
 Nancy Fox-Fernandez  
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 Nicholas Martorano  
 Patrick J. Kelley  
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 Paul S. Cobian  
 Paul Tantet  
 Polly Barrowman  
 Patricia Gouveia  
 Paul Jenkin  
 Philip Markle  
 Peter W. McGaw  
 Kevin Powers  
 Patrick Randall  
 Michael Miller  
 Robert Glaubitz  
 ralph ortega  
 Richard Bradley  
 Rebecca Christmann  
 Rebecca Winer-Skonovd  
 Robert Horton  
 Richard Haimann  
 Richard Nack  
 Raul N. Fernandez  
 Bob Wu  
 Roger B James  
 Rosanna Garrison  
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8/23/2007 10:43 tgaur@smbaykeeper.org  
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7/26/2007 13:34 tommy.liddell@ventura.org  
2/28/2005 12:53 trak@trakenviro.com  
10/5/2000 0:00 trodgers@waterboards.ca.gov  
3/3/2005 9:08 tsmith@bonterraconsulting.com  
10/21/2008 11:18 tthompson@entrix.com  
3/24/2005 14:57 ummorow127@yahoo.com  
4/22/2003 0:00 vconway@lacsds.org  
10/26/2005 11:06 vlhaller@aol.com  
12/4/2006 13:14 vmusgrove@ci.ventura.ca.us  
10/11/2006 14:13 wbotha@daley-heft.com  
11/18/2005 5:14 wfunderburk@sfcfirm.com  
1/10/2009 11:09 wlaton@aol.com  
7/10/2008 9:55 ysim@dpw.lacounty.gov  
4/4/2006 16:22 ysim@ladpw.org  
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Peri Davis  
Tracy Egoscue  
Tom Fung  
Tatiana K. Gaur  
Thomas Moorhouse  
Tommy Liddell  
Bradford S. Newman  
Theresa Rodgers  
Thomas E Smith Jr  
Tim Thompson  
Andrew Amorao  
Victoria O. Conway  
Verne Haller  
Vicky Musgrove  
Wentzelee Botha  
William Funderburk  
William Laton  
Youn Sim  
Youn Sim  
Zora Baharians

# LYRIS MAILING

LIST NAME: Misc Ventura  
 DATE MAILED: 5/4/09

DATEJOINED_	EMAILADDR_	FULLNAME_
1/28/2008 12:48	DianaE@lwa.com	Diana Engle
10/21/2005 6:54	Gary_Garofalo@dot.ca.gov	Gary Garofalo
11/2/2005 14:00	Gerhardt.Hubner@ventura.org	Gerhardt Hubner
12/1/2004 14:54	JEndicott@aei-casc.com	Jeff Endicott
1/26/2009 14:31	Jeanine.Hutton@ci.oxnard.ca.us	Jeanine Hutton
1/15/2003 0:00	JohnB648@AOL.com	John Bullington
10/29/2008 3:05	Johnrdarnell@yahoo.com	John R. Darnell II
3/11/2005 10:39	Melinda.Talent@ventura.org	Melinda Talent
3/4/2005 10:47	Nancy.Settle@Ventura.Org	Nancy Settle
3/1/2005 10:40	RWPearson@aol.com	Roger W. Pearson
3/11/2005 8:36	Richard.Hauge@ventura.org	Richard Hauge
3/2/2005 9:47	Ronald.Sheets@OjaiSan.org	Ronald Sheets
12/13/2005 9:31	adavis@rbf.com	Anne G. Davis
12/19/2005 11:22	adorablesam_4@yahoo.co.in	sam
1/3/2001 0:00	aharrington@ci.claremont.ca.us	Andrea Harrington
12/17/2005 8:28	ahheil@lacs.d.org	Ann Heil
12/19/2006 13:14	akuhlman@ci.camarillo.ca.us	Anita Kuhlman
9/8/2005 10:08	allen.camp@sfox.com	Allen F. Camp
3/28/2005 13:31	amarsh@pirnie.com	Anita Marsh
1/28/2008 11:54	amys@lwa.com	Amy Storm
9/19/2007 22:15	arlene.hopkins@gmail.com	arlene hopkins
3/10/2009 13:57	aross@dpw.lacounty.gov	Andrew Ross
8/24/2006 15:29	arri@mtaonline.net	Jeffrey Davis
12/28/2004 7:34	asaponara@treadwellrollo.com	Anthony Saponara
12/19/2006 13:10	ashlid@lwa.com	Ashli Desai
3/7/2005 13:11	barry.snyder@amec.com	Barry J. Snyder
8/11/2008 17:19	barry@winefieldassoc.com	Barry White
3/29/2006 11:03	berries01@sbcglobal.net	greg berry
7/21/2008 12:25	bhelm@crystalstream.com	Brent A. Helm
6/1/2005 11:37	blizmo1@aol.com	Elizabeth Zlotnik
3/28/2005 15:13	boylehm@cdm.com	Heather Boyle
3/11/2002 0:00	bradmilner@kennedyjenks.com	Brad Milner
4/7/2009 6:53	bruceheyman@cox.net	Bruce Heyman
3/16/2005 9:48	bteaford@ci.burbank.ca.us	Bonnie Teafor
9/20/2006 14:25	ca3@imsinfo.com	Cory R. Espinoza
12/8/2008 18:01	cabrera-stagno.valentina@epa.gov	Valentina Cabrera
2/28/2005 21:25	calcropdoc@yahoo.com	David Holden
5/4/2006 16:09	carla.cummings@westonsolutions.com	Carla Cummings
12/3/2008 15:20	cchang@waterboards.ca.gov	Cathy Chang
8/5/2008 8:27	chiggins@mines.edu	Christopher Higgins
5/9/2008 8:51	chrism@lwa.com	Chris Minton

1/15/2009 13:07 chrlee@ucla.edu	Christine Lee
2/28/2005 13:13 cleanwater@sfo.com	Daniel Cooper
1/7/2009 16:36 courtney@wreassoc.net	Courtney Davis Nichols
2/28/2005 15:13 cperez@newhall.com	Cris Perez
12/2/2008 9:23 craig.anderson@noaa.gov	Craig Anderson
3/19/2008 17:43 ctyrrell@pirnie.com	Catherine Tyrrell
7/17/2006 17:05 currunaga@waterboards.ca.gov	Carlos Urrunaga
3/13/2007 14:10 dapt@rbf.com	Daniel Apt
3/6/2006 10:57 darrell.siegrist@ventura.org	Darrell Siegrist
12/19/2006 13:09 davidm@lwa.com	David Martinez
5/7/2008 6:42 dduncan@santa-clarita.com	Dan Duncan
3/14/2008 10:14 dhock@rmcwater.com	Dawn Hock
3/2/2005 13:42 dlippman@lvmwd.com	david lippman
3/17/2006 14:34 donna.chen@lacity.org	Donna Chen
3/31/2009 13:05 dromo@mztco.com	Diana Romo
2/28/2005 9:05 earl.lapensee@rcslade.com	Earl LaPensee
8/26/2008 10:39 edward@lasgrwc.org	Edward Belden
5/23/2008 9:31 ewakefield@waterboards.ca.gov	Elisha Wakefield
9/12/2006 14:36 ewu@waterboards.ca.gov	Eric Wu
3/3/2005 15:51 fleming.terrence@epa.gov	Terrence Fleming
6/9/2008 15:47 gamah@waterboards.ca.gov	Ginachi Amah
8/6/2002 0:00 gary.wortham@tetrattech.com	Gary Wortham
1/16/2007 8:05 gvillarreal@rbf.com	Gian Villarreal
3/2/2005 16:00 hashimoto.janet@epa.gov	Janet Hashimoto
11/17/2005 11:07 houstgrp@pacbell.net	Laura Cottrell
5/1/2009 14:43 jalarcon@ci.malibu.ca.us	Jackie Alarcon
4/6/2009 19:07 janswift@live.com	jan andrew swift
5/1/2008 8:45 jcho@lvmwd.com	JIMMIE CHO
5/9/2006 12:33 jcox@waterboards.ca.gov	Joanne Cox
3/2/2005 10:56 jdeakin@simivalley.org	Joe Deakin
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4/13/2007 16:56 jfordyce@waterboards.ca.gov	Jennifer Fordyce
1/25/2006 7:47 jgully@lacsds.org	Joseph R. Gully
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4/28/2009 14:37 khoffman@lacsds.org	Ken Hoffman
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3/14/2007 16:53 krubin@ladwp.com	Katherine Rubin
5/22/2006 12:45 kthompson@mail.wqa.org	Kelley Thompson
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3/1/2005 11:37 lag@sbck.org	Leigh Ann Grabowsky
2/12/2007 10:18 laurie_solis@urscorp.com	laurie solis
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1/23/2008 13:32 lindaestrin@gmail.com	LG estrin
4/2/2004 13:13 llarsen@rbf.com	Laura Larsen
1/19/2005 10:42 lmartinez@biasec.org	Lisa Martinez
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5/5/2009 12:05 lmckenney@rbf.com	Larry McKenney
10/4/2006 15:48 lnye@waterboards.ca.gov	L. B. Nye
2/28/2005 11:12 lorettac@ci.irwindale.ca.us	Loretta Corpis
6/27/2005 14:56 louise.rishoff@asm.ca.gov	Louise Rishoff
2/27/2002 0:00 mark.pumford@ci.oxnard.ca.us	Mark Pumford
1/18/2002 0:00 marym@water.ca.gov	Mary M. Miller
10/18/2005 9:54 mbaker@crqlabs.com	Mark D. Baker
12/28/2004 12:15 mbiedebach@wcenviro.com	Mike Biedebach
7/11/2006 16:12 mcohen@rwglaw.com	Matthew Cohen
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3/28/2005 15:37 mgold@healthebay.org	Mark Gold
10/18/2000 0:00 mhoward@socalgas.com	Mary Howard
1/19/2009 18:15 michael.a.beasley@boeing.com	Michael Beasley
3/3/2005 10:09 mlcoffee@nossaman.com	Mary Lynn Coffee
7/12/2006 16:22 mlevy@waterboards.ca.gov	Michael Levy
1/25/2006 18:01 mpestrel@ladpw.org	Mark Pestrella
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7/11/2006 7:25 zora.baharians@lacity.org

William Funderburk  
William Laton  
Youn Sim  
Youn Sim  
Zora Baharians



# California Regional Water Quality Control Board

## Los Angeles Region



Linda S. Adams  
Agency Secretary

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

Arnold Schwarzenegger  
Governor

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### Notice of Public Meeting/Hearing

#### Two-Day Meeting

Thursday, May 7, 2009

10:00 a.m.

and

Friday, May 8, 2009

9:00 am

Meeting Location:

Ventura County Government Center

(Hearing Room)

800 South Victoria Avenue

Ventura, California

### Agenda

The Regional Board strives to conduct an accessible, orderly, and fair meeting. During the meeting, the Chair will conduct the meeting and establish appropriate rules and time limitations for each item. The Board will only act on items designated as action items. Action items on the agenda are staff proposals, and may be modified by the Board as a result of public comment or Board member input. Additional information about Regional Board meeting procedures is included after the last agenda item.

To ensure a fair hearing and that the Regional Board Members have an opportunity to fully study and consider written material, unless stated otherwise, written materials must be provided to the Executive Officer **not later than 5:00 p.m. on April 27, 2009. Please consult the agenda description for specific items, because certain items may have an earlier deadline for written submissions. If you are considering submitting written materials, please consult the notes at the end of the agenda. Failure to follow the required procedures may result in your materials being excluded from the hearing record; however, failure to timely submit written materials does not preclude a person from testifying before the Board.**

#### INTRODUCTORY ITEMS

1. Roll Call.
2. **Order of Agenda.** The agenda items are numbered for identification purposes only and may not necessarily be considered in this order.
3. **Approval of April 2, 2009 draft Meeting Minutes.**  
[Ronji Harris, (213) 576-6612]
4. **Board Member Communications.**

E001398

- 4.a. Ex Parte Disclosure. Board Members will identify any discussions they may have had requiring disclosure pursuant to Government Code section 11430.40.
- 4.b. Board Member Reports. The Board Members may discuss communications, correspondence, or other items of general interest relating to matters within the Board's jurisdiction.
- 5.a. **Executive Officer's Report.**  
[Tracy Egoscue, (213) 576-6605]
- 5.b. **Board Checklist.**
- 5.c. **Update from State Board.** [Fran Spivy-Weber]
- 5.d. **Public Forum.** Any person may address the Board regarding any matter within the Board's jurisdiction provided the matter does not appear elsewhere on this agenda, has not been scheduled to appear on a future agenda, and is not expected to be imminently scheduled for the Board's consideration. Remarks will be limited to five (5) minutes, unless otherwise directed by the Chair.

### **UNCONTESTED ITEMS**

*(Items marked with an asterisk are expected to be routine and noncontroversial. The Board will be asked to approve these items at one time without discussion. Any Board member or person may request that an item be removed from the uncontested calendar. The Chair will determine the appropriate time to consider an item removed from the consent calendar.)*

#### **Waste Discharge Requirements that Serve as Individual NPDES Permits**

##### **Termination -**

- \*6. California Dairies, Inc., 11709 E. Artesia Blvd., Artesia; NPDES No. CA0057371 [Rosario Aston, (213) 576-6653]

### **ACTION ITEM**

#### **Litigation**

- 7. Consideration of a draft Resolution rescinding Resolution Nos. R05-06 and R05-07 (Incorporating into the Basin Plan the 2005 versions of the Los Angeles River and Ballona Creek Metals TMDLs) pursuant to a writ of mandate in *Cities of Bellflower et al v. Los Angeles regional Water Quality Control Board et al.* [Michael J. Levy, (916) 341-5193]

#### **Ventura County MS4 Storm Water Permit**

- 8. Discharge of Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Unincorporated Cities Therein; NPDES Permit No. CAS004002. (Comment submittal deadline was April 10, 2009.) [Tracy Woods, (213) 620-2095]

#### **Waste Discharge Requirements that Serve as Individual NPDES Permits**

##### **Renewal-**

- 9. Joint Outfall System (Whittier Narrows Water Reclamation Plant), El Monte; NPDES Permit No. CA0053716 (Comment submittal deadline on the revised tentative Order was April 17, 2009) [Raul Medina, (213) 620-2160]
- 10. Consideration of tentative Waste Discharge Requirements for Santa Clarita Valley Sanitation District of Los Angeles County (Valencia Water Reclamation Plant), Valencia; NPDES No. CA0054216 (Comment submittal deadline was April 20, 2009) [Veronica Cuevas, (213) 576-6662]
- 11. Consideration of tentative Waste Discharge Requirements for Santa Clarita Valley Sanitation District of Los Angeles County (Saugus Water Reclamation Plant), Santa Clarita; NPDES No. CA0054313 (Comment submittal deadline was April 20, 2009) [Dr. Cathy Chang, (213) 576-6760]

#### **Non-NPDES State Discharge Requirements**

##### **Renewal-**

- 12. County Sanitation Districts of Los Angeles County (Calabasas Landfill); File No. 60-118 (Comment submittal deadline was April 14, 2009) [Enrique Casas, (213) 620-2299]

**Waste discharge Requirements that Serve as Individual NPDES Permits**

**Renewal-**

13. Consideration of tentative Waste Discharge Requirements for the Boeing Company, Santa Susana Field laboratory, Simi Hills (NPDES No. CA0001309). The tentative Order includes recent information provided by the Discharger, the results of the RPA and a compliance schedule for Outfalls 008 and 009 during the implementation of actions associated with the California Water Code Section 13304 Order issued by the Regional Board on December 3, 2008. (Comment submittal deadline was April 15, 2009) [Cassandra Owens, (213) 576-6750]

**Non-NPDES State Discharge Requirements**

**Cease and Desist Order-**

14. Consideration of the proposed Cease and Desist Order (CDO) for the Boeing Company, Santa Susana Field Laboratory (NPDES) No. CA0001309, CI 6027). The CDO provides a compliance schedule for the implementation of the interim source removal actions (ISRA) at Outfalls 008 and 009. (Comment submittal deadline was April 15, 2009) [Cassandra Owens, (213) 576-6750]

**INFORMATION ITEM**

15. Revision of Monitoring and Reporting Program for Browning Ferris Industries of California, Inc.'s Sunshine Canyon City/County Landfill, Sylmar; (File No. 58-076) (Comment submittal deadline was April 14, 2009) [Wen Yang, (213) 620-2253]

**CLOSED SESSION**

16. As authorized by the Government Code section 11126, the Regional Board will be meeting in closed session. Closed session items are not open to the public. Items the Board may discuss include the following: [Michael J. Levy (MJL), (916) 341-5193; Jennifer L. Fordyce (JLF), (916) 324-6682; Jeffery M. Ogata (JMO), (916) 341-5190]
- 16.1 *Cities of Los Angeles, City of Burbank v. Los Angeles Regional Water Quality Control Board*, Los Angeles County Superior Court, Case Nos. BS 060957 and BS 060960. [Challenging the Burbank, Tillman, and Los Angeles-Glendale Water Reclamation Plants' NPDES permits]. (MJL)
- 16.2 *County of Los Angeles et al. v. Commission on State Mandates et al. and City of Artesia et al. v. State of California*, Los Angeles Superior Court Nos. BS 089769 & BS089785, Second District Court of Appeal No. B183981 [Alleging that the Los Angeles MS4 Permit created an unfunded state mandate]. (MJL)
- 16.3 *In re Halaco Engineering Company*, United States Bankruptcy Court, Central District of California, Northern Division, No. ND-02-12255 RR [Regarding a CDO and CAO at the Oxnard Property]. (JLF)
- 16.4 *Cities of Arcadia et al., v. Los Angeles Regional Water Quality Control Board*, Orange County Superior Court No. 06CC02974 [Challenging the 2004 Triennial Review]. (MJL)
- 16.5 *Cities of Bellflower et al., v. Los Angeles Regional Water Quality Control Board et al.*, Los Angeles Superior Court No BS101732 [Challenging the Los Angeles River and Ballona Creek Metals TMDLs]. (MJL)
- 16.6 *In re: Petition of the County of Los Angeles and the County Flood Control District for Review of Order No. R4-2006-0074* [Challenging the incorporation into the MS4 Permit of the Waste Load Allocations from the Santa Monica Bay Beaches Bacterial TMDL]. (MJL)
- 16.7 *U.S., People of the State of California ex rel. California Regional Water Quality Control Board, Santa Monica Baykeeper, and Intervenors v. City of Los Angeles*, United States District Court, Central District of California, Consolidated Case Nos. 98-9039-RSWL and 01-191-RSWL [Regarding a Settlement Agreement and Final Order concerning the City of Los Angeles' sewer collection system]. (JMO)

- 16.8 Consultation with counsel about:
- (a) A judicial or administrative adjudicatory proceeding that has been formally initiated to which the Regional Board is a party;
  - (b) A matter that, based on existing facts and circumstances, presents significant exposure to litigation against the Regional Board;
  - (c) A matter which, based on existing facts and circumstances, the Regional Board is deciding whether to initiate litigation. (JLF)
- 16.9 Consideration of the evaluation of performance about a public employee. (MJL)
17. **Adjournment of Current Meeting.** The next regular meeting is scheduled for June 4, 2009, beginning at 9:00 a.m. at Metropolitan Water District of Southern California, located at 700 North Alameda Street, Los Angeles, California.

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**NOTICE**

**Ex Parte Communications:** An ex parte communication is a communication to a board member from any person, about a pending matter, that occurs in the absence of other parties and without notice and opportunity for them to respond. The California Government Code prohibits the board members from engaging in ex parte communications during permitting, enforcement, and other "quasi-adjudicatory" matters. The Regional Board discourages ex parte communications during rulemaking and other "quasi-legislative" proceedings. The ex parte rules are intended to provide fairness, and to ensure that the board's decisions are transparent, based on the evidence in the administrative record, and that evidence is used only if stakeholders have had the opportunity to hear and respond to it. Ex parte rules do not prevent anyone from providing information to the water boards or requesting that the water boards take a particular action. They simply require that the information come into the record through proper channels during a duly noticed, public meeting. A board member who has engaged or been engaged in a prohibited ex parte communication will be required to publicly disclose the communication on the record and may be disqualified from participating in the proceeding. For more information, please look at the ex parte questions and answers document found at [www.waterboards.ca.gov/laws\\_regulations/docs/exparte.pdf](http://www.waterboards.ca.gov/laws_regulations/docs/exparte.pdf)

**Hearing Procedures:** The Regional Board follows procedures established by the State Water Resources Control Board. These procedures are established in regulations commencing with section 647 of title 23 of the California Code of Regulations. The Chair may establish specific procedures for each item, and consistent with section 648, subdivision (d) of title 23 of the California Code of Regulations may waive nonstatutory provisions of the regulations. Generally, all witnesses testifying before the Regional Board must affirm the truth of their testimony and are subject to questioning by the Board Members. The Board does not, generally, require the designation of parties, the prior identification of witnesses, or the cross examination of witnesses. Any requests for an alternate hearing process should be made to the Executive Officer in advance of the meeting, and under no circumstances later than 5:00 p.m. on the Thursday preceding the Board meeting. The provisions of this paragraph shall be deemed superseded to the extent that they are contradicted by a hearing notice specific to a particular agenda item.

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**Written Submissions:** Written materials (whether hand-delivered, mailed, e-mailed, or facsimiled) **must be received prior to the relevant deadline** established in the agenda and public notice for an item. If the submitted material is more than 10 pages or contains foldouts, color graphics, maps, or similar items, 12 copies must be submitted prior to the relevant deadline.

Failure to comply with requirements for written submissions is grounds for the Chair to refuse to admit the proposed written comment or exhibit into evidence. (Cal. Code Regs. tit. 23, § 648.4(e).) The Chair may refuse to admit written testimony into evidence unless the proponent can demonstrate why he or she was unable to submit the material on time or that compliance with the deadline would otherwise create a hardship. If any other party demonstrates prejudice resulting from admission of the written testimony, the Chair may refuse to admit it.

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**Administrative Record:** Material presented to the Board as part of testimony that is to be made part of the record must be left with the Board. This includes photographs, slides, charts, diagrams, etc. All Board files pertaining to the items on this Agenda are hereby made a part of the record submitted to the Regional Board by staff for its consideration prior to action on the related items.

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**Accessibility:** Individuals requiring special accommodations or language needs should contact Dolores Renick at (213) 576-6629 or [drenick@waterboards.ca.gov](mailto:drenick@waterboards.ca.gov) at least ten working days prior to the meeting. TTY/TDD/Speech -to-Speech users may dial 7-1-1 for the California Relay Service.

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**Availability of Complete Agenda Package:** A copy of the complete agenda package is available for examination at the Regional Board Office during regular working hours (8:00 a.m. to 5:00 p.m. Monday through Friday) beginning 10 days before the Board meeting. Questions about specific items on the agenda should be directed to the staff person whose name is listed with the item.

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**Continuance of Items:** The Board will endeavor to consider all matters listed on this agenda. However, time may not allow the Board to hear all matters listed. Matters not heard at this meeting may be carried over to the next Board meeting or to a future Board meeting. Parties will be notified in writing of the rescheduling of their item. Please contact the Regional Board staff to find out about rescheduled items.

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**Challenging Regional Board Actions:** Pursuant to Water Code section 13320, any aggrieved person may file a petition to seek review by the State Water Resources Control Board of most actions taken by the Regional Board. A petition must be filed within 30 days of the action. Petitions must be sent to State Water Resources Control Board, Office of Chief Counsel; ATTN: Elizabeth Miller Jennings, Senior Staff Counsel; 1001 "I" Street, 22nd Floor; Sacramento, CA 95814.

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**Electronic Information and Updates:** Our web site address is [www.waterboards.ca.gov/losangeles/](http://www.waterboards.ca.gov/losangeles/). The site can also be accessed through the State Water Resources Control Board's web site at [www.waterboards.ca.gov/](http://www.waterboards.ca.gov/), then clicking on "Regional Boards". Information available online includes the Regional Board's meeting schedule, a list of the Regional Board members, past and present Executive Officer reports, program information, a list of staff and phone numbers arranged by their work unit, and links to the Santa Monica Bay Restoration Commission's home page and other governmental agencies. Last-minute changes to the agenda, such as the continuance of an item, will be posted electronically. If you need further information, please contact Jack Price at (213) 576-6669.

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**Pending Water Quality Certifications:** A listing of pending water quality certification applications currently on public notice pursuant to Section 401 of the Federal Clean Water Act may be obtained by calling Valerie Carrillo at (213) 576-6759.

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**Settlement of Enforcement Actions:** A listing of settlement enforcement actions can be accessed by the following link: <http://www.waterboards.ca.gov/enforcement/index.html>

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State of California  
 Environmental Protection Agency  
 State Water Resources Control Board  
 Los Angeles Regional Water Quality Control Board

**SIGN-IN SHEET**

Board Meeting  
 May 7, 2009  
 First Day of Two-Day Meeting

Name	Mail Address Company Name/Organization	E-Mail Address or Telephone Number	Add Name to Mail List
Mike Sedell	City of Simi Valley		
Scott Mitnick	City of Thousand Oaks		
Gene Hibberd	City of Ventura		
Dale Zurawski	Farm Bureau	dale@farmbureau.com	✓
Eric Strecker	Geosyntec	estrecker@geosyntec.com	✓
MATTHEW BREINER	ORO VISTA CORP.	MBREINER@AVC.COM	
Sara Soudani	Lawyers Title Company	ssoudani@htc.com	

# RWQCB Public Hearing Preparation

Thursday, May 7, 2009

PRINT NAME	AGENCY	PHONE NUMBER	EMAIL
BERT RAPP	FILLMORE	805 524-3701	brapp@ci.fillmore.ca.us
Tess Dunham	Somach Simmons Dunn	916-444-7972	tdunham@somachlaw.com
Trey Woods	LA-RWQCB	213/620-2095	twoods@waterboards.ca.gov
ARNE ANSELM	VENTURA COUNTY WATERBED	805 654 3942	ARNE.ANSELM@VENTURA.ORG
Jennifer Weiland	OC Watersheds	(714) 955-0601	jennifer.weiland@ocpw.org
CLAUDINE MECKER	CITY OF ALHAMBRA	626 570-5080	CMECKER@CITYOFALHAMBRA.ORG
Mary Jane Makedon	Contech	878-579-1781	Makedon@contech-cpi.com
Raphael Mazar	SCWRP / SMC	714-755-3235	raphaelm@scwrp.org
Mark Grey	CLWGX	909-525-0623	morey@siarc.org
Kevin Griesche	City of Simi Valley	805 583-6462	KGriesche@SimiValley.org
Ron Calkins	City of Ventura	805 654-7808	rcalkins@ci.ventura.ca.us
John Kemmer	US EPA	213-244-1832	Kemmer.John@EPA.gov
Ron Fuchiwaka	City of Simi Valley	805-583-6808	rfuchiwaka@SimiValley.org
Ana V. Cuevas	RWQCB	(213) 576-6662	vcuevas@waterboards.ca.gov
RAUL MEDINA	"	213 620-2160	rmedina@waterboards.ca.gov
Fred Camarillo	Port Huene	805 986 6556	fcamarillo@ci.port-huene.ca.us

RWQCB Public Hearing Preparation

Thursday, May 7, 2009

PRINT NAME	AGENCY	PHONE NUMBER	EMAIL
Gerald Greene	Powney	502 904 7112	ggreene@downeycc.org
Mack Walker	LWA	530.753.6400	macw@lwa.com
VATKO AUVEN	CONTECH	805-485-0154	glenuv@contech-cpi.com
Anita Kohnman	Camarillo	805-383-5059	akohnman@comanillo.ca.us
Shawn Krots	Meerpark	805-517-6257	skrots@ci.moorpark.ca.us
Karin Coyne	LWA	805-585-1835	Kcoyne@lwa.com
Kirsten James	Heal the Bay		mgold@healthebay.org
Munk Gold	"		ssantibena@healthebay.org
W. Susie Santibena	"		alburkenn@burkenngeri.com
Dave Burkenn	Burkenn Gest	213-629-8788	bill@hawkescivil.com
Bill O'Brien	City of Ojai	805-658-6611	jennifer.novak@doj.ca.gov
Jennifer Novak	Cal DOS	213 897 4953	kelly@toaks.org
Johanne Kelly	City of Thousand Oaks	805 449 7471	chic2@stoglobal.net
PETER CHILC	FE	(323)774-4628	JTHORSEN@CI.MALIBU.CA.US
Jim THORSEN	CITY OF MALIBU	310-456-2489	GAD@UCHOMEFINDERS.COM
KAY RENNION	1/2 Coastal Assn of REALTORS	805-781-2100	

RWQCB Public Hearing Preparation

Thursday, May 7, 2009

PRINT NAME	AGENCY	PHONE NUMBER	EMAIL
Kristen Ruffey	LACSD	562-908-4288x	2826 krunffell@lacsd.org
Brian Lowe	"	"	2802 blowe@lacsd.org
Lucia McGovern	City of Camarillo / Camarillo Sanitary	805 388-5334	lmcgovern@ci.camarillo.ca.gov
Craig George	CITY OF MARIETTA	36-486-2484x229	
Joe Bellomo	City of Westlake Village	805 279 0856	jbellomo@willdow.com
Ann Hill	LACSD	862 908 4288 x 2803	Ann.Hill@lacsd.org
Don Jensen	Jensen Design & Survey	805 654 6977	dj@jensenid.com
Craig Bois	BOIS CONSTRUCTION	805-656-1432	craigbois@boisconstruction.com
Lloyd A. Poindexter	VTN west, Inc	818-993-8740	lpoindexter@vtwest.com
SARA BATTLE	GEOLOGIC ASSOC	858-454-1136	sbattle@geologic.com
RICK NYZANK	B I A . . .	805 754 0887	richardnyzank@hotmail.com
Heather Wylie	Southern Cal watershed Alliance	<del>805 754 0887</del>	<del>hwylie@hotmai.com</del>
Ed DeLuclave	PW ENVIRONMENTAL	805-525-5563	ed@pwenvironmental.com
JOAN GAERLAN	Kennedy Jenks Consultants	805-658-0607	Joan.Gaerlan@KennedyJenks.com
Susan Weiner	Ventura Coastkeeper	310-775-5281	jweiner.ventura.coastkeeper@wishi.org
Jim Taylor	City of Thousand Oaks	805-449-2442	jtaylor@toaks.org

RWQCB Public Hearing Preparation

Thursday, May 7, 2009

PRINT NAME	AGENCY	PHONE NUMBER	EMAIL
Richard Watson	RWA	949-855-6272	r.watson@rwaplanning.com
JASON PEREIRA	Calif. Watershed Engineering	714-385-2602	jperera@cwecorp.com
Mark Punford	City of Chard	805 271-2220	
Geoff Brossseau	CA50A	650-365-8620	geoff@brossseau.us
<del>Tom Pennington</del>	City of Fullmore	905 524 1506	Tom.Pennington@cityoffullmore.ca.us
Philip L. Friess	LACS D	562-908-4288 ext 2501	pfriess@lacsol.org
Jon Tompkin	CITY OF SANTA ANA	805 933 4912 x303	JTOMP@CI.SANTA-ANA.CA.US
Carlos Santos	Riverside LA	213 620-2073	
John Franklin	Franklin Development	805-907-5124	john@franklinred.com
John Krist	VEALCO	905-289-0155	
Beata Reyes	CITY OF STANISLA	(805) 385-3963	beata.reyes@ci.stanisl.ca.us
Paul Jenkins	SERRIDER FOUNDATION	805 648-4005	Pjenkin@sbcglobal.net
TREVOR SMITH	Channel Islands Waterfront	HOA 469-9760	TRE@SMITHENGINEERING.COM
Rafael Garcia	Sunshine Canyon	(818) 833-6503	rafael.garcia@sunsh.com
Allen Hawks	City of Santa Ana	(805) 640-2560	Hawks@ci.santaana.ca.us
Peni Keane-Pengel	CAA	510.257.2002	peni.keane-pengel@caa.org



State of California  
 Environmental Protection Agency  
 State Water Resources Control Board  
 Los Angeles Regional Water Quality Control Board

**SIGN-IN SHEET**

Board Meeting  
 May 7, 2009  
 First Day of Two-Day Meeting

001408

Name	Mail Address Company Name/Organization	E-Mail Address or Telephone Number	Add Name to Mail List
Hilary Mack	WTS&P	hilmack@comcast.com	
Mara Voogt	LARWQCB		
MKSTENSTRÖM	NELA	STENSTROM@SOAS.UCLA.EDU	
Adam Sorokin		asorokin@gmail.com	
Brian Louie	LACSD	blouie@lacsd.org	

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: MAY 7

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. \_\_\_\_\_  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: TREVOR SMITH

- Representing Self  
 Representing: CHANNEL ISLANDS WATER FRONT HOME OWNERS ASSOCIATION

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the meeting. # 7

I do not wish to speak but I do want to express the following position:

Name: Dave Burkert

- Representing Self  
 Representing: Cities of Downey, Paramount, Santa Fe Springs, Signal Hill + Whittier

*To provide an opportunity for all meeting participants to speak during public individuals may be asked to limit their comments to three (3) minutes. Individuals need additional time to comment are invited to submit a second speaker request.*

E001409

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: May 7, 2009

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 7 (IF NEEDED)  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Mark Gold  
 Representing Self  
 Representing: Heal the Bay

*Unless exempted by the Board, comments are limited to three (3) minutes.*

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State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. \_\_\_\_\_  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: CRAIG GEORGE  
 Representing Self  
 Representing: CITY OF MALIBU

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001410



State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/21/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: John Kemmer  
 Representing Self  
 Representing: USEPA

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/21/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. Ventura Co MS4  
 I wish to speak during Public Forum on a non-agenda item. Permit

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Mike Sedell  
 Representing Self  
 Representing: V.C. Permits

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001411

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: May 7, 2009

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8 (environmental presentation)  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Mark Gold  
 Representing Self  
 Representing: Heal the Bay

*Unless exempted by the Board, comments are limited to three (3) minutes.*

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State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. Ventura Co MS4  
 I wish to speak during Public Forum on a non-agenda item. Permit

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. 1  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Kathy Long - Ventura Co District 3  
 Representing Self  
 Representing: Ventura County Spencer

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. Ventura Co. MS4  
 I wish to speak during Public Forum on a non-agenda item. Permit

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Pick Cole  
 Representing Self  
 Representing: V.C. Permittees

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. Ventura Co MS4  
 I wish to speak during Public Forum on a non-agenda item. Permit

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Jeff Prath  
 Representing Self  
 Representing: V.C. Permittees

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001413

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. Ventura  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Patti Walker Mayor  
 Representing Self  
 Representing: City Fillmore

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

*Electeds*

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Rondi Guthrie  
 Representing Self  
 Representing: Assemblywoman Audra Stierklarel

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001414

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Josoa DeGonia

- Representing Self  
 Representing: Assembly Member Cameron Smyth

*Unless exempted by the Board, comments are limited to three (3) minutes.*

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State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Chris Collier

- Representing Self  
 Representing: Senator Tony Strickland

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001415

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. Ventura Co MS4  
 I wish to speak during Public Forum on a non-agenda item. Permit

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Gerhardt Hubner  
\_\_\_\_\_  
Representing Self  
\_\_\_\_\_  
Representing: V.C. Permittees

*Unless exempted by the Board, comments are limited to three (3) minutes.*

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State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: May 6, 2009

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

\_\_\_\_\_  
I support Agenda Item No. \_\_\_\_\_  
\_\_\_\_\_  
I oppose Agenda Item No. \_\_\_\_\_

Name: Mark Pombo  
\_\_\_\_\_  
Representing Self  
 Representing: City of Oxnard

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001416

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 07 May 2009

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Richard WATSON

- Representing Self  
 Representing: City of Signal Hill and Coalition for Practical Regulation

Unless exempted by the Board, comments are limited to three (3) minutes.

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/9

I wish to speak during the meeting.

I do not wish to speak but I do want to express the following position:

Agenda Item 8

Name: Gerald Greene

- Representing Self  
 Representing: Executive Advisory Committee

To provide an opportunity for all meeting participants to speak during public forum, individuals may be asked to limit their comments to three (3) minutes. Individuals who need additional time to comment are invited to submit a second speaker request card.

E001417

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5-7-09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: John Franklin  
 Representing Self  
 Representing: \_\_\_\_\_

*Unless exempted by the Board, comments are limited to three (3) minutes.*

---

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8 - Other  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Geoff Brosseau  
 Representing Self  
 Representing: CASQA

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001418



State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Item 8

Date: 5/7/09

I wish to speak during the meeting.

I do not wish to speak but I do want to express the following position:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name: VALEO ALLEN

Representing Self

Representing: CONTECH STORMWATER SOLUTIONS

*To provide an opportunity for all meeting participants to speak during public forum, individuals may be asked to limit their comments to three (3) minutes. Individuals who need additional time to comment are invited to submit a second speaker request card.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09 5/8/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8

I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_

I oppose Agenda Item No. \_\_\_\_\_

Name: Carmen Ramirez

Representing Self

Representing: CAUSE

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5-7-09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Saira Gandhi ("Gone-DEE")  
 Representing Self  
 Representing: \_\_\_\_\_

*Unless exempted by the Board, comments are limited to three (3) minutes.*

---

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09 - 5/18/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Jason Weiner, Associate Director + Staff Attorney  
 Representing Self  
 Representing: Ventura ConstWerper

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001420

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. \_\_\_\_\_  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. 3 - Ventura City MSF  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Barbara Mackevy Ortiz (? spell)

- Representing Self  
 Representing: Affordable housing clients

*Unless exempted by the Board, comments are limited to three (3) minutes.*

---

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5-7-09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: MATT YEAGER

- Representing Self  
 Representing: SAN BERNARDINO COUNTY MSH PROGRAM

*Unless exempted by the Board, comments are limited to three (3) minutes.*

E001421

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5-7-09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support <sup>staff's recommendations on</sup> Agenda Item No. 8  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Don Jensen, P.E.  
 Representing Self  
 Representing: Jensen Design & Survey Inc.

*Unless exempted by the Board, comments are limited to three (3) minutes.*

---

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: MATTHEW BREINER  
 Representing Self  
 Representing: \_\_\_\_\_

*Unless exempted by the Board, comments are limited to three (3) minutes.*

please allow  
at end of  
BIA  
presentation

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

End of  
BIA

SPEAKER REQUEST CARD

Date: 5/7/09  
5/8/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Mary Lynn Coffe Nossaman LLP  
 Representing Self  
 Representing: Building Industry Legal Defense Foundation

Unless exempted by the Board, comments are limited to three (3) minutes.

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Mark Gray - Holly Schroeder - Eric Strecken  
 Representing Self  
 Representing: CICW Q

Unless exempted by the Board, comments are limited to three (3) minutes.

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the Board Meeting:

- I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

- I support Agenda Item No. \_\_\_\_\_  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Shelley Luce  
Representing Self  
 Representing: Santa Monica Bay Restoration Commission

*Unless exempted by the Board, comments are limited to three (3) minutes.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

*Item 8*

Date: 5-7-09

- I wish to speak during the meeting.  
 I do not wish to speak but I do want to express the following position:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name: PAUL JENKIN  
Representing Self  
 Representing: SURFRIDER FOUNDATION

*To provide an opportunity for all meeting participants to speak during public forum, individuals may be asked to limit their comments to three (3) minutes. Individuals who need additional time to comment are invited to submit a second speaker request card.* E001424

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

Item 8

SPEAKER REQUEST CARD - MS4

Date: May 7, 2009

I wish to speak during the meeting.

I do not wish to speak but I do want to express the following position:

Name: Heather Wylie

Representing Self

Representing: Southern California Watershed Alliance

*To provide an opportunity for all meeting participants to speak during public forum, individuals may be asked to limit their comments to three (3) minutes. Individuals who need additional time to comment are invited to submit a second speaker request card.*

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5/7/2009

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8

I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. \_\_\_\_\_

I oppose Agenda Item No. \_\_\_\_\_

Name: Shaun Kroes

Representing Self

Representing: Permittees (Moorpark)

*Unless exempted by the Board, comments are limited to three (3) minutes.*

[ IF necessary ] ~~\_\_\_\_\_~~ ~~\_\_\_\_\_~~

E001425

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

SPEAKER REQUEST CARD

Date: 5-7-09

I wish to speak during the Board Meeting:

I wish to speak on Agenda Item No. 8  
 I wish to speak during Public Forum on a non-agenda item.

I do not wish to speak but I do want to express the following position:

I support Agenda Item No. 8  
 I oppose Agenda Item No. \_\_\_\_\_

Name: Kevin Gleschen

Representing Self

Representing: \_\_\_\_\_

*Unless exempted by the Board, comments are limited to three (3) minutes.*

SPEAK IF NECESSARY

State of California  
Environmental Protection Agency  
Water Resources Control Board  
Los Angeles Regional Water Quality Control Board

*Item 8*

SPEAKER REQUEST CARD

Date: 5/7/09

I wish to speak during the meeting, if necessary

I do not wish to speak but I do want to express the following position:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name: Bill O'Brien

Representing Self

Representing: CITY OF OSAJ

*To provide an opportunity for all meeting participants to speak during public forum, individuals may be asked to limit their comments to three (3) minutes. Individuals who need additional time to comment are invited to submit a second speaker request card.*

E001426

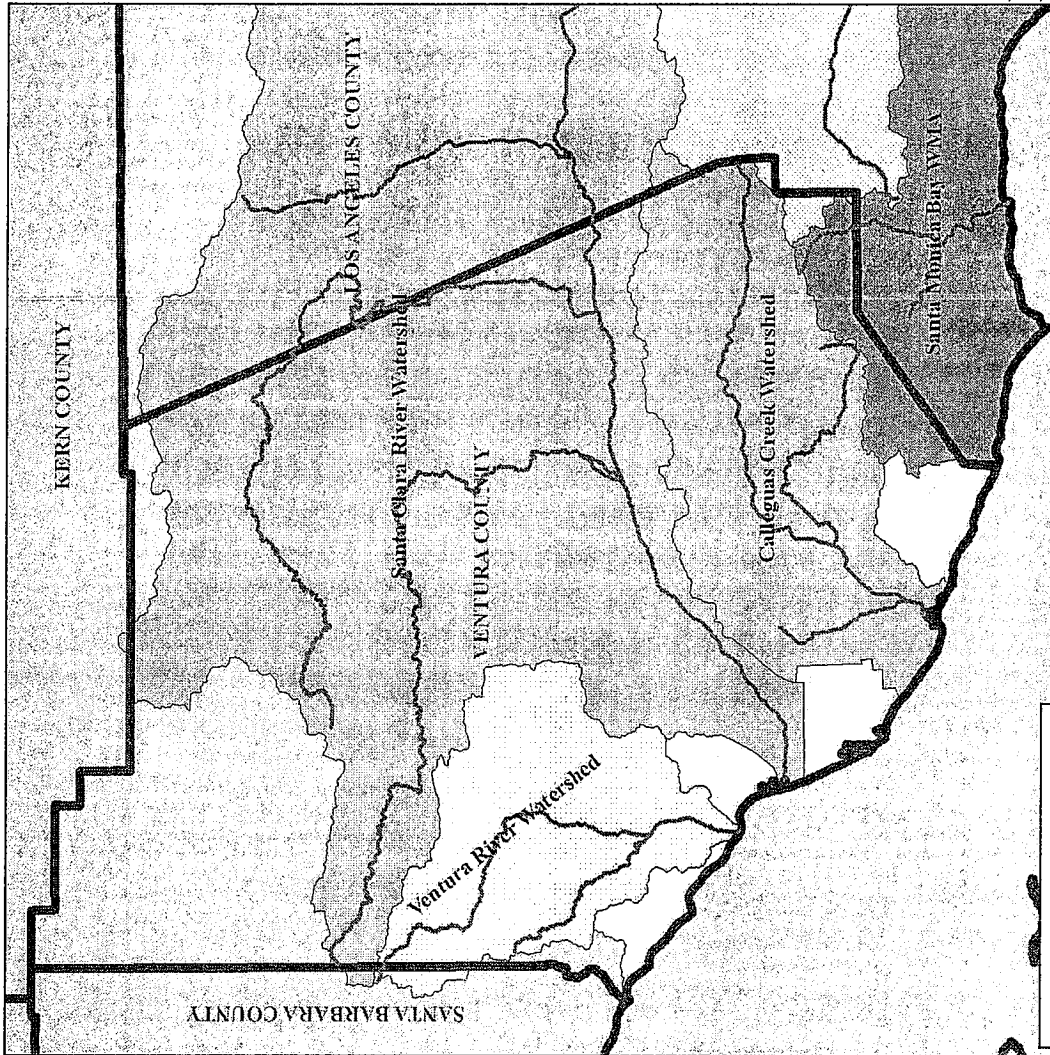


**Item 8**  
**Reissuance of Ventura**  
**MS4 Permit**

Regional Water Quality Control  
Board Los Angeles Region

May 7, 2009

# Ventura County with Watersheds



TS:p/gis/arcmap/vwatershed.mxd

California Regional  
Water Quality Control Board  
Los Angeles Region  
320 W. 4th St., Suite 200  
Los Angeles, CA 90013  
April 5, 2007

**Legend**

- County Boundary
- Primary Streams

N

0 4 8 Miles

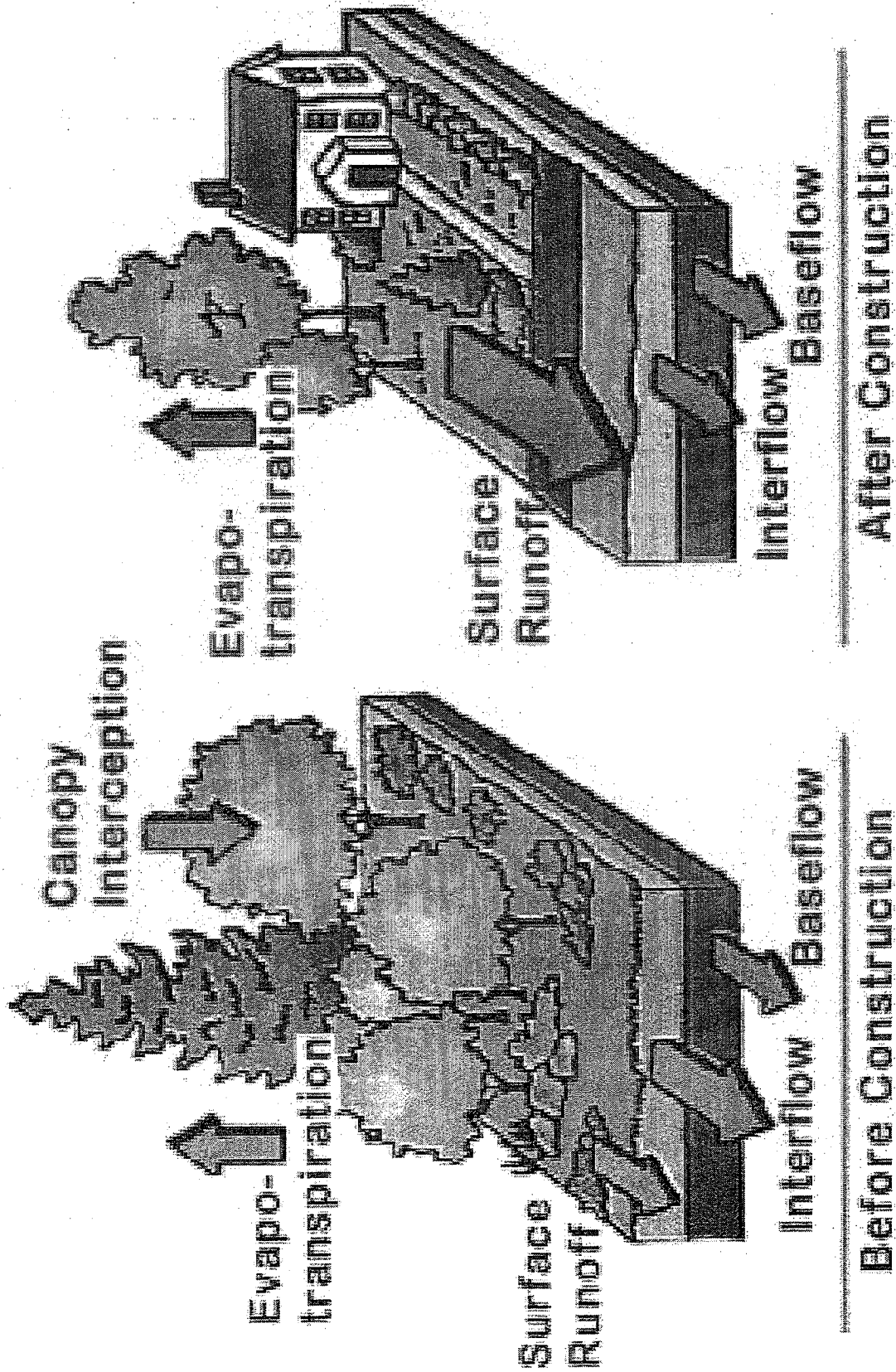
# Municipal Storm Drain Systems Within Ventura County

CO-PERMITTEE AGENCIES	OPEN CHANNELS: SOFT SIDE AND BOTTOM	OPEN CHANNELS: HARD SIDE OR BOTTOM	OPEN CHANNELS: HARD SIDE AND BOTTOM	UNDERGROUND STORM DRAINS	DITCHES	GUTTERS	OTHER STORM DRAIN	TOTAL LENGTH in ft.
<b>Principal Co-permittee</b>								
<b>VCWPD</b>	409,728	307,296	204,864	102,432	-	-	-	1,024,320
<b>Co-permittees</b>								
City of Camarillo	-	-	-	400,000	32,178	2,956,800	1,095	3,390,073
County of Ventura	29,568	22,176	14,784	7,392	-	-	-	73,920
City of Fillmore	-	-	300	35,500	1,000	316,800	-	353,600
City of Moorpark	-	-	-	136,000	10,000	940,000	22	1,086,022
City of Ojai	-	-	7,920	31,680	-	337,920	-	377,520
City of Oxnard	63,360	15,840	26,400	211,200	-	2,112,000	-	2,428,800
City of Port Hueneme	5,000	-	-	66,000	-	440,000	-	511,000
City of Ventura	9,477	-	9,869	-	76,603	-	1,708	97,657
City of Santa Paula	582	-	-	96,817	18,174	633,600	-	749,173
City of Simi Valley	4,000	-	1,000	553,115	-	3,146,880	-	3,704,995
City of Thousand Oaks	-	534	-	790,164	-	5,333,440	-	6,324,138

# **Pollutant Sources and Stormwater Impacts**

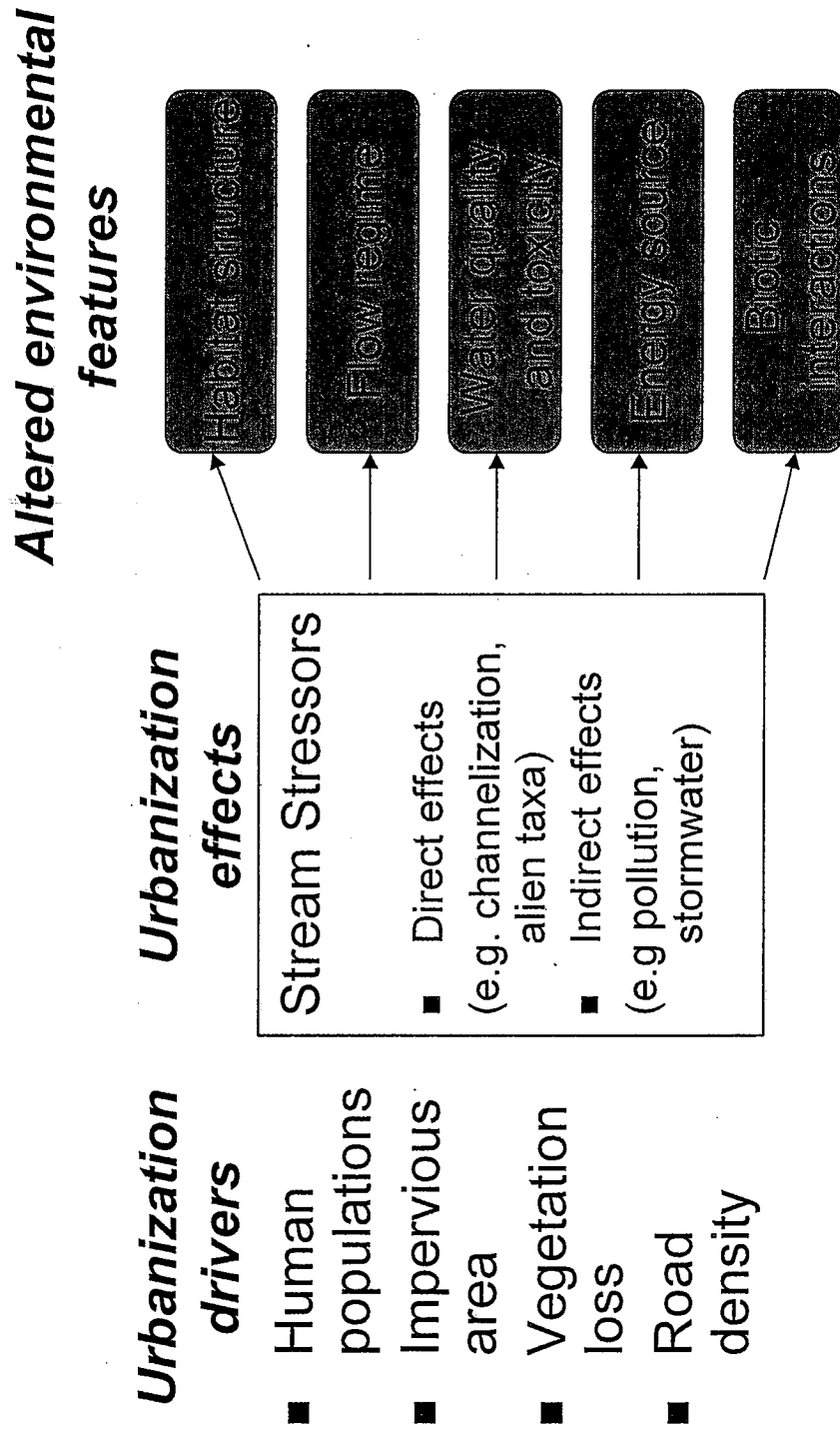
- **Land Use**
  - Pollutants added from precipitation runoff over land surfaces
- **Land Development and Engineered Systems**
  - Increases imperviousness and transforms hydrologic regimes

# Local Hydrologic Cycle



Source: Adapted from Schueler (1987) and Maryland Department of the Environment

# Urbanization Effects on Water Quality



1001432

# Historical Perspective Stormwater Regulations

1972	Federal Water Pollution Control Act • Clean Water Act Section 303(d) • Clean Water Act Section 208
1977 1981	Clean Water Act Sections 301 and 402
1977	<i>NRDC v. Costle</i>
1987	Clean Water Act Amended Sections 301 and 402
1990	EPA's Phase I Stormwater Permit Rules Promulgated

1999	EPA's Phase II Stormwater Permit Rules Promulgated
1997- 2001	Total Maximum Daily Load (TMDL) Program Litigation
2006- 2008	Section 323 of the Energy Policy Act of 2005
2007	Energy Independence and Security Act of 1997



# 2007 GAO Report: Current Status of Implementation

- Urban stormwater runoff remains a major contributor to nation's degraded waters
- Stormwater program implementation has been slow and the level of implementation ranges widely
- Communities' inconsistent reporting of activities makes it difficult to evaluate program implementation nationwide

*Difficult to discern success of program implementation on a national scale*



# National Science Foundation Assessment of Urban Stormwater Management - 2008

- Lack of quantitative metrics
- Lack of end-of-pipe monitoring
- Ineffective control on hydromodification
- Proactive USEPA Involvement on Source Control

# Ventura County MS4 Permit

- 1994 - First Ventura County MS4 Permit
  - Public Involvement; education
  - Industry Outreach
- 2001 - Second Ventura County MS4 Permit
  - Mass emission monitoring
- 2006 - Application for renewal received
  - Characterize nature of MS4 discharges
  - Focus on effective BMP application

# Stakeholder Meetings

- Conducted 42 stakeholder meetings
  - October 13, 2005 through May 19, 2009
  - Roundtable February 27 and 28, 2008
  - Permittees and their representatives
  - Non-Governmental Agencies
  - Various Stakeholders
    - State/ County/ City Agencies, Commissions, Water/ Flood Districts, Associations, Consultants

# **Current Permit Elements Retained in Revised Tentative Permit**

- Public Information & Participation Program
- Illicit Connections & Illicit Discharges (IC/ID) Elimination Program
- Industrial & Commercial Program
- Public Agency Activities
- Monitoring Program
- Reporting Program

# Ventura County Municipal Storm Water (MS4) Permit – Revised Tentative

## The Next Generation

- Monitoring Major Outfalls
- Municipal Action Levels
- Hydromodification Control Criteria
- Low Impact Development Strategies
- Enhanced BMPs Wet Season Hillside  
Grading
- TMDL Implementation

# Municipal Action Levels

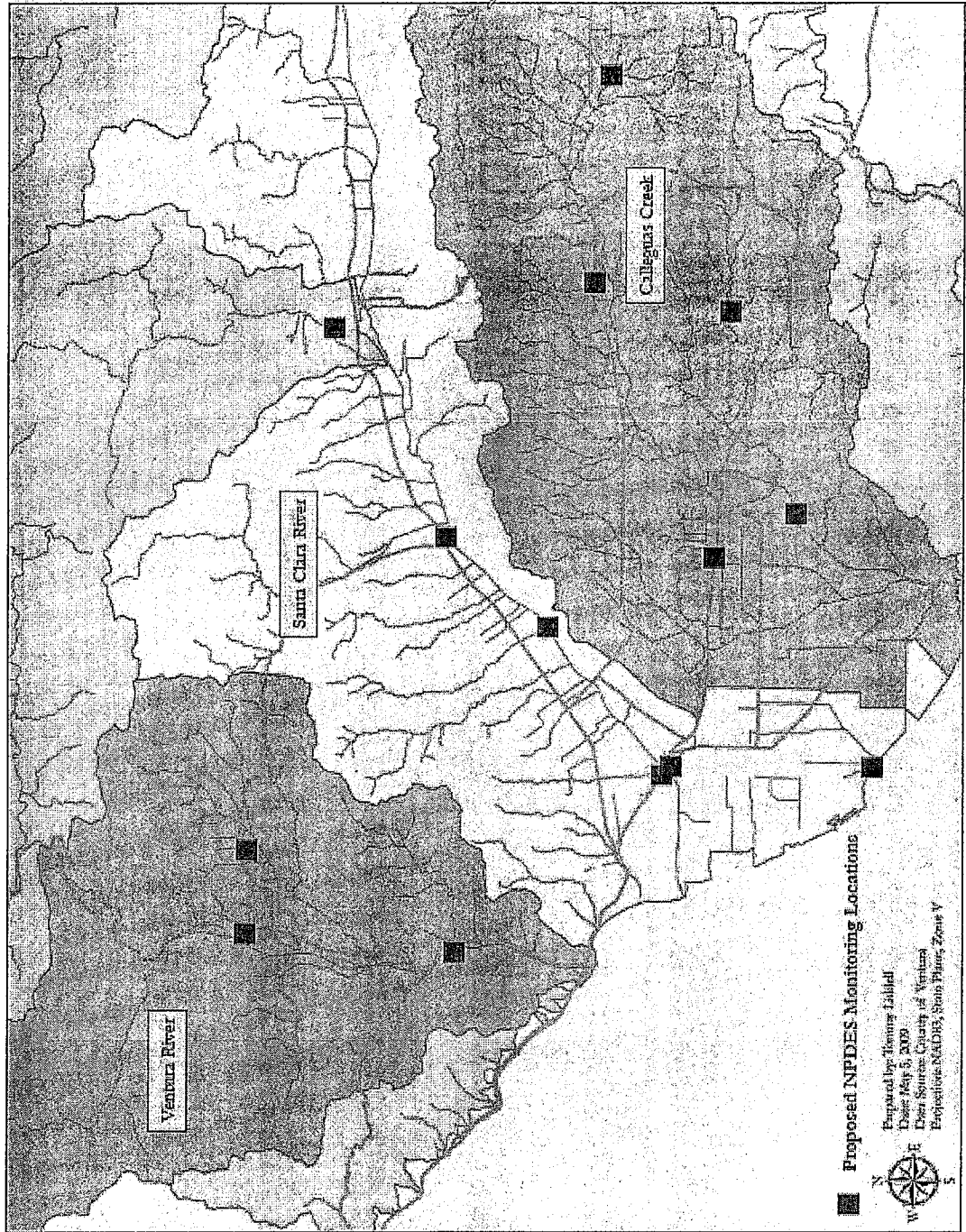
- Action Levels to Drive BMP Implementation in High Pollutant Load Catchments
- Based on Two Pollutant Classes:
  - Conventional- nitrogen and TSS
  - Metals
- Exceedances Compel BMP Implementation
- EO may revise MALs

# Monitoring Program

- Existing Monitoring - Mass Emission Stations
- Representative end-of pipe monitoring
- TMDL Receiving Water Monitoring
- Bioassessment Monitoring
- Beach Water Quality Monitoring



# Outfall Monitoring Locations



E001442

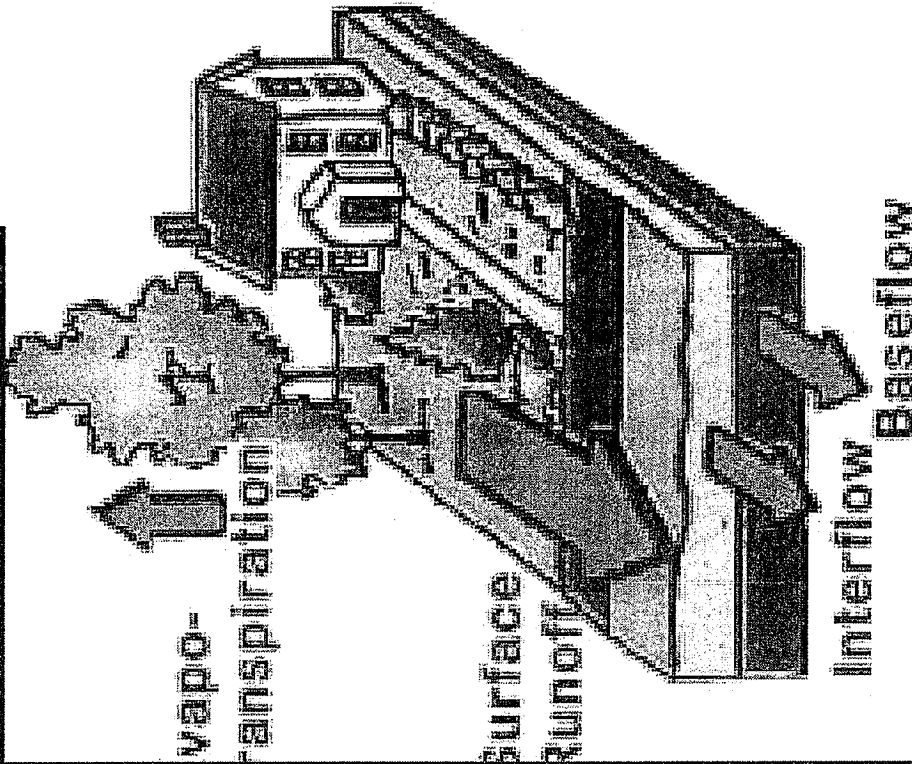


# Land Development Planning

- Hierarchy of BMP Approaches
- Quantitative Impervious Area Standard (5% EIA)
- Criteria for Infeasibility to be approved by EO
- Off site mitigation for infeasible sites
- In-lieu program for infeasible sites
- Post development maintenance

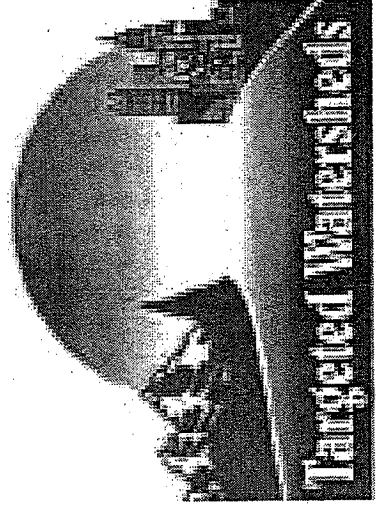
## VOLUME MATCHING

- Staff Proposal
- Equal evapotranspiration
- Equal baseflow
- Equal in surface runoff
- Equal in interflow



# Total Maximum Daily Load (TMDL) Provisions

- MS4 TMDL Waste Load Allocations (WLAS) incorporated into Permit
- WLAs are expressed as receiving water limits
- WLAs have monitoring and implementation requirements



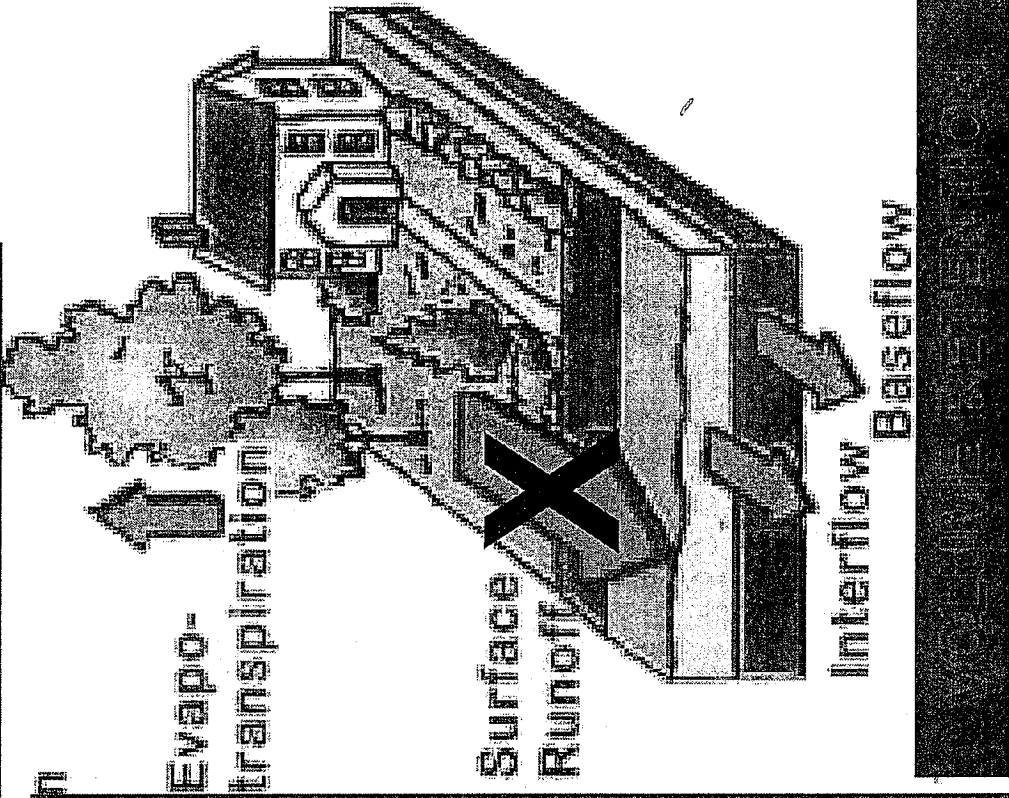
# Comments Received

- 44 Comments received by Deadline
  
- Comment Focus
  - MALS
  - Land Development
  - TMDLs
  - Monitoring

# NGO-Permittee Agreement

- Need to Consider as Whole
- Low Impact Development
  - Replace Volume Matching with Volume Capture
  - Defines Criteria for Technical Infeasibility
- Municipal Action Levels
  - Eliminated from Permit

## VOLUME RETENTION



- "The Agreement"
- Equal evapotranspiration
- Equal baseflow
- No surface runoff
- Increase in interflow

Source: Adapted from Schueler (1987) and Maryland Department of the Environment

## **Comment**

### **Municipal Action Levels**

- Levels Significantly Greater than CTR -  
NGOs
- MALS Do Not Represent MEP –NGOs
- MALS in Accordance with Blue Ribbon  
Panel – Permittees and Various  
Stakeholders
- Can be confused with Effluent Limits -  
LAFCD

# Response

## Municipal Action Levels

- Comparison to CTR is Inappropriate
- EO may revise MALs pending new data
- MALs essential to reduce pollutant loading



## Comments

### Land Development and Planning

- Land Development Weakened – NGOs
  - Subject to Infeasibility Waiver
  - Applicability Requirement
  - “Predevelopment” vs. “Preproject”
  - Waive hydromodification requirements
  - Development of Plans not subject to EO approval
  - LID restricted to Volume Capture
- EIA Not a Proven Standard- BIA

# Response

## Land Development and Planning

- EIA Standard Strengthened
  - Tied to a volume standard
  - Revisions to Tentative to address NGO comments
  - Overall structure based on volume matching
  - Greater specificity for creation of an in-lieu funding program

# **Comment and Response**

## **BMP Performance Criterion**

- Volumetric component required for BMP performance criterion – NGO
- In response to comments – 85<sup>th</sup> Percentile; 24 hour storm added to performance criterion

# Comments Monitoring

- Significant Increase to Monitoring Costs – Permittees
- Outfall Monitoring not Adequate – NGOs
- Beach Monitoring Protocols not Appropriate – NGOs
- TMDL Monitoring is Unclear - NGOs
- Dry Weather Monitoring not Adequate - NGOs

# **Response - Monitoring**

- Increased Monitoring to Fill Critical Data Gaps
- First MS4 Permit with Representative Outfall Monitoring
- First MS4 Permit with Regular Dry Weather Monitoring
- TMDL Monitoring is Receiving Water Based
- Beach Monitoring in Accordance with AB 411

# Comparison of AB 411 Ocean / Beach Monitoring Programs

County	No. of Mon. Sites	Pop. (2008 est.)	Miles of Coastline	Results rep. on website	Postings/ Closures noted	Ongoing program?
Ventura	51	797,740	43	-Latest testing results -5-week sampling history -Log of historical posts	Yes	Suspended
Los Angeles	86	9,862,049	~60	-Latest testing results -30-day grade	Yes	Yes
Orange County	35	3,010,759	42	-Latest testing results -Sampling history -Log of historical posts	Yes (most easy to read)	Yes
Santa Barbara	20	405,396	?	Latest testing results	Yes	Suspended
San Francisco	14	808,976	?	-Latest testing results -11-week sampling history	Yes	Yes
Humboldt	5	129,000	?	-Latest testing results -Log of historical posts	Yes	Yes

# **TMDL Comments and Responses**

- Include All Established TMDLs - NGOs
- WLAs Should be Enforceable –NGOs, USEPA
- All Established TMDLs Included
- Compliance with WLAs is in accordance with State implementation plans

# Legal Issues

- Federal vs. State Requirements – 13241
- Unfunded Mandates
- TMDL Incorporation
- CEQA
- MEP
- Prohibition of New Sources



# Change Sheet

- Page 1, **Correction:** “Ventura County Watershed Protection District (Principal Permittee and Copermittee)”.
- Page 3, **Correction:** “... (**REFERENCE?** Pruss, 1998, Review of epidemiological studies on health effects from exposure to recreational waters, International Journal of Epidemiology; Haile et al., 1996, An epidemiological study of possible adverse health effects of swimming in Santa Monica Bay, Santa Monica Bay Restoration Project; and Haile et al., 1999, The health effects of swimming in ocean water contaminated by storm drain runoff, Epidemiology)”
- Page 63, **Deletion:** “(1) A Waiver for Impracticability is granted.”  
All the following items, (2) through (5), will be renumbered appropriately.
- Page 64, **Correction:** “...a project is infeasible in accordance with 5.(E).III.(1)(c)(b),...”

# Board Alternatives

- Adopt Revised Tentative Permit
- Adopt Revised Tentative Permit with Changes Resulting from Logical Outgrowth of this Hearing
- No Action

# **Staff Recommendation**

- **Adopt Revised Tentative Permit**

MEETING  
STATE OF CALIFORNIA  
LOS ANGELES  
REGIONAL WATER QUALITY CONTROL BOARD

VENTURA COUNTY GOVERNMENT CENTER  
800 SOUTH VICTORIA AVENUE  
HEARING ROOM  
VENTURA, CALIFORNIA

THURSDAY, MAY 7, 2009

10:10 A.M.

JAMES F. PETERS, CSR, RPR  
CERTIFIED SHORTHAND REPORTER  
LICENSE NUMBER 10063

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

**E001462**

APPEARANCES

BOARD MEMBERS

Ms. Mary Ann Lutz, Chairperson  
Ms. Madelyn Glickfeld, Vice Chairperson  
Mr. Steve Blois  
Ms. Francine Diamond  
Ms. Maribel Marin  
Mr. Dick Richardson

STAFF

Ms. Tracy J. Egoscue, Executive Officer  
Ms. Debbie Smith, Chief Deputy Executive Officer  
Mr. Stephen Cain, Senior Environmental Planner  
Ms. Ronji Harris, Executive Assistant  
Mr. Michael J. Levy, Senior Staff Counsel  
Mr. Ivar Ridgeway  
Mr. Sam Unger, Chief, Regional Programs Section

ALSO PRESENT

Mr. Vaikko Allen, Contech Stormwater Solutions  
Mr. David Beckman, Natural Resources Defense Council  
Mr. Joe Bellomo, City of Westlake Village, Los Angeles  
Stormwater Quality Association  
Mr. Matthew Breiner  
Mr. Geoff Brosseau, California Stormwater Quality  
Association  
Mr. Dave Burhenn, Burhenn & Guest

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

**E001463**

APPEARANCES CONTINUED

ALSO PRESENT

Mr. Rick Cole, City of Ventura

Mr. Chris Collier, Office of Senator Tony Strickland

Mr. Jarrod DeGonia, Office of Assemblymember Cameron Smyth

Ms. Ashli Desai, Larry Walker & Associates

Ms. Tess Dunham, Somach, Simmons & Dunn

Mr. John Franklin

Mr. Craig George, City of Malibu

Dr. Mark Gold, Heal the Bay

Dr. Gerald Greene, Executive Advisory Committee Los Angeles County MS4 Permittees

Dr. Mark Grey, Construction Industry Council on Water Quality

Ms. Rondi Guthrie, Office of Assemblymember Audra Strickland

Mr. Gerhardt Hubner, Watershed Protection District, Ventura County Stormwater Management Program

Mr. Paul Jenkin, Surfrider Foundation

Mr. Don Jensen, Jensen Design & Survey

Mr. John Kemmerer, EPA

Mr. John Krist, Farm Bureau of Ventura County

Mr. Shaun Kroes

Ms. Barbara Macri-Ortiz

Mr. Jeff Pratt, County of Ventura

Mr. Mark Pumford, City of Oxnard

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

APPEARANCES CONTINUED

ALSO PRESENT

Ms. Carmen Ramirez, CAUSE

Ms. Holly Schroeder, BIA

Mr. Mike Sedell, City of Simi Valley

Mr. Trevor Smith, Channel Islands Waterfront Homeowners Association, Inner Neighborhood Council Forum

Mr. Eric Strecker, Geosyntec Consultants

Mr. Richard Watson, Coalition for Practical Regulation

Mr. Jason Weiner, Ventura Coastkeeper

Ms. Heather Wylie, Southern California Watershed Alliance

Mr. Matt Yeager, San Bernardino County Flood Control District

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

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## UNCONTESTED ITEMS

Waste Discharge Requirements that Serve as  
Individual NPDES Permits

*6. California Dairies, Inc.	19
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## ACTION ITEM

Litigation

7. Consideration of a draft Resolution rescinding Resolution Nos. R05-06 and R05-07 (Incorporating into the Basin Plan the 2005 versions of the Los Angeles River and Ballona Creek Metals TMDLs) pursuant to a writ of mandate in Cities of Bellflower et al v. Los Angeles Regional Water Quality Control Board et al.	19
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Ventura County MS4 Stormwater Permit

8. Discharge of Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, county of Ventura and the Unincorporated Cities Therein: NPDES Permit No. CAS004002	39
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**E001466**



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## PROCEEDINGS

1  
2 CHAIRPERSON LUTZ: Good morning. We'll call this  
3 meeting of the LA Regional Water Quality Control Board to  
4 order. And I will ask Ms. -- actually, I'll ask Mr.  
5 Richardson to please lead us in the flag salute.

6 (Thereupon the Pledge of Allegiance was  
7 Recited in unison.)

8 CHAIRPERSON LUTZ: Okay. First, we will start  
9 with the order of agenda. And before we start, I just  
10 want to say that we're very happy to be here in beautiful  
11 County and City of Ventura. Thank you for having us here  
12 and hosting this meeting today.

13 Order of agenda, Ms. Egoscue.

14 EXECUTIVE OFFICER EGOSCUE: Good morning, Chair  
15 Lutz. Can we start with the roll call.

16 CHAIRPERSON LUTZ: Oh, yes. That would probably  
17 be a good idea.

18 EXECUTIVE ASSISTANT HARRIS: Mr. Blois?

19 BOARD MEMBER BLOIS: Here.

20 EXECUTIVE ASSISTANT HARRIS: Ms. Diamond?

21 BOARD MEMBER DIAMOND: Here.

22 EXECUTIVE ASSISTANT HARRIS: Ms. Glickfeld?

23 VICE CHAIRPERSON GLICKFELD: Here.

24 EXECUTIVE ASSISTANT HARRIS: Ms. Lutz?

25 CHAIRPERSON LUTZ: Present.

1 EXECUTIVE ASSISTANT HARRIS: Ms. Marin?

2 BOARD MEMBER MARIN: Here.

3 EXECUTIVE ASSISTANT HARRIS: Ms. Mehranian?

4 Mr. Richardson?

5 BOARD MEMBER RICHARDSON: Here.

6 CHAIRPERSON LUTZ: Okay. Order of agenda,  
7 please.

8 EXECUTIVE OFFICER EGOSCUE: There are no changes  
9 to the agenda at this time.

10 CHAIRPERSON LUTZ: Okay. There is one thing that  
11 I would like to say. We're here for 2 days. And we have  
12 some very large items to go through in the next 2 days.  
13 We have made a decision on one of -- in a way of trying to  
14 separate the items. The Boeing item, which is Boeing 12  
15 and 13, we will have that item tomorrow morning at 9  
16 o'clock when we convene tomorrow morning. So if you're  
17 here for that item and that item only, I just want to let  
18 you know that we will not take that matter up until  
19 tomorrow. We'll try to get through all the other items  
20 today and then more tomorrow as well.

21 And that will happen regardless of where we are  
22 with the other items that we're working on today. We  
23 will -- if we're not completed with the other items, we  
24 will postpone them till after the item on Boeing tomorrow.

25 Can I ask if we have -- if everybody had an

1 opportunity to read through the minutes of the last  
2 meeting and can we have a motion to approve?

3 BOARD MEMBER DIAMOND: So moved.

4 BOARD MEMBER BLOIS: Second.

5 CHAIRPERSON LUTZ: Discussion?

6 All in favor?

7 (Ayes.)

8 CHAIRPERSON LUTZ: Opposed?

9 So moved.

10 And then we have Board Member ex parte  
11 communications. We'll start with Mr. Blois.

12 BOARD MEMBER BLOIS: None.

13 BOARD MEMBER DIAMOND: None.

14 VICE CHAIRPERSON GLICKFELD: None.

15 CHAIRPERSON LUTZ: I have none.

16 BOARD MEMBER MARIN: None.

17 BOARD MEMBER RICHARDSON: None.

18 CHAIRPERSON LUTZ: Okay. Board Member reports of  
19 meetings and such.

20 Mr. Blois?

21 BOARD MEMBER BLOIS: None.

22 BOARD MEMBER DIAMOND: Just that I attended the  
23 Malibu Symposium on Water Quality last week. And that's  
24 the only thing I'd like to report.

25 VICE CHAIRPERSON GLICKFELD: Nothing to report.

1 BOARD MEMBER MARIN: Nothing.

2 BOARD MEMBER RICHARDSON: Nothing.

3 CHAIRPERSON LUTZ: I also was at the Malibu  
4 Symposium on water last week as was our Executive  
5 Director, Tracy Egoscue. And it was a very interesting  
6 symposium, and there was a lot of good information  
7 distributed back and forth. It was very good and we thank  
8 the people of Malibu for putting it together.

9 And now we will go to the Executive Officer's  
10 Report.

11 Ms. Egoscue.

12 EXECUTIVE OFFICER EGOSCUE: Good morning. I'd  
13 ask that Ana Townsend, who is in our audience, come  
14 forward please. Due to the lengthy and unusual nature of  
15 our 2-day agenda, I am asking the Board and the Chair's  
16 permission to only use this opportunity to present an  
17 award. It's our Sustained Superior Achievement Award.  
18 Every year we are able to nominate a staff member. And we  
19 send that nomination up to the State Board. And this year  
20 Ana Townsend is our award winner and I'd like to take this  
21 opportunity to present this award to her in front of the  
22 Board. And the Chair is actually going to give this to  
23 you, Ana.

24 CHAIRPERSON LUTZ: I should have started walking  
25 here sooner.

1 (Laughter.)

2 EXECUTIVE OFFICER EGOSCUE: Two more seconds of  
3 what Ana does. Ana is responsible for our site cleanup  
4 projects, in particular, the Long Beach project that  
5 Boeing has. She reviews hundreds of reports. She goes  
6 above and beyond. And she keeps me in the loop. She  
7 frequently comes to my office and tells me what's going  
8 on. And I trust her and I value her and it's very well  
9 deserved.

10 Thank you.

11 (Applause.)

12 CHAIRPERSON LUTZ: The members of the Board, our  
13 board checklist is in our packet. And if you do have  
14 questions about that, we will take some time, at some  
15 point tomorrow, when we know better where we are with our  
16 meeting.

17 And our next item is our update from our State  
18 Board Member Fran Spivy-Weber.

19 STATE WATER BOARD VICE CHAIRPERSON SPIVY-WEBER:

20 Thank you, Mayor Lutz. Congratulations, and  
21 Board.

22 I'll be very fast too. Just mostly some  
23 announcements. We're in the midst of budget hearings in  
24 Sacramento. And no one is making decisions about anything  
25 until after the May election. So I have zero to report.

1 It doesn't look great, but you know we'll see.

2           The State Board was able to impanel a  
3 Constituents of Emerging Concern Blue Ribbon Task Force  
4 that was envisioned in the recycled water policy. We  
5 impaneled that group on Monday. And so they are starting  
6 their work. They will be producing guidance for all of us  
7 to use in addressing CEC issues in the future. And they  
8 have one year to get their work done. It was put together  
9 by a wide range of stakeholders who submitted names and  
10 that were vetted. And I think there's consensus that this  
11 is a good group that everyone will be wanting to listen  
12 to.

13           Again on recycled water, the Statewide Water  
14 Recycled Water Irrigation Permit Workshop is coming up on  
15 May the 19th in the afternoon I believe. And after that,  
16 they will take in comments. And we think we will  
17 definitely meet our deadline of getting this statewide  
18 permit done by the end of July.

19           The Conservation 20x2020 multi-agency effort is  
20 also coming to close. There's going to be a workshop at  
21 the end of May, May 29th, in Sacramento. After that, the  
22 comments will be put together and then submitted to the  
23 Governor. So that's moving along pretty quickly too.

24           We have a stormwater construction grant permit  
25 and stormwater linear permit have been combined. And

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1 there will be a hearing at the State Board on June the  
2 3rd. And we expect to be able to consider all the  
3 comments and the permit itself at our first meeting in  
4 August. That's August 4th.

5 That could slip into early September, but it  
6 couldn't slip past the first meeting in September, given  
7 the schedule that we have to keep. So that seems to be  
8 moving along.

9 And on the stormwater water reuse -- or urban  
10 water reuse LID topic, on June 17th, we will be having a  
11 workshop on the role of urban water reuse in the context  
12 of climate change. This will be an all-day workshop again  
13 at the State Board. And we'll be showcasing a lot of the  
14 projects that are out there now and talking specifically  
15 about the energy and greenhouse gas reduction effect of  
16 these projects. And we'll be helped with that by a number  
17 of organizations and stakeholders, but particularly NRDC.

18 Thank you.

19 VICE CHAIRPERSON GLICKFELD: Yeah, could you just  
20 repeat the date for that last meeting.

21 STATE WATER BOARD VICE CHAIRPERSON SPIVY-WEBER:

22 June the 17th.

23 CHAIRPERSON LUTZ: Thank you very much.

24 Our next order of business is our public forum.

25 We do have some speakers who have filled out cards. I



1 will ask -- the nature of our meeting today we have, as I  
2 said earlier, many, many topics. And they're all very  
3 large and important. So I would like to hold our public  
4 comments to 3 minutes, if possible.

5 The first speaker is John Krist, and followed  
6 by -- I'm sorry I don't have a name, but it's somebody  
7 representing the City of Westlake Village.

8 MR. KRIST: Good morning, Madam Chair and members  
9 of the Board. Welcome to Ventura.

10 My name is John Krist. And I'm the Chief  
11 Executive Officer of the Farm Bureau of Ventura County.  
12 In my capacity as CEO, I oversee the program activities of  
13 the Ventura County Agricultural Irrigated Lands Group.

14 VCAILG, as we call it, was formed in 2006 to help  
15 property owners in Ventura County comply with the  
16 conditional waiver of Waste Discharge Requirements for  
17 irrigated land, which this Board adopted in November of  
18 2005.

19 As you know, the conditional waiver requires  
20 property owners to measure and control discharges from  
21 irrigated agricultural lands, including irrigation return  
22 flows and stormwater runoff.

23 I have three purposes in addressing you today.  
24 First, I'd like to provide you with a brief update on  
25 VCAILG's activities over the past 3 years. I'd also like

1 to summarize the compliance costs associated with the  
2 Board's 2005 order. And finally, I want to ask your help  
3 and attention in resolving a situation that we believe  
4 threatens to undermine the progress we've made toward  
5 improving water quality in Ventura County.

6 VCAILG has achieved remarkable cooperation from  
7 the agricultural community. Nearly 1,500 landowners have  
8 enrolled in the group, representing 92 percent of the  
9 county's irrigated acreage. We have established a  
10 countywide network of water quality monitoring stations,  
11 collected and analyzed hundreds of water samples, and  
12 conducted more than 90 hours of educational workshops.

13 You recognized many of these accomplishments by  
14 honoring VCAILG and my predecessor as farm bureau CEO, Rex  
15 Laird, with the 2007 David Nahai Water Quality Award.

16 Since then, VCAILG has submitted 2 annual  
17 monitoring reports and a water quality management plan.  
18 VCAILG is now surveying growers and conducting outreach to  
19 help them implement best management practices to address  
20 the water quality issues identified by our monitoring  
21 program.

22 These activities carry a hefty price tag. Since  
23 2006, VCAILG's members have spent \$1.9 million monitoring  
24 and reporting as required by the waiver. Because of the  
25 way the agricultural economy is structured, growers have

1 no real way to pass those costs on to their customers.

2       CHAIRPERSON LUTZ: Mr. Krist, if you could sum up  
3 for us quickly, we'd appreciate it.

4       MR. KRIST: Okay. In 2007, your staff sent a  
5 Notice of Violation to those landowners who had not  
6 enrolled in the group or taken steps to comply with the  
7 waiver as individuals. For 18 months, VCAILG and its  
8 consultants communicated repeatedly with Regional Board  
9 staff urging follow-up enforcement action against those  
10 violators. Yesterday, I received notice that your staff  
11 finally had sent notices of administrative civil liability  
12 to 4 non-compliant property owners in Ventura County  
13 proposing to fine them \$7 a day for each day that has past  
14 since they received that NOV.

15       Although we welcome this action, we fear that it  
16 may not send the strong message that is required. The  
17 maximum allowable fine is \$1,000 a day and there are  
18 325 -- 235 non-compliant landowners. Many of them reside  
19 out of the county.

20       By focusing on so few and proposing to fine them  
21 so little, this action may have little effect on those  
22 absentee owners who have saved a substantial amount of  
23 money by ignoring the law for the past 3 years.

24       As you might imagine, VCAILG and the Farm Bureau  
25 are extremely uncomfortable advocating sanctions against

1 members of the county's agricultural community. Let me  
2 assure you, it's not a position we take lightly. But you  
3 should be aware that from the beginning those growers who  
4 chose to join VCAILG and pay the assessments have been  
5 waiting to see how the Regional Board would treat  
6 landowners who refused to comply with the waiver.

7 Compliance increases grower's production costs  
8 and places them at a competitive disadvantage. If it  
9 becomes clear that violators pay little or no price for  
10 breaking the law, VCAILG members will wonder why they  
11 should continue to bear the heavy economic burden of  
12 obeying it.

13 CHAIRPERSON LUTZ: I'm sorry, Mr. Krist, your  
14 time has exceeded. Thank you.

15 MR. KRIST: Can I complete one sentence?

16 CHAIRPERSON LUTZ: Very, very quickly.

17 MR. KRIST: We firmly believe that most growers  
18 want to do the right thing and that VCAILG offers them the  
19 best way to do this. Members take the conditional waiver  
20 seriously and have the billing invoices to prove it.  
21 Please show them that you take it just as seriously by  
22 ensuring that staff expedites and sustains the enforcement  
23 actions that it has long last begun.

24 Thank you.

25 CHAIRPERSON LUTZ: Thank you.

1 VICE CHAIRPERSON GLICKFELD: Madam Chair?

2 CHAIRPERSON LUTZ: Yes.

3 VICE CHAIRPERSON GLICKFELD: If we could ask our  
4 staff -- we are very overwhelmed over the next few months  
5 with things that we're trying to catch up with. But some  
6 time in the future, it would be good to agendize a  
7 discussion of these very issues. I think when you have an  
8 agency, such as this, saying you need to do more in terms  
9 of enforcement, that gets my attention. It should get  
10 ours.

11 CHAIRPERSON LUTZ: Okay. Our next speaker is  
12 from Westlake Village. And following that Mr. Craig  
13 George.

14 MR. BELLOMO: Good morning. My name is Joe  
15 Bellomo. I am the Stormwater Program Manager for the City  
16 of Westlake Village. And today, I am here speaking as a  
17 member of the Los Angeles Stormwater Quality Partnership,  
18 LASQP.

19 Since Alex Farassati, from the City of Calabasas,  
20 presented to your board in March for our last LASQP  
21 report, we have had a very informative and productive  
22 workshop led by Sam Unger about the Ventura permit.

23 We welcomed Azusa as our ninth city member. We  
24 met with Gail Farber from Los Angeles County, and continue  
25 to work with them on an upcoming bond measure. And

1 finally, we planned our June member cities meeting.

2           In the City of Westlake Village, we are proud to  
3 report on some of the innovative components of our  
4 stormwater program and projects. Here are some  
5 highlights. The City of Westlake Village conducts roving  
6 mobile car wash inspections with dedicated staff during  
7 peak seasons of the year to ensure proper methods are  
8 followed by the operators in our city. We conduct  
9 commercial stormwater site visits in lieu of inspections  
10 as a way to foster a positive relationship with our  
11 business owners. We conduct -- we've co-funded several  
12 watershed assessment Reports and surveys, such as the  
13 Watershed-Wide Monitoring Program, the Integrated Total  
14 Maximum Daily Load Implementation Plan for the Malibu  
15 Creek watershed, and the Reference Watershed Study for  
16 Bacteria, to name a few.

17           All streets throughout the city are swept  
18 weekly -- on a weekly basis. Some storm channels are  
19 cleaned weekly. And all trash accumulation in the public  
20 right of way is collected on a daily basis throughout the  
21 city.

22           Currently, the City of Westlake Village is  
23 developing a regional sports complex with the environment  
24 in mind. The over 50-acre complex is designed with fields  
25 and slopes landscaped with reclaimed water. Water usage

1 is minimized with California natives and efficient  
2 irrigation system. The irrigation system is networked  
3 with a citywide centrally controlled irrigation system  
4 with its own weather-based ET system.

5           Runoff from --

6           CHAIRPERSON LUTZ: Please sum up for us if you  
7 wouldn't mind. Thank you.

8           MR. BELLOMO: Runoff from both the fields and the  
9 parking lots will be captured in a stormwater harvesting  
10 unit and treated and reused on site. The unit will reduce  
11 oils and fertilizers entering the stormdrain system which  
12 empties into Westlake Lake. The on-site debris basins  
13 will be planted with further vegetation for removal of  
14 silt before entering the stormdrain system.

15           Another project -- example project is the  
16 citywide irrigation system retrofit and meeting  
17 enhancement project. It reduces water use by reducing  
18 turf and replacing with California native plants. Medians  
19 are lowered and drain into sumps, which keep water off  
20 streets and draining into the lake.

21           All-weather controller in the systems -- in the  
22 cities connected to the centrally located system at City  
23 Hall, where water use is monitored and has improved  
24 control and reaction to irrigation system breaks.

25           In closing, we want to keep you informed on the

1 proactive measures our cities and LASQP are performing.  
2 And if you have any suggestions or ideas for LASQP, we  
3 welcome your thoughts. Thank you for your time.

4 CHAIRPERSON LUTZ: Thank you very much.

5 We always appreciate these updates. Thank you.  
6 And nice to see you're growing, adding new cities.

7 Mr. Craig George.

8 MR. GEORGE: Good morning, thank you. As you're  
9 aware we've been -- Craig George City of Malibu. And as  
10 you're aware, we're trying to do presentations in regards  
11 to the City's wastewater programs and make these  
12 presentations. And in respect for today, and knowing that  
13 you have a very aggressive agenda today, I'll be brief,  
14 unlike in the past.

15 And I appreciate the opportunity that you've  
16 given me in the past. You've asked that we provide you  
17 with documentation. I did do a binder, and I presented  
18 that today. Your executive officer asked that I deliver  
19 that to staff, which we're going to do. So I ask that you  
20 just take the time to read the binder prior to next  
21 meeting and we'll go through the binder and discuss the  
22 program.

23 Basically, what it is, is you've heard me talk in  
24 the past, the city has adopted an operating permit program  
25 for on-site wastewater treatment systems. And we've also



1 adopted a point-of-sale program.

2 How we manage all those programs is through the  
3 IWIMS, it's the Integrated Wastewater Information  
4 Management System, very similar to the State's SWIM  
5 system, that you may be familiar with.

6 So we just ask that you take the opportunity to  
7 look through this. We'll do a presentation at the next  
8 meeting and go into a little more detail and depth about  
9 it, and give you an opportunity to question how we manage  
10 our operating systems.

11 We do utilize the EPA manual for on-site  
12 wastewater treatment systems, of management level 3  
13 operating permits. And this is how we do that. So I hope  
14 at the next meeting we'll be able to express a little more  
15 detail of how that operates.

16 CHAIRPERSON LUTZ: Thank you.

17 And the last speaker card I have is Mr. Trevor  
18 Smith.

19 MR. SMITH: Good morning, Madam Chair and board  
20 members. My name is Trevor Smith. I'm on the board of  
21 directors of the Channel Islands Waterfront Homeowners  
22 Association. I'm also on the Board of Directors of the  
23 new INCF, Inner Neighborhood Council Forum, that  
24 represents the 3,000 homes in the entire inland waterway,  
25 comprised of Seabridge, Westport, Harbor Island,

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1 Channel -- Mandalay Bay, and a couple of others. And I'd  
2 just like to put an issue onto your radar.

3           In the Seabridge EIR, which you issued a water  
4 quality permit to, it was stated and represented that the  
5 Mandalay powerplant would be pumping 250 million gallons a  
6 day forever basically, to ensure that the water would  
7 circulate -- the complete water body of the harbor would  
8 circulate out of the harbor in 3 days. It stated in the  
9 EIR that if the powerplant is not running, the water would  
10 not -- would take 17 days to circulate out of the harbor,  
11 which could increase pollution issues.

12           So I intercepted a letter, and I've done a lot of  
13 research on it, at the last Coastal Commission hearing on  
14 the peaker plant. And I wasn't given this letter, but it  
15 was just circulated. But I'd just like to read into the  
16 record that the -- this is a letter from Peter Brand from  
17 the California Coastal Conservancy to Louise Rishoff.

18           And part way down in the letter it says that,  
19 "Actions by federal courts, the Ocean Protection Council  
20 and the State Water Board have resulted in new policies  
21 that will eliminate many once-through cooling plants,  
22 predominant technology used by the California coastal  
23 plants in the near future." And "An adopted strategic  
24 plan, the Ocean Protection Council states that an  
25 objective work is to eliminate the harmful environmental

1 impacts of the once-through cooling coastal plants."

2           And it goes on to state that there's a  
3 probability that there will be an attempt to replace the  
4 existing water once-through plant with a closed loop,  
5 which would provide no water circulation. So I'd just  
6 like to put it on your radar, on behalf of the 3,000  
7 people that have homes there and investments. Plus,  
8 everybody in Oxnard enjoys the water quality of the  
9 harbor, that we need to look at into the future, because  
10 as soon as 2013, the plant may be sunsetted, possibly  
11 earlier, if Reliant decides to shut it down.

12           And the effect of 17 days of time to take the  
13 water to completely replace in the harbor, as opposed to 3  
14 days, is of great significance. And my personal  
15 preference, and I'm sure it's probably unrealistic, but  
16 I'd like to see something like Bolsa Chica implemented,  
17 where we cut a pass-through to the ocean to provide  
18 natural water circulation, which would also restore the  
19 canal to some sort of a marine estuary.

20           Thank you.

21           CHAIRPERSON LUTZ: Thank you.

22           And I would like to ask staff if they would --  
23 can you hand our staff, if you have an extra copy of the  
24 letter, and we can take a look and see what the status is.

25           MR. SMITH: Yes. I gave it to them. I only had

1 one. I'm sorry.

2 CHAIRPERSON LUTZ: That's okay. Thank you very  
3 much.

4 Okay, those are all the speaker cards I have for  
5 our public comment. So we will move on to our uncontested  
6 items, of which we only have one, which is Item number 6.

7 Can I have a motion for the uncontested item?

8 BOARD MEMBER RICHARDSON: So moved.

9 BOARD MEMBER BLOIS: Second.

10 CHAIRPERSON LUTZ: All in favor?

11 (Ayes.)

12 CHAIRPERSON LUTZ: Opposed?

13 So moved.

14 Okay. Then we will move on to our first item,  
15 which is Item number 7, litigation. And for this I  
16 believe our staff attorney, Michael Levy will do the staff  
17 presentation.

18 SENIOR STAFF COUNSEL LEVY: Good morning, Board  
19 members. Michael Levy, Senior Staff Counsel for the  
20 Regional Board.

21 So this item before you now is a resolution to  
22 comply with a writ of mandate, or the last part of a writ  
23 of mandate would challenge the Los Angeles River and  
24 Ballona Creek metals TMDLs. The short answer, and then  
25 I'll go into a bit of an explanation, is that on April of

1 this year -- April 3rd of 2009, the California Court of  
2 Appeal issued a decision resolving every issue,  
3 essentially in our favor, except for one minor issue on  
4 our cross appeal, which is minor from a legal standpoint.  
5 It's significant from a practical standpoint for this  
6 Board. But in short, the Court of Appeal upheld every  
7 ruling of the trial court on the challenges to the metals  
8 TMDLs.

9           And so backing up to the beginning, on June 2nd,  
10 2005, this Board adopted Resolutions 05-006 and 007, which  
11 established Total Maximum Daily Loads for metals in the  
12 Los Angeles River and Ballona Creek watersheds. On  
13 February 16th, 2006, the Cities of Bellflower, Carson,  
14 Cerritos, Downey, Paramount, Santa Fe Springs, Signal  
15 Hill, and Whittier filed a petition for a writ of mandate,  
16 challenging many aspects of the TMDLs.

17           In that petition, they raised, according to the  
18 trial court, about 14 separate claims and dozens of  
19 separate CEQA challenges, contending that our TMDLs were  
20 inadequate as a matter of law.

21           On May 24th, 2007, the trial court issued the  
22 third of three Statements of Decision adjudicating all of  
23 the claims of the cities and rejected every one of them.  
24 Among these, the trial court ruled that the cities failed  
25 to raise certain claims by not addressing them in their

1 opening brief, meaning they raised claims at the end of  
2 litigation and left it to us to respond to them after we  
3 had already briefed the case, and that they were waived.

4           The trial court sustained the Water Board's  
5 analysis of the environmental impacts associated with the  
6 TMDLs. The trial court sustained our analysis of the  
7 foreseeable mitigation measures of the TMDLs as analyzed  
8 in the TMDLs. The court determined that our environmental  
9 documents did not improperly defer site-specific analysis  
10 to the cities for their second tier environmental  
11 analysis.

12           And what that means is, as a regulatory agency  
13 adopting performance standards, we have an obligation to  
14 do a Tier 1 environmental review. But those who have to  
15 comply with our regulations have to do a more local,  
16 site-specific environmental review when they comply with  
17 it. And the court ruled that we did not improperly defer  
18 our analysis to the cities.

19           The trial court ruled that the water board  
20 properly considered aerial deposition, which you all know  
21 is a really big issue for stormwater, that flows through  
22 storm drains to be part of the point source discharge of  
23 stormwater, which is what we argued that the Clean Water  
24 Act requires. That whatever flows into the storm drains  
25 is properly part of the point source discharge, as a

1 matter of federal law.

2           The trial/court said that the water boards  
3 committed no error by failing to establish a separate  
4 program of implementation for non-point sources, when  
5 municipal stormwater was a primary cause and we had the  
6 non-point source policy that addresses non-point sources.

7           And that the Water Board's decision to base waste  
8 load allocations on land area was not arbitrary and that  
9 the California Toxics Rule does, in fact, apply to all  
10 waters, even those waters which flow into stormwater  
11 flows. And that the TMDL was based on sound science and  
12 is suitable for TMDL calculation. Those were part of the  
13 trial court's rulings.

14           The last of its rulings, however, that's  
15 significant to us, was that the trial court ruled that we  
16 had failed to consider alternatives to the project under  
17 CEQA. And I don't mean alternatives to the means of  
18 compliance. I mean alternatives to the TMDL itself.

19           And we argued that, "Well, wait a minute. The  
20 cities did not tell us that there were any alternatives to  
21 the project. We don't believe there are any." Since  
22 there's no alternatives that are lawful, because we're  
23 required by law to adopt a TMDL, there is no utility in an  
24 alternatives analysis and there's nothing to analyze.

25           The requirement to perform an alternatives

1 analysis requires that a lead agency, when adopting a  
2 CEQA-relevant project, has to consider alternatives to the  
3 project that could -- that will result in the basic  
4 project purposes that are feasible and that will result in  
5 substantially less environmental impacts as the project  
6 has adopted.

7           And we said, there were none. And the cities  
8 argued that there were. And the court gave each side 5  
9 pages to brief it. And in the 5 pages, we were unable to  
10 demonstrate to the court that all of them -- the  
11 alternatives that were listed by the cities in their 5  
12 pages were illegal and therefore not feasible or would not  
13 result in substantially less impacts than the projects and  
14 the TMDLs as adopted.

15           And that was the trial court's ruling.

16           And so while we were having discussions with the  
17 court and the cities about what the writ of mandate should  
18 entail, we immediately on June 22nd 2007, even before the  
19 writ was entered, wrote an alternatives analysis and  
20 circulated it for a 45-day public comment period as  
21 required by CEQA.

22           And in that alternatives analysis, we examined  
23 every alternative that the cities raised in their petition  
24 in court, and every alternative that had been suggested to  
25 us during other TMDL proceedings. And we still concluded



1 in the draft analysis that there were no alternatives that  
2 were feasible, meaning legal, capable of achieving the  
3 project's purposes, including complying with the federal  
4 TMDL requirement and resulting in substantially less  
5 significant impacts.

6 And so while that was pending, we went back to  
7 the trial court. And we said trial court, "We're going to  
8 comply with your writ. We've started to do that. You  
9 haven't adopted it yet, but please don't issue a writ that  
10 compels us to set aside the TMDLs that we have adopted."  
11 Under 21168.9(a)(3) of the Public Resources Code, the  
12 court has the authority, we argued, to not order us to set  
13 aside the regulation, unless it's actually necessary after  
14 we're complying with the writ of mandate.

15 And we said, as our draft analysis shows, there  
16 is no alternative. So setting aside this regulation and  
17 compelling us to adopt a new regulation is a meaningless  
18 act, because a new regulation would presumably have  
19 exactly the same requirements as the old one.

20 And meanwhile, it will cast into disarray, what  
21 we calculated at the time, to be about a half a dozen  
22 permits that had already implemented the waste load  
23 allocations from the metals TMDLs.

24 The cities opposed that request. That notably  
25 the cities' permit was not among the half a dozen permits

1 that were already subject to the TMDLs. So they really  
2 didn't have a legal interest in that part of the claim.

3           Nevertheless, the court determined that he would  
4 set aside our TMDLs or order us to do so. On  
5 September -- on July 13th, 2007, the court issued its writ  
6 of mandate. On September 6th, 2007, you considered the  
7 alternatives analysis, determined that, in fact, it does  
8 not change your assessment of the need for the project and  
9 the appropriateness of the project. And that there were  
10 no -- you determined there were no impact -- alternatives  
11 that were feasible and lawful that would achieve the  
12 project's purposes and result in substantially less  
13 environmental impacts. And you re-adopted the same TMDLs  
14 identically.

15           On September 28th, 2007, the cities appealed  
16 every part of the trial court's decision that they lost.  
17 And the water board filed the limited cross appeal. And  
18 our cross appeal was not to challenge the requirement to  
19 do the alternatives analysis, which again we thought was  
20 not necessary, but rather was directed to the trial  
21 court's decision to order us to set aside the TMDLs, when  
22 there wasn't a reason to do so.

23           On April 3rd, 2009, this year, I'm pleased to  
24 report, the court of appeal affirmed the trial court. And  
25 as to the CEQA claims, that were raised by the cities in

1 the court of appeal, the court of appeal said,

2 "The cities contend that the trial court  
3 should have found the Regional Board's substitute  
4 Environmental Impact Report failed to set forth  
5 the reasonably foreseeable environmental impacts  
6 of compliance with the metals TMDLs and the  
7 reasonably foreseeable mitigation measures.

8 "We have examined the cities' contentions and  
9 concluded that they are without merit.

10 Therefore, we decline to address the specific  
11 contentions. In all cases...", the court went  
12 on, "...the sufficiency of the information  
13 contained in an Environmental Impact Report is  
14 reviewed in light of what is reasonably feasible.  
15 We conclude, from our review of the substitute  
16 documents, as did the trial court, that the  
17 documents complied with the requirement to  
18 address the reasonably foreseeable environmental  
19 impacts from methods of compliance and set forth  
20 mitigation measures to minimize any significant  
21 environmental impacts."

22 And then the court went on to discuss how our  
23 review was adequate. And essentially what the court of  
24 appeal affirmed, was what we had been saying right along,  
25 that it is not our duty, on the water boards, in adopting

1 a regulation to do a street-by-street assessment or  
2 project plan for each and every best management practice  
3 or construction project or other means of implementation  
4 that a city or municipality or CalTrans or other permittee  
5 might implement to comply with our regulations. A macro,  
6 big-picture view, regionwide, setting forth what we know  
7 and examining what we know is an adequate CEQA analysis.

8           Now, since, of course, the trash TMDL, our CEQA  
9 analysis has gotten a lot more diligent and more detailed  
10 than the metals TMDL. So it appears from this ruling that  
11 the level of CEQA analysis that we are doing now, that the  
12 courts, in Arcadia One, the trash TMDL, had a problem  
13 with, has been remedied. And your staff is adequately and  
14 fully analyzing environmental impacts in compliance with  
15 the law in complying with CEQA, which is a very good  
16 determination for this agency.

17           On the second issue on the cross appeal, the  
18 court of appeal ruled, agreed with our statement of the  
19 law, that the trial court does, in fact, have the  
20 authority to not set aside TMDLs if it finds CEQA  
21 violations. And the court ruled though that that's in the  
22 discretion of the trial court. And if we're faced with  
23 CEQA challenges in the future, we'll raise that as a  
24 defense, if it's not something fundamental.

25           The court of appeal, however, did uphold the

1 judge's exercise of discretion in the case in setting  
2 aside our TMDLs. And although the final judgment from the  
3 trial court, the remittitur from the court of appeal has  
4 not yet been handed down, we do recommend that you comply  
5 with the writ of mandate at this time.

6 Since you adopted the new TMDLs and since you  
7 have circulated in compliance with an alternatives  
8 analysis that you were ordered to perform and consider,  
9 and since the new TMDLs superceded the old TMDLs, the only  
10 thing left to do to comply with the writ of mandate is to  
11 repeal the original TMDLs, which we're recommending that  
12 you do at this time.

13 What that will result in, based on our new  
14 analysis and assessment, is casting a question over about  
15 17 separate permittees, merely so we can determine whether  
16 or not the effluent limitations in those permits, which  
17 are based on the first metals TMDLs, need to be modified,  
18 even though the effluent limitations will not change to  
19 have the findings point to the new TMDLs instead of the  
20 old TMDLs.

21 And there's a question about the enforceability  
22 of every violation of those limitations that occurred in  
23 the meantime. And we're asking you to direct staff to  
24 undertake that analysis and to bring back whatever changes  
25 are necessary to bring all of those permits into

1 compliance with the new TMDLs, rather than the old TMDLs.

2           So that's the status of the case at this time.

3 We received one comment letter on this matter on May 4th,

4 which was well after the comment deadline. It was by

5 Howard Gest, the attorney for the petitioners. Mr. Gest,

6 acknowledged when he sent the comment letter, that it was

7 after the deadline and asked if we could make an exception

8 and allow it into the record. And we said we really have

9 to hold all the stakeholders to the same procedural

10 requirements. But you're free, of course, to come and

11 testify at public comments and give your comments about

12 this resolution at that time. So we did reject that

13 letter.

14           And other than that, we recommend that you adopt

15 the resolution as presented. And I'm available to answer

16 any questions you may have.

17           Thank you.

18           CHAIRPERSON LUTZ: We do have some speakers on

19 this item. The first is Dr. Jerry Greene from the City of

20 Downey.

21           DR. GREENE: No, it was not intended for this

22 item.

23           CHAIRPERSON LUTZ: I'm sorry. Then I do have

24 other speakers on this item. Dave Burhenn.

25           And after that will be Mark Gold.

1 MR. BURHENN: Good morning, Madam Chair and  
2 members of the Board. My name is David Burhenn of the  
3 firm of Burhenn and Guest who are counsel for the cities  
4 of Bellflower, Carson, Cerritos, Downey, Paramount, Santa  
5 Fe Springs, Signal Hill, and Whittier.

6 The letter that Mr. Levy referred to, we did not  
7 have a chance to submit before the April 27th deadline. I  
8 would like to respectfully request that we submit it for  
9 the record today and it be considered. If that is done,  
10 we can perhaps save some time in my comments.

11 CHAIRPERSON LUTZ: I'm sorry, we cannot accept it  
12 as written. If you'd like to read into the record, --

13 MR. BURHENN: Very good.

14 CHAIRPERSON LUTZ: -- that would be fine.

15 MR. BURHENN: I will do that, Madam Chair. And  
16 again, I don't want to take anymore of the Board's time on  
17 this packed day.

18 We also respectfully suggest that to the extent  
19 that the proposed resolution rescinding Resolution numbers  
20 R05-006 and 007 is considered an amendment to the basin  
21 plan, the requisite 45 days notice for this item have not  
22 been given, as required by the Government Code Section  
23 11346.4 and Title 23 of the Code of Regulations Section  
24 649.

25 The Board is considering rescission of 2

1 resolutions, numbers R05-006 and 007, in compliance with  
2 the writ of mandate that Mr. Levy referred to. My  
3 comments today only go to the Los Angeles River Resolution  
4 number 05-006.

5 We respectfully submit that upon rescission of  
6 this resolution, the Board is also required to rescind  
7 resolution R2007-014, a subsequent resolution that  
8 re-adopted the metals TMDL, for these reasons:

9 First, Resolution R2007-014 was based on  
10 Resolution 05-006. It's specifically incorporated by  
11 reference of findings of the prior resolution. By  
12 vacating the earlier resolution, the findings that were  
13 incorporated are no longer operative.

14 Second, in adopting resolution R2007-014, the  
15 Regional Board precluded the public, including the cities,  
16 from submitting evidence on the full environmental impact  
17 of the resolution. It did not take or allow comments  
18 except on the CEQA alternatives analysis and advised a  
19 compliance schedule.

20 And there were a number of new environmental  
21 impacts that could have been indicated. These were  
22 suggested by the 301-page supplemental environmental  
23 document for the trash TMDL, that Mr. Levy referred to, I  
24 think a much better environmental document. These  
25 included air impacts related to street sweeping; the catch



1 basin maintenance, including odor. They included  
2 information on noise impacts of the alternatives of street  
3 sweeping and catch basin maintenance, which again are the  
4 same BMPs for this TMDL -- the metals TMDL as that were in  
5 the trash TMDL.

6 In addition, the impacts relating to stagnant  
7 water, impacts to health of workers working on maintaining  
8 the basins.

9 We respectfully request that the SED, which  
10 unfortunately is not in this record, be included in the  
11 record of this TMDL. And we have specific page cites in  
12 our letter for these that can be found in the TMDL.

13 And in summation, again, we respectfully suggest  
14 that this -- that there is a need to review these new  
15 impacts, impacts that were identified after the effective  
16 date of the original TMDL, so that the CEQA statute can be  
17 complied with. Thank you very much for your time.

18 One quick correction to what Mr. Levy said. The  
19 cities did not challenge in the court of appeal any of the  
20 non-CEQA issues.

21 With that, I'll be happy to answer any questions.

22 Thank you.

23 CHAIRPERSON LUTZ: Thank you.

24 Dr. Mark Gold.

25 DR. GOLD: Good morning. My name is Dr. Mark

1 Gold. I'm the president of the environmental group, Heal  
2 the Bay. My comments will be extremely brief on this  
3 particular item.

4 Just as an interested observer on this particular  
5 case. A couple things, obviously congratulations to the  
6 State and your efforts on this litigation. Hopefully, we  
7 can move forward on implementing the metals TMDL. Last I  
8 checked, the L.A. River and Ballona Creek are still highly  
9 polluted with toxic metals. And that's really the major  
10 issue that's here at hand.

11 I'm very, very concerned that the judge's ruling  
12 is obviously going to create a huge amount of additional  
13 work for your staff at a time when your staff is already  
14 being cut back and is on furlough, and all these other  
15 sorts of issues. And I think this sort of ongoing  
16 litigation on one thing after the other just is really  
17 holding up what we need to do, which is move forward on  
18 protecting water quality and having improvement in that  
19 regard. And to think that somehow that these issues that  
20 were just brought up by the previous speaker, are really  
21 in the interests of better protecting public health,  
22 sounds a little disingenuous at best.

23 So obviously you need to move forward on this  
24 resolution. I hope that whatever you can do is obviously  
25 with a minimum impact to staff, and more importantly, so

1 that we can move forward with the business of protecting  
2 aquatic life and public health.

3 Thank you.

4 CHAIRPERSON LUTZ: Thank you, Dr. Gold.

5 Does anybody have any questions for staff or any  
6 of the speakers?

7 VICE CHAIRPERSON GLICKFELD: Yeah, I'd like to  
8 have our staff attorney respond to any of the comments  
9 that he thinks are necessary to respond to.

10 SENIOR STAFF COUNSEL LEVY: Thank you.

11 Mr. Burhenn, said, first of all, that the  
12 set-aside of this resolution requires 45 days. It does  
13 not. The resolutions that are being set aside have  
14 already been superceded. All you're doing is complying  
15 with a court order. There's no 45-day requirement to do  
16 that.

17 The second issue is that the claim that the 2007  
18 resolutions, number 2007-014 and 015 are invalid because  
19 they incorporate by reference findings from Resolutions  
20 05-006 and 007, is also not correct. Incorporation by  
21 reference merely allows you to append something without  
22 having to repeat it word for word. And for the sake of  
23 the Board's reading, especially in a big packet as today,  
24 I decided merely to incorporate the findings by reference  
25 rather than restating them in the resolution. That's

1 perfectly lawful. Even if they weren't part of a  
2 resolution, even if they were written on scratch paper,  
3 the fact that they're written somewhere else incorporated  
4 by reference means that they were re-adopted anew when the  
5 new resolutions were adopted.

6           The third issue relating to so-called new  
7 impacts. The trial court and the court of appeal -- the  
8 trial court limited its ruling on CEQA to the one issue,  
9 the alternatives analysis. And the type of serial  
10 challenges to regulations and claims, subsequent to  
11 litigation, that new CEQA impacts have allegedly been  
12 identified is not allowed when the court says my ruling is  
13 only limited to this one issue.

14           In fact, all of the issues that Mr. Burhenn  
15 raised were analyzed in these particular CEQA documents.  
16 And the fact that in response to the trash litigation, we  
17 redoubled and did more analysis doesn't make this current  
18 analysis invalid as the trial court and the court of  
19 appeal have affirmed.

20           Thank you.

21           CHAIRPERSON LUTZ: Any other questions?

22           I do have a question for staff. Do we anticipate  
23 a timeframe for redoing the TMDLs or the permits rather?

24           SENIOR STAFF COUNSEL LEVY: We're still analyzing  
25 what each of those permits say. Some of them have

1 references to the TMDLs or the metals TMDLs, but doesn't  
2 reference the specific metals TMDLs. Some of them  
3 reference the specific TMDLs and some of them are part of  
4 one of our general permits. And so we really have to go  
5 forward with our analysis case by case before we can give  
6 you that estimate. But we'll report back as soon as  
7 possible.

8 CHAIRPERSON LUTZ: Okay. And in the interim,  
9 these permits are not valid. I hate to use that word.  
10 But they're not valid, what does happen with the water  
11 quality at that point?

12 SENIOR STAFF COUNSEL LEVY: To the extent that  
13 the effluent limitations derived from the original metals  
14 TMDLs are not enforceable, we cannot enforce those  
15 violations, not just from today, but from the date that  
16 the permits were issued to include those effluent  
17 limitations, which is roughly since -- well, in some  
18 cases, back to shortly after 2006 when the State Board and  
19 U.S. EPA approved the TMDLs and they were subsequently put  
20 into the permits.

21 CHAIRPERSON LUTZ: And it's strictly up to us the  
22 order in which we go through working with these permits,  
23 correct?

24 SENIOR STAFF COUNSEL LEVY: Correct. And also  
25 some of them actually, the metals limitations in some of

1 them, like for some of our wastewater treatment plants,  
2 aren't enforceable yet, because they had compliance  
3 schedules, which have -- so those effluent limitations for  
4 some of the facilities have not yet become operative. But  
5 the permits will still need to be revised. And obviously  
6 we would prioritize the ones with operative effluent  
7 limitations, first, or the ones that are coming up for  
8 review anyway, we would address that, at the same time.  
9 For instance, Boeing tomorrow, we'll address Boeing's  
10 permit.

11 CHAIRPERSON LUTZ: So we'll be able to address  
12 Boeing's permit right away.

13 SENIOR STAFF COUNSEL LEVY: Correct.

14 BOARD MEMBER MARIN: And I think the permits of  
15 major concern weren't in force yet anyway. So I think  
16 that from that standpoint we're in a good position,  
17 because Boeing will come up tomorrow and then the POTWs  
18 have time anyway.

19 SENIOR STAFF COUNSEL LEVY: I don't know about  
20 all of the 17, but L.A., Glendale, Donald C. Tillman, and  
21 Burbank, which are major facilities, their effluent  
22 limitations, based on the metals TMDLs, would not become  
23 operative until 2011.

24 VICE CHAIRPERSON GLICKFELD: Madam Chair?

25 CHAIRPERSON LUTZ: Yes.

1 VICE CHAIRPERSON GLICKFELD: Could we ask the  
2 staff in the EO's Report to update us when you have more  
3 conclusive information about what is the status of each of  
4 these and when they're going to be coming back to us at  
5 all.

6 EXECUTIVE OFFICER EGOSCUE: Yes.

7 BOARD MEMBER DIAMOND: And I just wanted to ask,  
8 are you prioritizing these in terms of the improvement of  
9 water quality, the impact on water quality that the  
10 various permits will have, rather than just in any other  
11 kind of order?

12 I really know that this is a setback in a lot of  
13 ways, but I think it's really important that we have a  
14 list of priorities that begin with the most significant  
15 water quality improvements that we'll see as we issue  
16 these permits. And I don't know who wants to answer that.

17 EXECUTIVE OFFICER EGOSCUE: I will answer that.  
18 We will do that. We will bring back next month and I will  
19 perhaps do it during the EO Report time, and I will give  
20 you the status of where we are with this effort, and where  
21 our priorities are. And the Board will be able to weigh  
22 in at that time.

23 BOARD MEMBER DIAMOND: Thank you.

24 CHAIRPERSON LUTZ: Are there any other questions  
25 or comments from the Board?

1 VICE CHAIRPERSON GLICKFELD: I'd like to make the  
2 motion. And the motion would be to approve the tentative  
3 resolution in our packet under Item A on the Los Angeles  
4 River and Ballona Creek TMDLs. Is that appropriately  
5 made?

6 CHAIRPERSON LUTZ: I believe so.

7 BOARD MEMBER BLOIS: Item 7 not 8?

8 CHAIRPERSON LUTZ: Are you seconding, I'm sorry?

9 BOARD MEMBER BLOIS: Item 7 not 8?

10 CHAIRPERSON LUTZ: Item 7.

11 VICE CHAIRPERSON GLICKFELD: Item 7.

12 BOARD MEMBER MARIN: Second.

13 CHAIRPERSON LUTZ: Any further discussion?

14 All in favor?

15 (Ayes.)

16 CHAIRPERSON LUTZ: Opposed?

17 Okay, that will be the order.

18 And we will move on to the Ventura MS4 Stormwater  
19 Permit, our main event, if you may. I would like to take  
20 a moment and talk about the order of this proceeding.

21 We have had 2 entities join in to these  
22 proceedings, so it will change a little bit from the way  
23 we normally do our proceedings. And if you'll bear with  
24 me, I will go through the process.

25 We will first have a staff report. And after



1 that, we will hear from EPA. Following that, we will have  
2 the parties' presentations from the city and other  
3 entities. After that, we will have comments from the  
4 elected officials who have asked to speak. Then the  
5 parties themselves will give us a presentation. The  
6 interested person comments will continue after that, and  
7 anybody else who has filled out a speaker card. We will  
8 then have time for rebuttal from the permittees and the  
9 other parties that are interested and staff, if necessary.

10 At that point, we will have questions from the  
11 Board, and then move into our board deliberations. We do  
12 anticipate this to take most of the day, if not all of it.  
13 We will break for our lunch and our regular breaks as we  
14 can.

15 I want to ask the reporter how we're doing?

16 THE COURT REPORTER: I'm fine.

17 CHAIRPERSON LUTZ: Then I think what we'll start  
18 with is the staff report. And then from there, we'll see,  
19 it will probably be about lunch time, so we may take our  
20 lunch break at that point and go from there.

21 I would like you to read the opening statement  
22 and swear.

23 EXECUTIVE ASSISTANT HARRIS: This is a public  
24 hearing to consider adoption by this Board in accordance  
25 with State and federal legislation of National Pollutant

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

E001507

1 Discharge Elimination System permits, and Waste Discharge  
2 Requirements for discharges to navigable waters or  
3 tributaries thereto for discharges -- excuse me, of  
4 stormwater, wet weather and non-stormwater dry weather  
5 from the municipal separate stormwater systems within the  
6 Ventura County Watershed Protection District, County of  
7 Ventura and the unincorporated cities therein.

8           A notice of this hearing and of the Board's  
9 intent to prescribe Waste Discharge Requirements was  
10 published in a daily newspaper of general circulation in  
11 the geographical area of discharge as prescribed by law.  
12 Copies of the tentative orders were sent to all known  
13 interested parties and agencies.

14           If you will be speaking before the Board today,  
15 please leave written copies of your testimony, if  
16 available.

17           Madam Chair, will you now please open the hearing  
18 and administer the oath.

19           CHAIRPERSON LUTZ: Thank you. Will all those who  
20 will be speaking today, please stand.

21           (Thereupon the witnesses were sworn, by the  
22 Chairperson, to tell the truth, the whole  
23 truth and nothing but the truth.)

24           CHAIRPERSON LUTZ: Thank you. Just another quick  
25 reminder about our speakers and I'll probably remind after

1 the staff comment. Because we do have so many people who  
2 would wish to speak, I'm going to ask that everybody do  
3 your very best to stay within the time allotted. I do  
4 have a little clock up here. And I understand on the  
5 backside of it, it says talk, sum up and stop.

6 (Laughter.)

7 CHAIRPERSON LUTZ: Please try to pay attention to  
8 that, rather than me having to ask you to wrap it up  
9 quickly.

10 And then I think we will proceed. We do want to  
11 hear from everybody. We want to make sure that all  
12 comments are heard and that we are making a well-informed  
13 decision today. So that can only be done if we all keep  
14 some decorum. And certainly, if somebody says something  
15 and you want to say the exact same thing, please just say  
16 I agree with this person. That way it will help speed it  
17 up as well.

18 So, Mr. Unger, thank you very much and the floor  
19 is yours.

20 REGIONAL PROGRAMS SECTION CHIEF UNGER: Thank  
21 you. Good morning, Chair Lutz and members of the Regional  
22 Board. I am Sam Unger, the Chief of the Regional Programs  
23 Section of the Regional Board. And this morning -- may we  
24 have our slides, please.

25 (Thereupon an overhead presentation was

1 presented as follows.)

2 REGIONAL PROGRAMS SECTION CHIEF UNGER: How do I  
3 project them, Jack?

4 CHAIRPERSON LUTZ: Is your mike on, Sam?

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes, this  
6 one is.

7 This morning -- sorry about all this. This  
8 morning I'll present for your consideration the reissuance  
9 of the Ventura County Municipal Separate Stormwater Sewer  
10 System MS4 permit.

11 Can you hear me?

12 CHAIRPERSON LUTZ: I'm sorry, can I just  
13 interrupt you. We have in front OF us 2 PowerPoints. Can  
14 you -- which one is this one or are they not?

15 It's neither one of them.

16 EXECUTIVE ASSISTANT HARRIS: Those are the  
17 permittee's presentations.

18 CHAIRPERSON LUTZ: So do we have one from staff?

19 Okay. No. Thank you. That's what we needed to  
20 know.

21 REGIONAL PROGRAMS SECTION CHIEF UNGER: This  
22 morning I'll present for your consideration the reissuance  
23 of the Ventura County Municipal Separate Stormwater Sewer  
24 System Permit, the MS4 permit. As you can see from your  
25 binders, and from the audience today, this item is a large

1 item, well beyond the scope of many other -- the permits,  
2 basin plan amendments, that you have considered in the  
3 recent time.

4 Today, I will give a brief background of the  
5 nature of stormwater and its effects on water quality.  
6 The presentation will then focus on a brief history of  
7 stormwater regulations on a national and at the local  
8 level. I will then speak about some of the unique aspects  
9 of this permit, relative to the existing stormwater permit  
10 for Ventura County MS4, and then discuss some of the  
11 comments received and staff responses.

12 Because many of the comments that we received are  
13 legal in nature, Senior Staff Counsel, Michael Levy, will  
14 discuss the response to the legal comments that we  
15 received. Then there's a change sheet that you have, I  
16 believe, that I'll discuss briefly. And then sum up my  
17 presentation.

18 Before I get too far started in this  
19 presentation, I would like to acknowledge some of the key  
20 staff who have worked so hard to bring this complex permit  
21 for your consideration today. Specifically, Ivar  
22 Ridgeway, Tracy Woods, and Xavier Swamikannu, who have  
23 done so much to provide a structure to advance the State  
24 of regulatory development to address the difficult issues  
25 regarding stormwater regulation.

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REGIONAL PROGRAMS SECTION CHIEF UNGER: Thank  
you.

From a technical aspect, stormwater is defined as precipitation that can be measured in a downstream water body shortly after the precipitation has reached the ground. From a regulatory standpoint, stormwater must pass through an engineered channel or conveyance and discharge to a water of the United States.

As stormwater passes over land surfaces, it picks up various pollutants that are related to the land-use over which it passes, and then discharges those pollutants into the waters of the U.S.

Additionally, there are other effects related to hydrology changes of the flow regime caused by land-surface alteration, and other human activities.

This is a map of Ventura County, which has 5 watershed management areas. These are the watersheds the water bodies into which the stormwater is drained by the Ventura County MS4s.

Just for brief reference, I would like to just make a brief comparison that Ventura County is different from Los Angeles county, in that the urban land uses in many parts of the county are somewhat discontinuous and separated by large areas of open space and agricultural

1 land.

2       The 5 watershed management areas are the Ventura  
3 River, which includes O'Jai, Ventura, and the  
4 unincorporated Ventura county areas, the Lower Santa Clara  
5 River, Fillmore, Oxnard, Ventura, Santa Paula, also  
6 unincorporated Ventura County, the Calleguas Creek,  
7 Camarillo, Moorpark, Simi Valley, Thousands Oaks, again  
8 areas of unincorporated Ventura county and the upper  
9 Malibu Creek, Thousand Oaks, and also county land. And  
10 then there's miscellaneous coastal Ventura counties,  
11 county watershed management areas, which include Oxnard,  
12 Port Hueneme and areas of Ventura.

13                               --oOo--

14           REGIONAL PROGRAMS SECTION CHIEF UNGER: This is a  
15 brief slide just to summarize some of the statistics on  
16 the storm drain system within Ventura County. I'll just  
17 sum it up very quickly. It's broken up into the different  
18 types of channels that are available. They're both soft  
19 side and bottom channels. There are hardened side soft  
20 bottom. There's completely so-called unimproved and  
21 completely concreted channels as well. There's  
22 underground storm drains.

23           The total adds up to about 4,000 miles and  
24 discharges either directly into the Pacific Ocean or to 1  
25 of the 5 watershed management areas that I previously

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1 discussed.

2

--o0o--

3 REGIONAL PROGRAMS SECTION CHIEF UNGER: The  
4 federal regulations recognize a difference between  
5 stormwater discharges and industrial and municipal  
6 discharges, by including a provision that requires  
7 pollutants to be excluded from the storm drain system to  
8 the maximum extent practicable. We received many comments  
9 on this issue. Michael Levy will be discussing it.

10 But from a regulations standpoint, of course,  
11 it's a standard that is subject to much interpretation.  
12 And it really has made this regulation of stormwater on a  
13 national level, not only in our region, very challenging  
14 for regional board staffs.

15

--o0o--

16 REGIONAL PROGRAMS SECTION CHIEF UNGER: This  
17 slide is intended just to briefly show you some of the  
18 local hydrologic cycles that result from alteration of  
19 land surfaces. On the left-hand side, you see a depiction  
20 of what would be an undeveloped area, natural area. This  
21 basically has several key water flows shown on it.

22 First of all, the canopy interception, which not  
23 all the rain water may reach the ground;  
24 evapotranspiration from the plants on the site. There's  
25 surface runoff. And then 2 different regimes of



1 groundwater runoff: The shallow groundwater, which is  
2 known as interflow; and then the base flow, which is the  
3 deeper groundwater.

4           And this is basically, in very simplified manner,  
5 the fate of groundwater -- or excuse me, the fate of  
6 stormwater when it falls on land. But it really has a lot  
7 to do with how this permit is structured.

8           To the right of it, you can see just by the size  
9 of the arrows are meant to depict the results of  
10 development and alteration of the land. Essentially, what  
11 you see is the surface runoff is a much larger component.  
12 Essentially, you have less canopy interception. You have  
13 base flow and interflow are relatively constant. They're  
14 probably less groundwater, because of the impervious  
15 nature of the surface over which the stormwater is  
16 flowing.

17                           --oOo--

18           REGIONAL PROGRAMS SECTION CHIEF UNGER: This  
19 slide shows general urbanization effects on water quality.  
20 It's really meant to show more than just the pollution  
21 effects really. And essentially what you see are some of  
22 the drivers due to urbanization, human population  
23 intensity, greater impervious areas due to development and  
24 roadways, vegetation loss, and also road density with tire  
25 road space and more pollutants from automobiles and other

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1           In that time, 303(d) Section contains a water  
2 quality-based strategy for waters that remain polluted  
3 after implementation of the technology-based standards.  
4 And it requires states to identify waters that remain  
5 polluted, to determine the Total Maximum Daily Loads that  
6 would reverse the impairments and then to allocate loads  
7 to sources. If states do not perform these actions, EPA  
8 must.

9           The Clean Water Act also contained Section 208,  
10 which was designated and funded the development of  
11 Regional Water Quality Management Plans to assess regional  
12 water quality, propose stream standards, identify water  
13 quality problem areas, identify wastewater treatment  
14 plans, long-term needs. And these plans also include a  
15 policy statement, which provide a common consistent basis  
16 for decision making.

17           In the period from 1977 to 1981, Sections 301 and  
18 402 were added. The control release of toxic pollutants  
19 into the United States waters; technology treatment  
20 standards for conventional pollutants and priority toxic  
21 pollutants; and regulations of technology limitations for  
22 some processes.

23           In 1977, as a result of some litigation, between  
24 NRDC, who is also here today, as you know one of the  
25 parties to comment on this stormwater permit, the result

1 of that litigation required EPA to include stormwater  
2 discharges with the -- under the National Pollutant  
3 Discharge Elimination System, the NPDES Program.

4           So what we have now, all the way from the period  
5 of 1972 to about 19 -- the late eighties, nineties, is  
6 that the stormwater systems were not included really in  
7 the NPDES system.

8           In 1990, EPA's Phase I Stormwater Permit Rules  
9 were promulgated. And some of the earlier stormwater  
10 permits were generated nationwide for large cities. In  
11 1997 to 2001, the TMDL Program litigation ordered EPA to  
12 establish TMDLs in a number of states. If the states  
13 failed to do so -- and, as you know, we are assisting EPA  
14 in some of that litigation by producing TMDLs here in  
15 Region 4.

16           Finally, more recently, there's some further  
17 development on a regulatory sense in the stormwater area,  
18 having to deal with the Energy Policy Act and the  
19 Independence and Security Act of 2007, which required all  
20 federal development and redevelopment projects with a  
21 footprint of above 5,000 square feet to achieve  
22 predevelopment hydrology. That is the hydrology that you  
23 saw on the left-hand side of that slide before the  
24 development took place, the lower surface flows, the  
25 higher groundwater infiltration to the maximum extent

1 practicable.

2 With all this lengthy implementation, both in our  
3 region and nationally of stormwater regulations, there  
4 have been a number of recent reports.

5 --oOo--

6 REGIONAL PROGRAMS SECTION CHIEF UNGER: The 2007  
7 GAO report talked about the current status of  
8 implementation. It issued a report to determine the  
9 impact of the EPA Stormwater Program on communities. Some  
10 of the relevant findings are that urban stormwater  
11 continues to be a major contributor to the nation's  
12 degraded waters. And that the stormwater program  
13 implementation has been slow, for both Phase I and Phase  
14 II communities, with almost 11 percent of communities not  
15 yet permitted even under NPDES permits.

16 It's reasonable to conclude that the level of  
17 implementation of the stormwater program ranges widely  
18 across the nation from municipality to municipality. And  
19 we're now embarking upon the third generation of the  
20 permit here in Ventura.

21 There were a number of other findings by the GAO  
22 report. Essentially, that it's really difficult to  
23 discern the success of the stormwater program on a  
24 nationwide basis. There's inconsistent monitoring.  
25 There's inconsistent reporting. And it's really difficult

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1 to tell essentially what impact the stormwater regulations  
2 and the stormwater programs have had on the nation's  
3 waters.

4 This was followed up in 2008 by the National  
5 Science Foundation. It's a pre-publication report.  
6 Basically, it made some recommendations to try to cure  
7 things in this next generation of permits, which we think  
8 we have done in today's permit that's before you.

9 First, there's a lack of quantitative metrics.  
10 We'll talk about how we address that in this, but -- in  
11 this permit in several senses, but, you know, that's one  
12 of the key aspects of this program that has made it very  
13 difficult for regulators and permittees to really get  
14 ahold on how effective their programs are.

15 There's lack of in-the-pipe monitoring. The  
16 monitoring within the stormwater programs to date has  
17 really focused on what we call mass emission stations,  
18 which is kind of a fancy name for receiving water  
19 monitoring near the bottom of watersheds. By the time you  
20 get to the water -- and that's what we have now basically  
21 in both Los Angeles county and in Ventura County in the  
22 permits now, as do many other stormwater permits  
23 throughout the country.

24 Essentially, it's very difficult to parse out by  
25 the time you're at the bottom of a watershed the

1 contribution from the MS4 system with all the other  
2 discharges into that. So it's really been fairly  
3 ineffective in allowing us to essentially discern the  
4 pollutant loading from the stormwater systems into the  
5 water bodies. So they definitely cite the lack of  
6 in-the-pipe monitoring as a key suggestion or  
7 recommendation for improvement of stormwater management.

8           They also mention ineffective control on  
9 hydromodification. Hydromodification again is the changes  
10 not due to the chemistry water in the stormwater, but  
11 really changes in the water -- the streams themselves due  
12 to the energy of the flow through the higher flow rates  
13 that is generated by the alteration of land surfaces. And  
14 so there's ineffective control there. We think we've also  
15 addressed that in this permit before you today.

16           And finally, there is -- they mentioned it should  
17 be a lack of -- there's a lack of proactive U.S. EPA  
18 involvement on source control. That is, there's a number  
19 of initiatives that are going forward, things like that,  
20 but they -- you know, how fast and how effective they are  
21 is difficult to tell.

22           One example of that would be the brake pad  
23 partnership, which I think is just in State legislature at  
24 this point, to try to reduce copper runoff from  
25 automobiles and other vehicles from the brake pads that

1 land on the roadways and then are transported into the  
2 waterways.

3 --o0o--

4 REGIONAL PROGRAMS SECTION CHIEF UNGER: To get a  
5 little more local here, finally, I want to talk just a bit  
6 about the history of the Ventura MS4 permit. In 1994 was  
7 the first Ventura County MS4 permit. The permit focused  
8 on public involvement, education, real source control,  
9 trying to get people to not dump waste and materials and  
10 trash into storm drains and things like that, with storm  
11 drain stickers, and really focused on programmatic  
12 elements for source control. There is outreach to  
13 industry, and it was the start of some initial work for --  
14 to try to cure whatever illicit connections and discharges  
15 that were draining from industry into the stormwater  
16 system.

17 In 2001, the second Ventura County MS4 permit was  
18 promulgated by this Board. It included all the previous  
19 programs and also included mass emission monitoring as  
20 well. And we -- the mass emission monitoring, as you'll  
21 see in a minute, it stays with us in this third generation  
22 of the permit, but it's augmented greatly.

23 In 2006, the application for renewal of the NPDES  
24 permit was received from the Ventura County permittees,  
25 and it's taken us until this time really to bring this



1 back on your attention.

2 To date, there have been three drafts that have  
3 been circulated from this to the stakeholders prior to the  
4 tentative that was released that you're considering today.

5 Really, I think from 2006 all the way through  
6 2009, over that period of time, Regional Board staff  
7 conducted 42 stakeholders meetings. The Board itself had  
8 two information items on this. And actually, we were  
9 scheduled for a third last July, you may remember, when we  
10 were shut down by a writ of mandate.

11 Basically, one of the more informative and  
12 productive sessions that we had was a round table last  
13 February 27th and 28th at this facility, Ventura County  
14 hosted, where essentially all the stakeholders came, we  
15 talked about the permit, which you'll see is quite  
16 different from the existing permit right now. It has many  
17 more provisions, and they were all subject to a lot of  
18 debate and a lot of consideration. Essentially all  
19 stakeholders were present at these meetings, at many of  
20 the meetings that we've held.

21 We've had the permittees, of course. We've had  
22 water and flood control districts. There have been NGOs  
23 at the meetings. Various consultants. And also there  
24 have been a lot of interested parties as well from  
25 Los Angeles County, because they see that their permit is

1 up too soon and they're interested in becoming informed on  
2 what we're doing here in Ventura County to try to cure the  
3 issues that have been brought out by the GAO and the  
4 National Science Foundation.

5           What happened, just a brief history -- as a brief  
6 history, what happened was when the stay was lifted last  
7 September, we started another series of meetings that went  
8 from October to the end of this year, the end of last year  
9 that really resulted in the tentative permit that is  
10 before you today.

11                               --oOo--

12           REGIONAL PROGRAMS SECTION CHIEF UNGER: I just  
13 put the slide up briefly. I don't want to speak too much  
14 about it, because these are the current permit elements  
15 that are retained in the permit. They're still effective  
16 from the earlier generation of permits; it's one of the  
17 reasons why your binder is so thick and why the permit is  
18 120-such pages.

19           Essentially, there's a public information and  
20 participation program; there's assessments of outreach  
21 strategies to schools to educate children on water quality  
22 and their role in its -- in maintaining trash and other  
23 waste out of it. There's the ICID program, the Illicit  
24 Connection/Discharge. Basically a maintenance of a  
25 hotline is still required, as is monitoring, specifically



1 generation, there's a number of upgrades which really  
2 report for the other half of this weighty binder, the  
3 weighty part of the permit.

4           Essentially, what we have, I think these are  
5 essentially listed on the bullets here. We're now  
6 monitoring major outfalls. We think this is one of the  
7 first permits nationwide that has regular monitoring of,  
8 what we consider to be, representative outfalls. And they  
9 have been -- we've been working with Ventura County staff  
10 to identify those outfalls throughout the county. I'll  
11 show them to you later in this presentation on a map. We  
12 think it's one of the first ones.

13           We know that there's other stormwater programs  
14 that do monitor outfalls, but usually they're just  
15 specialized, maybe beach outfalls, not entirely throughout  
16 the system like this permit is requiring.

17           There's municipal action levels, which I'll talk  
18 about. Essentially, what we wanted to do is address some  
19 of the issues about there's no quantitative measures, so  
20 what do we find when we have these monitoring reports from  
21 the outfalls. We've incorporated municipal action levels.  
22 It's been a very controversial part of the permit  
23 development. I'll talk about it in a bit more detail.

24           We've included a hydromodification control  
25 criteria for larger storms and to try to reduce the

1 impacts, the deleterious impacts to the water bodies.

2           There's Low Impact Development strategies. This  
3 permit embraces the principles of Low Impact Development  
4 And we're trying to put and we have put quantitative  
5 measures to the degree we felt feasible on the Low Impact  
6 Development.

7           We have enhanced BMP requirements in this.

8 During the wet season for hillside construction and  
9 grading, essentially what happens is we all know that  
10 during major rain events at open construction sites, they  
11 can generate a lot of sediment and with pollutant loads  
12 that cause erosion, and we are -- now have a requirement  
13 essentially that developers must and the permittees must  
14 look ahead, the weather forecast, things like that, see  
15 storm events and prepare their sites before the  
16 precipitation event, essentially happened during the wet  
17 season.

18           And finally, there's TMDL implementation. Since  
19 we last reopened this permit, there's been a number of  
20 TMDLs adopted in this region, which you know, and we are  
21 incorporating those TMDL waste load allocations into the  
22 permit.

23           So this is quite a different permit from the  
24 previous permit and the existing permit that's in place  
25 right now.



1           So there's been quite a controversy about this.  
2 The State Board convened a blue ribbon panel that issued  
3 their report in 1996 to ask about how MALs should be  
4 structured. And basically the blue ribbon panel found  
5 that it was not feasible to set enforceable numeric limit  
6 criteria for municipal BMPs, because the stormwater  
7 discharges are so variable and they're so poorly  
8 characterized at this point, the technologies unlike for  
9 POTWs can't really be -- their performance cannot be set  
10 at this point yet.

11           However, they said -- this is the blue ribbon  
12 panel -- it is possible to select and design them much  
13 more rigorously with respect to the physical, chemical,  
14 and biological processes that take place within them,  
15 provide more confidence that the estimated mean  
16 concentrations of constituents and the effluents will be  
17 close to the design range. That is, they found it to be  
18 an extremely effective tool to identify areas within the  
19 watersheds that drive high pollution loads -- pollutant  
20 loadings relative to what they should be.

21           So over the course of the three, and now fourth  
22 generation of this permit, the expression of MALs has  
23 changed. And now what you have before you is you have  
24 MALs that are in accordance with the blue ribbon panel  
25 suggestions, the statewide suggestions. They're still one

1 of the first MALs that are in a permit anywhere within the  
2 State, and as far as we know, again, we don't know of too  
3 much more that are in the country. We just don't think,  
4 at this point, that the data support reasonable potential  
5 to set effluent limits at this point, but we think MALs  
6 can be very, very effective.

7 --o0o--

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: The  
9 monitoring program retains the existing monitoring  
10 program, the mass emission stations in the county.  
11 However, it's been augmented greatly. The first, again,  
12 is the receiving water stations we think have little  
13 utility really in determining and helping us ferret out  
14 where the pollutant loadings are really coming from.

15 So we've augmented this with representative  
16 end-of-pipe monitoring. We've worked with the county to  
17 establish 11 different outfalls, major outfalls, into the  
18 storm drain system or -- yeah, into the storm drain  
19 system, that essentially try to represent the land uses in  
20 the various communities in which they're based.

21 Essentially, each of the cities in the county are  
22 responsible fiscally for at least one of these major  
23 outfalls. They're managed four times -- they're monitored  
24 four times per year: Three during the dry season, one  
25 during the wet season. And we think within a relatively

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1 short period of time we'll be able to build up a very good  
2 database of information to allow us to then guide the  
3 implementation of BMPs to reduce pollutant loadings.

4           The TMDL monitoring is also a requirement of this  
5 permit. For the TMDLs that are established, the TMDL  
6 monitoring in Ventura County is mostly receiving water  
7 monitoring, so we think we have a good mix there between  
8 outfall monitoring and receiving water monitoring. And so  
9 we think we have good coverage with the TMDLs that are  
10 currently in place and the representative end-of-pipe  
11 monitoring.

12           There's bioassessment monitoring that's a  
13 requirement of this permit. There's been controversy  
14 about that element as well, which I'll talk about. But  
15 the Ventura County permittees participate in a SCCWRP  
16 region-wide bioassessment monitoring plan. And  
17 essentially what it has, it has rolling stations through  
18 the county -- and I understand that the county will talk  
19 more about that -- on a yearly basis to assess with  
20 biocriteria the state of the water in the various  
21 receiving waters throughout the county.

22           We have actually augmented due to -- well, I'll  
23 get to that when we talk about Response to Comments. But  
24 we've actually augmented the SCCWRP requirements with some  
25 fixed monitoring stations for bioassessment as well.

1           Finally, this is a permit that also includes  
2 requirements for beach water quality monitoring, even at  
3 some beaches that don't receive stormwater discharges from  
4 the MS4 system. The reason is basically the funding  
5 sources for AB 411 is tenuous at best. For awhile the  
6 beach water quality monitoring program statewide was shut  
7 down. I think it still is in Ventura, or it was last  
8 winter. It's now back on line. Essentially, what we have  
9 now is the permittees have stepped up and have met the  
10 requirements to have beach water quality monitoring  
11 included in the permit at ten beaches within Ventura  
12 County. This is in addition to other beaches, which are  
13 also monitored as well.

14                               --oOo--

15           REGIONAL PROGRAMS SECTION CHIEF UNGER: This is  
16 just a brief map of the 11 outfall stations. Again, we  
17 think this is a big step forward in the monitoring program  
18 for this permit. You can see they're located throughout  
19 the county, one in each municipality, one in the  
20 unincorporated county land.

21                               --oOo--

22           REGIONAL PROGRAMS SECTION CHIEF UNGER: Land  
23 development planning. This slide shows the key provisions  
24 for our land development section. The goal of this  
25 section is to incorporate Low Impact Development

1 principles into the permit. Essentially, the broad  
2 objectives of land development provisions in municipal  
3 stormwater regulations are to preserve the natural  
4 hydrological characteristics of development sites in order  
5 to minimize the adverse effects associated with land  
6 development changes; and two, plan for implementation of  
7 the most appropriate suite of stormwater BMPs to control  
8 the stormwater pollution which results from the  
9 development.

10 This permit defines a hierarchy of technologies  
11 that favor on-site capture and reuse as the first  
12 technique, infiltration as the next prescribed technique,  
13 and then finally off-site discharge after filtration as  
14 the final technique.

15 Basically, we have a quantitative measure of five  
16 percent effective impervious area; that is, developers  
17 must disconnect the impervious surfaces of their land from  
18 the stormwater system and they do that with bio-retention  
19 strips, infiltration techniques, various technologies such  
20 as that.

21 So basically it's limited to five percent.  
22 Swales, infiltration trenches, like I say, are some of the  
23 more common techniques of achieving that. And we've had  
24 that five percent standard in the permit. There's quite a  
25 bit of controversy about this standard, and I'm sure

1 you're going to hear a lot about it this afternoon.  
2 However, with any standard such as this, where there are  
3 criteria for infeasibility, if sites cannot achieve the  
4 five percent, there are some criteria for feasibility. In  
5 this particular permit we have not specified those  
6 criteria at this point. It's to be determined by the  
7 permittees and approved by the executive officer shortly  
8 after the adoption of the permit. So essentially all  
9 sites meet five percent until -- unless infeasibility is  
10 determined.

11 We'll talk a bit about some of the criteria for  
12 infeasibility. The County of Los Angeles has already  
13 developed an ordinance for Low Impact Development that has  
14 a pretty, I would say, robust suite of criteria by which  
15 sites are rendered infeasible, such as geotechnical  
16 concerns, the ability for soils to infiltrate, geological  
17 hazards, pollution existence, brownfields, things like  
18 that, all would possibly make on-site retention and reuse  
19 maybe not the best technique. So these criteria are a  
20 very key point. We'll be talking about them more later on  
21 today I'm sure.

22 So what happens if -- what happens if a site  
23 cannot meet the five percent EIA standard? There are two  
24 requirements, or two options basically. One is off-site  
25 mitigation for infeasible sites. And the other is an

1 in-lieu program for infeasible sites or sites that are  
2 determined to be infeasible. The in-lieu program is not  
3 yet in place. The county is required to develop it for  
4 executive officer approval within, I believe, 18 months.  
5 And essentially we will be working with them on a staff  
6 level to try to develop both the criteria and the nature  
7 of the in-lieu program for infeasible sites. It also  
8 requires essentially post-development maintenance of the  
9 BMPs that are on site. The cities are going to have to  
10 require that the developers or the owners of the land  
11 maintain the BMPs, because it's a key facet really of  
12 maintaining their effectiveness during the life of a  
13 project.

14 --o0o--

15 REGIONAL PROGRAMS SECTION CHIEF UNGER: I want to  
16 talk little bit more about LID too because -- essentially  
17 come back to it a little bit, because this -- it's  
18 complicated. And what I have is the next two slides, two  
19 different concepts for LID. And they're really questions  
20 of degrees, not really questions of absolutes.

21 But what we have is we have one slide here called  
22 "Volume Matching." The criteria for volume matching is  
23 really what is in our proposed permit before you today.  
24 What it tries to do is it tries to limit the off-site  
25 runoff to the predevelopment hydrology.

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1           Of course, it could be more on-site capture, but  
2 it will -- the objective there is to limit it to  
3 essentially what the hydrology was before pre-capture.  
4 This is what is the basis of the Los Angeles County LID  
5 ordinance, and there's other LID ordinances that are  
6 before other regional boards within the state that are  
7 also based on this volume matching concept.

8                               --oOo--

9           REGIONAL PROGRAMS SECTION CHIEF UNGER: I'll talk  
10 about the other concept when we get to an alternative  
11 proposal, because we have received an alternative proposal  
12 which I'll talk about, which is called full retention or  
13 zero discharge. I'll talk about that a little later when  
14 we get to that portion of it. I just wanted to finish off  
15 with the TMDLs, their provisions.

16           The TMDL provisions, they're -- the waste load  
17 allocations are incorporated into the permit. The TMDLs  
18 are incorporated into the permit, really, in accordance  
19 with the state adoption of and approval of the TMDLs that  
20 this Board has done. In accordance with the Code of  
21 Federal Regulations, waste load allocations are to be  
22 incorporated into permits consistent with the assumptions  
23 and requirements of the waste load allocations when they  
24 were put into place by the state.

25           So when we bring TMDLs to you, you usually adopt

1 them with implementation plans. Oftentimes, we discuss  
2 those implementation plans and compliance schedules at  
3 length. They're often more controversial than the waste  
4 load allocations themselves. But at the end of the day,  
5 for all the TMDLs that are established through the state  
6 process, there are implementation plans, and the intention  
7 here is to honor implementation plans that you and the  
8 State Board and Office of Administrative Law have all  
9 approved.

10           There are several TMDLs that are in place  
11 EPA-established. They do not have implementation plans,  
12 and the waste load allocations are included in those TMDLs  
13 as is, if you will.

14                           --oOo--

15           REGIONAL PROGRAMS SECTION CHIEF UNGER: Comments  
16 received. We received 44 comments by the deadline.  
17 Basically they came from a full suite of stakeholders,  
18 permittees, the U.S. EPA, other stakeholder groups,  
19 including Los Angeles County and Los Angeles County  
20 municipalities, various environmental groups, and various  
21 state associations for stormwater management have  
22 also -- have submitted permits. We have also had  
23 some -- excuse me, submitted comments. We also had some  
24 comments from private citizens as well.

25           What is interesting about the permits is that

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1 minimizing the runoff.

2           And, you know, from a concept standpoint, we  
3 understand it, less runoff, less pollutant loading.  
4 However, essentially what will happen is with the greater  
5 retention and the greater on-site infiltration, we have a  
6 number of comments about that that appeared in their  
7 technical infeasibility criteria.

8           I'd also -- staff also would like to point out  
9 too that this would be the first of its type nationwide.  
10 EPA really defines volume capture -- excuse me, volume  
11 matching to preexisting hydrology as, you know, it's  
12 version of Low Impact Development. And all the other  
13 permits that are under consideration by other boards also  
14 look at low impact -- the volume matching portion rather  
15 than a full retention.

16           So it's -- we're very challenged in looking at  
17 this, because as staff, when we bring -- you know, when  
18 permittees and stakeholders come to agreement, it's great  
19 for us, and it's really hard for us to -- and usually we  
20 engage immediately upon those and we have a discussion  
21 about, you know, what we like, what we don't like, what we  
22 think is effective for water quality, what isn't; but  
23 essentially -- I'm going to come back to -- let me just  
24 come back to that for a second, I'm sorry.

25           But really what we have is I'm going to go down

1 the list here of some of the criteria and some of the  
2 questions that we have that really lead us to, at this  
3 point, say to you, our Board, that from a staff standpoint  
4 we cannot really recommend this agreement as it was  
5 presented to us.

6 First, the agreement has yet to be finalized.  
7 There's one portion of the agreement that the parties did  
8 not agree upon about the time, the amount of time  
9 necessary that was required to develop plans for off-site  
10 mitigation and reporting. And that was sent to our  
11 review.

12 So we were kind of being asked to look at  
13 something again that had not been quite finalized. There  
14 was a comment there, that letter said that they hadn't  
15 completed their agreements by the time they sent it in to  
16 us.

17 Second, really, and this is our big issue from a  
18 staff standpoint, is the elimination of the Municipal  
19 Action Levels. We find that MALs are really an essential  
20 tool that -- that can identify areas that discharge  
21 excessive pollutant loads. They are key for prioritizing  
22 the stormwater management resources in an effective and  
23 efficient manner. How are the cities, how is the county  
24 going to spend their money? We think with MALs they can  
25 do it in a logical and in an effective sense.

1           Third, again, the concept of volume capture is  
2 not well documented or demonstrated yet. We think it's  
3 too difficult to postulate things that have been brought  
4 up, such as human health and safety issues that may be  
5 associated with standing water on a site that cannot be  
6 drained off site and not properly infiltrated. There may  
7 be property damage to dampened near surface subsurface;  
8 and in really -- some people have commented that it  
9 countermands the concepts like drought-resistant  
10 landscaping, in the sense that you don't need a lot of  
11 water for drought-resistant landscaping and then you're  
12 holding water during a time when you don't need water on  
13 site.

14           Again, we understand the argument of less surface  
15 flow and less pollution load, but there are no  
16 requirements right now for any sort of filtration like  
17 there are in the permit that's before you, to filter out  
18 pollutant loads. And we think that it's possible that  
19 these pollutant loads will be transferred directly to the  
20 groundwater.

21           Further, there's benefits, purported benefits  
22 regarding groundwater resources that we have questions  
23 about and we're not in a position that we can talk about.  
24 You can see on this slide really that there are two  
25 regions of groundwater flow, the near surface and the

1 subsurface. Really, when we talk about groundwater  
2 resources, we're talking about the deeper aquifers.  
3 Essentially, the idea that by infiltrating water into the  
4 shallow subsurface is going to really, really increase  
5 water resources, or groundwater resources, is not well  
6 determined in our regard.

7           We're concerned about specific criteria that are  
8 in their proposal. The most specific criteria that we're  
9 concerned about that we can't ask questions about really  
10 or question is a five-foot depth to groundwater. You'll  
11 be infiltrating water where surface -- is only five feet  
12 below the surface. It really is -- we think it's -- it  
13 countermands a lot of our groundwater protection programs  
14 at the Regional Board, which requires a greater distance  
15 to trap and retain the pollutants before they become  
16 mobilized into the groundwater.

17           And, you know, finally we noticed that last year,  
18 it was just last year, that the County of Los Angeles, the  
19 NGOs who are commenting on this agreement and the Building  
20 Industry Association, the IA, they all agreed on a LID  
21 ordinance, a Low Impact Development ordinance, that was  
22 based on volume matching.

23           So we find that that ordinance was better vetted  
24 through technical committees and such, and technical  
25 personnel, than the one proposed, and we have some

1 difficulties with it as I tried to talk about.

2           We do find some aspects of the agreement are  
3 really attractive, but again, we think some of the  
4 drafting and things like that are clarified. However, we  
5 bring you this recommendation under the constraints of  
6 having to look at this agreement as a whole.

7           So that's the NGO agreement which precipitated,  
8 essentially, a number of different comments from some  
9 agencies. I'm sure they'll be talking to you about that  
10 as well.

11           I'll now go to just the normal sort of comments  
12 that we received on the -- and some of our responses.  
13 Essentially, what I have on these slides, the Municipal  
14 Action Levels the first thing. The NGOs commented that  
15 the levels were significantly greater in the California  
16 Toxics Rule criteria, and basically that the MALs had  
17 been -- I think had been weakened over the course of three  
18 drafts of this permit from 2007.

19           We don't disagree, however, we think the  
20 comparison to CTR is inappropriate. CTR is a dissolved  
21 metals standard. Whereas effluent limits, MALs, and  
22 things like that, are based on the total metals. And  
23 oftentimes there's a huge difference between the  
24 concentration of a total metal in a water body versus its  
25 dissolved component; so we don't think the difference is

1 quite as great as what has been told to us.

2           The MALs do not represent MEP, the maximum extent  
3 practicable. I'm going to leave Michael Levy to discuss  
4 that one with you. It's a legal comment really.

5           Other permittees and various stakeholders, like  
6 what we did, because the MALs are now in accordance with  
7 the blue ribbon panel. And the County of Los Angeles  
8 Flood Control District made a comment that they're  
9 concerned that MALs can be confused with effluent limits.  
10 We're very clear, we're very clear, we think, in our  
11 permit that they are not effluent limits and they're to be  
12 used to identify priority areas.

13                               --oOo--

14           REGIONAL PROGRAMS SECTION CHIEF UNGER: Comments  
15 on the land development and planning. Basically, there  
16 are two comments -- I mean two sets of comments here. I  
17 think everyone else sort of falls in the middle. One  
18 extreme is -- well, one point of view is that the land  
19 development components of this permit have been  
20 significantly weakened by the NGOs; and on the other side,  
21 from the building industries, we have that EI is not a  
22 proven standard at this point and, you know, discourages  
23 us from setting numeric limits.

24           I'll talk about NGOs' comments first. Really, we  
25 disagree. I mean, we actually think that the EI standard

1 is strengthened in this version of the permit relative to  
2 the draft that they last saw. The reason is because now  
3 the EIA standard is tied to language that ensures that the  
4 BMPs are properly sized. That was missing from the last  
5 third draft. Actually, the NGOs commented on that, and  
6 from that draft we took that comment and crafted that  
7 language into this.

8           So we actually think without that language  
9 essentially you could put in a very undersized BMP,  
10 there's no requirement. And that would be -- can serve as  
11 95 percent effective as one that would infiltrate the  
12 water from a 24-hour storm, like we have now. So we  
13 really think that we strengthened this area of the permit.  
14 We didn't weaken it, we tied it to a volume standard.

15           We made a number of revisions in the revised  
16 tentative that you have before you that essentially  
17 addressed some of the NGO comments. We agreed with them  
18 in a number of cases. In the re- -- in the tentative that  
19 was submitted for public review, we had made the standard  
20 on total land area for projects to be brought in under the  
21 land development criteria. It's now an impervious area  
22 for many development types.

23           There were a number of plans that were to be  
24 developed by the permittees during the land development  
25 portion of the permit, such as updating their county



1 technical manuals and things like that. We, at the  
2 suggestion of NGOs, and we think it's a good one, that we  
3 now have those subject to the executive officer approval.

4           There was another facet of the tentative rather  
5 than the revised that went out that had a provision where  
6 essentially the county could essentially revise the  
7 interim hydromodification requirements. We struck that  
8 from this draft.

9           So we think in a whole sense, basically, that  
10 we've made this stronger. There were some things that  
11 were weakened and brought up by the NGOs that we think we  
12 captured in the revised draft that's in front of you now.

13                           --o0o--

14           REGIONAL PROGRAMS SECTION CHIEF UNGER: In terms  
15 of EIA being not a proven standard, it's -- I don't know  
16 if it's not proven. It's early in its development. There  
17 are other -- we need some sort of numeric standard, you  
18 know, for new development and redevelopment projects. And  
19 EIA, we think, tied to a volume standard is really as good  
20 as any.

21           And so the flip side of it is that we are going  
22 to have to develop the technical infeasibility criteria;  
23 and we'll be doing that during the first year of the  
24 permit application.

25                           --o0o--

1 REGIONAL PROGRAMS SECTION CHIEF UNGER: There's  
2 BMP performance criteria that is part of this permit.  
3 That's a new facet of the permit. Before it was the  
4 permittees determined which BMPs they wanted to deploy and  
5 implement for various water quality issues. Now they have  
6 to meet a certain performance standard for pollutant  
7 reduction.

8 The comment was made that that also should be  
9 tied to a volumetric requirement; that is, if something is  
10 good, you know, for 90 percent reduction, but it's only  
11 ten gallons a minute, it's not going to do as well in a  
12 storm. We also tied that to a volumetric requirement.  
13 And we agree with that comment and we tied it to the 85th  
14 percentile 24-hour storm.

15 --oOo--

16 REGIONAL PROGRAMS SECTION CHIEF UNGER:

17 Monitoring costs. One comment that we got is  
18 there's a significant increase to monitoring costs by the  
19 permittees. We acknowledge that there is a cost. They  
20 tell us it's doubled. We don't really have a way to  
21 verify that per se, but we do know that the monitoring  
22 requirements of this permit are quite a bit more stringent  
23 than in the previous permit.

24 The NGOs counter that outfall monitoring is not  
25 adequate. There's only 11 sites throughout the region, or

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1 throughout the county. However, again, this is the first  
2 outfall monitoring on a major program that's going to  
3 continue throughout the entire duration of the permit.  
4 And we think that we have put in provisions for TMDL  
5 monitoring to be included.

6 As you heard from Mr. John Krist this morning,  
7 there's agricultural waivering that's going on -- waiver  
8 monitoring that is going on within the county. We think  
9 we have pretty good coverage on the surface water and  
10 receiving water within Ventura County.

11 The NGOs made a comment that the beach monitoring  
12 protocols are not appropriate. That is, essentially in  
13 Los Angeles County, you may know that the beach monitoring  
14 is such that the monitoring is right in front of a storm  
15 drain. Our understanding here is that requirement is  
16 not -- it is not in place, that they require -- they can  
17 monitor at other places on the beach, and they have a  
18 historical record of that on the beach. And really, at  
19 this point, I think staff sees advantages in both  
20 maintaining the historical record and also being  
21 consistent throughout our region. So I think I'm going to  
22 leave this one for you guys to inform us on beach water  
23 quality monitoring.

24 And then finally, the dry weather monitoring, I  
25 think the TMDL monitoring is unclear from the NGOs. All

1 the TMDL monitoring has been brought in. We're a little  
2 confused by this comment. We understand that it's not  
3 quite easy in the sense that it's not tied to the back of  
4 the permit. It's referenced to the other TMDL monitoring  
5 programs, but all that is available from -- you know, at  
6 our offices. In fact, we put together a map of the TMDL  
7 monitoring for the NGOs during this permit development.

8           The dry weather monitoring is not adequate at the  
9 outfalls. Again, this gets to be somewhat of a cost  
10 issue. What we did there is there was no dry weather  
11 monitoring at all. And we know from 2007 NGO -- the  
12 government report, 2007, the NSF report in 2008, that it's  
13 not only stormwater, it's urban runoff that also travels  
14 through the storm drains that affect our waterways. What  
15 we did was, we retained the same monitoring frequency such  
16 that it's three wet weather samples and one dry weather  
17 sample to try to conserve costs. And we still think with  
18 that coverage, in a very short period of time, we will  
19 build up a very robust database from which we can then  
20 work with the county to deploy the appropriate BMPs.

21                           --o0o--

22           REGIONAL PROGRAMS SECTION CHIEF UNGER: This is  
23 just -- well, it doesn't come out too well. It's a brief  
24 comparison of the AB 411 beach monitoring program to other  
25 counties throughout the state. Essentially, Ventura falls

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1 right in the middle. There's 10 sites for here, but I  
2 think there's, what, more than 40 sites in Ventura County  
3 for beach water quality monitoring.

4 --oOo--

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: And as  
6 far as TMDL comments and responses, basically the TMDL was  
7 to include all established TMDLs from the NGOs. The  
8 tentative that went out did not have all TMDLs in. We  
9 corrected that; they're correct. And we now included all  
10 the TMDLs that are in place, including the EPA-established  
11 TMDLs in this permit.

12 The waste load allocation should be enforceable,  
13 came from both the NGOs and the U.S. EPA. We feel that  
14 they are enforceable. They're enforceable in accordance  
15 with the assumptions and requirements by which the waste  
16 load allocations were adopted by this Board and approved  
17 by the State Board and the Office of Administrative Law.

18 --oOo--

19 REGIONAL PROGRAMS SECTION CHIEF UNGER: I think  
20 that's about it really until the legal issues. So I'm  
21 going to turn it over to Michael Levy and then come back  
22 and talk about the change sheet that we have and provide  
23 staff recommendation.

24 CHAIRPERSON LUTZ: Sam, how much more time do you  
25 think you'll need?

1 REGIONAL PROGRAMS SECTION CHIEF UNGER: I

2 think -- Michael, how much more time?

3 SENIOR STAFF COUNSEL LEVY: About 15, 20 minutes.

4 CHAIRPERSON LUTZ: And then when you come back?

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: Five  
6 minutes or less.

7 CHAIRPERSON LUTZ: Okay. We're looking at a  
8 12:30-ish kind of break. Is that right?

9 REGIONAL PROGRAMS SECTION CHIEF UNGER: It should  
10 be sooner than that, I hope.

11 CHAIRPERSON LUTZ: Okay. You've exceeded your  
12 hour is why.

13 (Thereupon an overhead presentation was  
14 presented as follows.)

15 SENIOR STAFF COUNSEL LEVY: Whenever you're  
16 ready.

17 CHAIRPERSON LUTZ: We're ready.

18 SENIOR STAFF COUNSEL LEVY: Good morning again,  
19 Board Members, Chair Lutz. For the record, Michael Levy,  
20 senior staff counsel.

21 As Sam indicated, there were a few consistent  
22 legal arguments that were raised that I'm going to provide  
23 specific responses to. And the first one is a recurring  
24 theme that the provisions of the permit go beyond federal  
25 law or go beyond MEP. And I want to break this claim down

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1 because it relates actually to two legal issues.

2           The first one is whether a consideration of the  
3 Water Code Section 13241 factors is required under the  
4 case of "City of Burbank versus State Water Resources  
5 Control Board." Ignore my slide for a minute, I'll get to  
6 that in a moment.

7           The second issue is whether the constitutional  
8 unfunded mandates provisions are implicated. And so I  
9 want to take those separately.

10           And here's my slide. I thought this would be  
11 easier for everyone to understand what we're talking  
12 about, to just see it up on the screen.

13           13241 of the California Water Code requires that  
14 when the Regional Board's established water quality  
15 objectives were required to do two things; one, we're  
16 required to implement the -- protect beneficial uses, and  
17 also we're required to consider a variety of factors. And  
18 as you'll see the language, it says, "However, it is  
19 recognized that it may be possible for the quality of  
20 water to be changed to some degree without unreasonably  
21 affecting beneficial uses, therefore, consider these  
22 factors."

23           And you can see they're listed here in yellow for  
24 you. Past, present, and probable future beneficial uses;  
25 environmental characteristics of the hydrographic unit;

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1 water quality conditions that could reasonably be achieved  
2 through coordinated control of all factors which affect  
3 water quality; economic considerations; the need for  
4 developing housing in the region; and the need to develop  
5 and use recycled water.

6 And I want to emphasize one word from this. This  
7 says, "consider these factors," it doesn't mean balance  
8 them. We're not engaged in a cost-benefits analysis,  
9 assuming this section applies.

10 The next statute which I want to draw to your  
11 attention is our permitting statute. This is the statute  
12 we use for adoption of all Waste Discharge Requirements,  
13 whether they are NPDES or otherwise. Water Code Section  
14 13263 requires that when we adopt Waste Discharge  
15 Requirements, the requirements shall implement any  
16 relevant water quality control plans that have been  
17 adopted and shall take into consideration, among other  
18 things, the provisions in Section 13241 at the bottom of  
19 the statute.

20 A few years back the City of Los Angeles and the  
21 City of Burbank filed the challenge to your wastewater  
22 treatment plant permits for Donald C. Tillman, L.A.,  
23 Glendale and City of Burbank wastewater treatment plants  
24 contending that this language between the two statutes  
25 requires you to consider the 13241 factors whenever you



1 adopt an NPDES permit. And the Supreme Court ruled in  
2 that case that that's not true, that federal law prevails  
3 under the concept of federal supremacy and the state  
4 statute requiring an examination of these factors cannot  
5 allow us to relax federal requirements.

6           So the California Supreme Court said that this  
7 provision does not apply to the extent that we are  
8 implementing federal law. However, if we, as a State  
9 agency, adopt requirements that go beyond that which  
10 federal law requires, then we must consider these factors.  
11 And the reasoning was that if we can't relax the factors  
12 based upon -- that we can't relax our requirements based  
13 upon a factors analysis, there's no need to do the  
14 analysis, it's an idle act.

15           So that's the backdrop for this. And we've heard  
16 since that time, for the last many years, that going  
17 beyond federal law, that all of our NPDES permits go  
18 beyond federal law and are required, therefore, to  
19 consider 13241.

20           So as I noted, those were wastewater treatment  
21 plant permits, and those are significantly different from  
22 what we have before us, which is a municipal separate  
23 storm sewer system permit, as distinguished from  
24 industrial stormwater permits. And so I want to point out  
25 what the federal law requires, so we can decide what goes

1 beyond federal law when we're talking about an MS4 permit.

2           This is 402(p) -- let me see if I get it up all  
3 at the same place here -- 402(p) of the Federal Clean  
4 Water Act. That's small. Let me see if I can blow that  
5 up a bit. I'm sorry. Bear with me a moment.

6           Jack, can you help me here while I'm talking?

7 Let me try this. There we go. Thank you.

8           402(p) is the statute that applies specifically  
9 to the MS4 systems, which Sam was talking about later.  
10 402(p) (3) (B) specifically. You'll note (p) (3) (A) relates  
11 to industrial stormwater, requires strict compliance with  
12 water quality standards. (p) (3) (B) has three separate  
13 requirements.

14           The first one is, as we noted for this MS4  
15 system, is that they may issue on a system- or  
16 jurisdiction-wide basis.

17           The second one is another mandatory provision  
18 that requires that the permit shall include a requirement  
19 to effectively prohibit non-stormwater discharges into the  
20 storm sewers. And that's an absolute requirement.

21           And the third one is where this concept of MEP  
22 comes from. That the permit shall require controls to  
23 reduce the discharge of pollutants to the maximum extent  
24 practicable, including management practices, control  
25 techniques, and system design and engineering methods, and

1 such other provisions as the administrator or the state  
2 determines appropriate for the control of such pollutants.

3           As Sam noted, this provision was effective --  
4 became effective in 1987. And it's a federal statute that  
5 directly applies to municipalities and municipal separate  
6 storm sewer systems. And I'll come back to that concept  
7 in a moment.

8           In addition to these requirements, we also have a  
9 separate requirement under 303(d) of the Clean Water Act  
10 to establish TMDLs and federal regulations under 40 CFR  
11 122.44(d)(1)(vii)(B). And that requires that NPDES  
12 permits must be consistent with the assumptions and  
13 requirements of duly-adopted TMDLs.

14           And on a side note, which Sam mentioned earlier,  
15 we have no authority to issue an NPDES permit that is  
16 inconsistent with a TMDL that's been duly adopted and  
17 approved by U.S. EPA, so we are bound to make sure it's  
18 consistent.

19           So that's a brief synopsis of federal law related  
20 to MS4 permits.

21           What are the permittees' contentions? The first  
22 one is that the permit provisions, any permit provisions  
23 that are more stringent than MEP, are per se more  
24 stringent than federal law requires. And the second  
25 allegation is that this permit may have provisions that

1 require pollutant reductions greater than the greatest or  
2 maximum extent that's practicable.

3 And staff would state in response the following:

4 The first one is that MEP is not the only legal  
5 requirement. There are a variety of provisions, which I  
6 just went over, that require provisions which may be  
7 beyond MEP, but they're still mandated by federal law,  
8 such as, for instance, the effective prohibition of  
9 non-stormwater into the MS4.

10 The second comment is that the Defenders of  
11 Wildlife case stated that the authority to include, quote,  
12 "such other provisions as the administrator or State  
13 determines appropriate for the control of such pollutants,  
14 number one, can require strict compliance with water  
15 quality standards, and is also authority held by the  
16 administrator as well as the state."

17 So our position is that even if it goes beyond  
18 MEP, if it's operating in this provision, it's not beyond  
19 federal law. It is federal law, since the administrator  
20 is charged with the same authority and has to exercise  
21 that authority in like regard. So even if it goes beyond  
22 MEP, we don't believe that 13241 is implicated.  
23 Furthermore, the requirement to include TMDLs in  
24 stormwater permits is a separate and independent  
25 requirement.

1           So nevertheless, despite the arguments and the  
2 rhetoric, when we've been getting this claim every time  
3 over the last ten years or so, we have never actually  
4 received any specific evidence that any permit provision  
5 is specifically not practicable or not within the concept  
6 of doing the maximum that is practicable to do. And that  
7 is, again, true in this permit. We have allegations of  
8 what may be or what could be, but we have no evidence in  
9 this record demonstrating for you to consider that  
10 something is specifically beyond the concept of MEP; and,  
11 therefore, our conclusion that 13241 is not implicated is  
12 established on that basis alone.

13           The other point in this regard is a similar  
14 permit, the Los Angeles MS4 permit. And I understand  
15 that's the last generation of MS4 permits, not this one,  
16 was specifically upheld against the challenge that the key  
17 components of that permit, including the receiving water  
18 limitations and the other provisions, were not MEP. That  
19 Court of Appeal upheld them as being MEP and also  
20 determined that there was no evidence that anyone had  
21 pointed to in that case to contradict the Board's  
22 conclusion that all of the requirements were within the  
23 concept of MEP.

24           And, again, having no evidence to bring before  
25 you, we don't offer you -- we don't have any basis to

1 change our recommendation in that regard. If we did have  
2 that evidence, we would bring it forward. We would  
3 analyze it. We would determine if it's not practicable,  
4 and we would make a recommendation about whether it's  
5 appropriate to include in the permit. And if it is  
6 appropriate to include in the permit, we would do our  
7 13241 analysis just -- whether required or not to  
8 demonstrate that we are acting under our lawful authority  
9 and in full consideration of everything we're supposed to  
10 consider. And then you could decide whether to include  
11 that provision. But, again, that is not before you  
12 because we have no such evidence.

13           Nevertheless, as in 2001 when we adopted the L.A.  
14 MS4 permit, and in specific response to these comments, we  
15 have released internal economic analysis regarding this  
16 specific permit, which was developed last April by  
17 economists in the State Board on our request, which is a  
18 very detailed assessment of the economic considerations  
19 associated with this permit.

20           Now that was a previous version of this permit,  
21 and staff has confirmed with the economist, and it's in  
22 our record, that the current iteration of this permit --  
23 the analysis still relates to the current iteration of  
24 this permit, the changes do not affect the economic  
25 considerations as developed in that analysis. And again,

1 that's just for the benefit of the public and the  
2 stakeholders so they can know that we actually have  
3 considered these factors.

4           Also, staff has responded to comment in the  
5 Responses to Comments has identified a variety of  
6 documents demonstrating that we've considered all of the  
7 other factors as well.

8           Nevertheless, as I pointed out, we are not  
9 allowed to relax the federal MEP requirement on the basis  
10 of 13241. But if we were, nothing in this analysis would  
11 lead us to do so and the fact that the commenters have put  
12 forth no evidence that any particular factor militates  
13 against a specific permit provision that corroborates the  
14 staff conclusion in that regard.

15           The next claim about going beyond federal law is  
16 whether the constitutional unfunded mandates provisions  
17 are implicated. Article 13B Section 6 of the California  
18 Constitution was adopted by an initiative. And what it  
19 does is it requires that whenever the State of California  
20 passes on to local government State obligations that  
21 require either a new program or higher level of service,  
22 the State must include a payment mechanism to finance  
23 those requirements. Otherwise, anybody who's aggrieved by  
24 those requirements may file a claim with the Commission on  
25 State Mandates to seek subvention or payment for the

1 program, which would presumably come out of the general  
2 fund.

3 Now, we didn't start gratuitously putting these  
4 findings in permits. We've been responding to, again, the  
5 same claims, that our permits are unlawful because they  
6 constitute a State mandate for the last ten years. And  
7 we've had litigation, as you know, in the Court of Appeal  
8 where we were originally exempt from the mandate's  
9 provisions, our permitting program. And the Court of  
10 Appeal said, well, that's not true. That statute  
11 exempting the water boards from mandates is not  
12 constitutional. And the Commission on State Mandates was  
13 ordered to go consider test claims.

14 There's currently some test claims pending in the  
15 Commission that relate to isolated provisions of the  
16 permit. Again, in response to the comments, that this is  
17 not beyond -- that this is beyond federal law and this is  
18 a State obligation, we have findings. And I'll explain  
19 why we have those in a moment.

20 But the first point I want to point out is that  
21 there are a variety of exceptions to the State mandates'  
22 rules. The first one is if the mandate is not a State  
23 mandate, but a federal mandate, the State mandate rules  
24 don't apply. The State can't be obligating local  
25 government to perform a function that's not the State's



1 function but the municipal functions.

2           It is our position that Congress determined that  
3 the municipalities shall comply with the MEP requirement  
4 and the NPDES requirement, not that the State shall  
5 comply. The only thing that the State has done is  
6 undertaken the responsibility to issue the permits in lieu  
7 of the federal government. The obligation, nevertheless,  
8 remains an obligation on municipalities.

9           The second exception is that these requirements  
10 in this case are not due to the municipality's status as a  
11 governmental body, but as the operator of a point source  
12 discharge of pollutants.

13           So, in fact, the dischargers are being regulated  
14 as any private or public discharger would be. They own a  
15 point source that discharges pollutants to waters of the  
16 United States, and, therefore, they are obligated as are  
17 wastewater treatment plants, whether public or private, as  
18 are industries, refineries, mills and the like, and  
19 anybody discharging pollutants to have a permit that  
20 controls their stormwater discharges or their waste  
21 discharges. And since it's not a program or requirement  
22 that is placed -- that is singling out municipalities  
23 separately but treating them in their enterprise capacity,  
24 the mandate's rules we believe do not apply anyway.

25           Third, even if they did apply, the requirements

1 on municipalities are expressly less stringent than the  
2 requirements on other entities. And that's because in  
3 this provision, as I point out here in the last sentence  
4 of (p) (3) (B), that the administrator of this state has the  
5 authority to require such other methods in "Defenders of  
6 Wildlife versus Browner," the 9th Circuit Court of Appeals  
7 determined that that provision -- I beg your pardon --  
8 that provision, while it can require strict compliance  
9 with water quality standards, it does not necessarily do  
10 so. And so the authority to require less than strict  
11 compliance with water quality standards is what we're  
12 operating under for municipal separate storm sewer  
13 systems.

14           The next issue that's an exception is that local  
15 agencies are able to charge fees and assessments for the  
16 things that are required out of this permit. They can  
17 charge assessments, for instance, for trash at transit  
18 stops; they can increase their bus fares; for inspections,  
19 they can increase fees to cover the cost of the  
20 inspections that are required.

21           The municipalities and some of the stakeholders  
22 have claimed that Proposition 218 impedes their ability to  
23 issue fees to pay for certain stormwater and other  
24 infrastructure costs; and we agree, that it does impede  
25 their requirements. Prop 218 is a difficulty. However,

1 we don't believe that places them in a different situation  
2 as a result.

3           In other words, it would be as though -- in other  
4 words, when the municipalities are required before they  
5 assess a tax to obtain the voters' approval, the voters  
6 are acting in a legislative capacity. And the voters are  
7 not different from the municipality. And to say we, the  
8 city, do not have authority to impose these fees because  
9 our voters won't approve it is the same as saying we, the  
10 city, do not have authority to impose these fees because  
11 the majority city council won't approve it. The authority  
12 exists to issue the fees whether or not the municipality  
13 or locality avails themselves of the opportunity to do so,  
14 either because voters veto it or the city council vetoes  
15 it.

16           The next claim -- the next issue is why do we  
17 have these findings in here? And this is beyond your  
18 purview is the claim, that the water boards don't have the  
19 purview to make assessments nor determinations on  
20 mandates. And again, we agree with that. And again, many  
21 of these findings are in Response to Comments that were  
22 made.

23           But what is squarely within our purview and what  
24 is not within the Commission on State Mandates' purview is  
25 determining whether or not our requirements are federal or

1 state and the source of our federal water quality laws and  
2 the reasons that we're imposing them and what effect they  
3 have.

4 And so it is important that we, as the body  
5 issuing these, educate the Commission about the effect of  
6 these requirements and what they're borne from, because  
7 the Commission does not have the purview to do that.

8 CHAIRPERSON LUTZ: Mr. Levy, I just was wondering  
9 how much longer you have.

10 SENIOR STAFF COUNSEL LEVY: Very short.

11 CHAIRPERSON LUTZ: Okay.

12 SENIOR STAFF COUNSEL LEVY: Five minutes, four  
13 minutes.

14 (Laughter.)

15 CHAIRPERSON LUTZ: Do I hear three?

16 SENIOR STAFF COUNSEL LEVY: Taking bids.

17 (Laughter.)

18 SENIOR STAFF COUNSEL LEVY: The next issue is a  
19 CEQA claim. And this comes from the Building Industry  
20 Association. And BIA argues that the permits' LID and  
21 other provisions shouldn't be mandated in the permit but  
22 rather should be subject to CEQA exceptions. And we have  
23 two responses to that.

24 The first one is that the County of L.A. case,  
25 County of L.A. versus State Water Resources Control Board,

1 held that MS4 permits are completely exempt from CEQA  
2 under Water Code 13389.

3           The second response is that we lack the authority  
4 to give exceptions from MEP based upon CEQA  
5 considerations. We cannot, for instance, allow a  
6 municipality to say we're not going to require compliance  
7 with MEP, because we issue this Statement of Overriding  
8 Considerations that say that there are other policies that  
9 countervail. We don't have that authority in federal law.  
10 We're required to implement the federal law whether or not  
11 the locality that's the lead agency determines that it's  
12 practicable or economically appropriate or most  
13 beneficial.

14           The last issue that I want to raise is an issue  
15 raised by NRDC and their contention that every new  
16 structure or development is a new source or new  
17 discharger, as those terms are used in federal  
18 regulations. And as NRDC notes in their comment letter,  
19 for a facility to be deemed a new source or new  
20 discharger, it must involve a, quote, "discharge of  
21 pollutants."

22           But that term is actually federally defined, and  
23 Section 122.2 of 40 CFR requires that for something to be  
24 a discharge -- a discharge of pollutants must be a  
25 discharge of pollutants from a point source into waters of

1 the United States. The term "discharge of pollutants"  
2 does not describe discharges to land that might be  
3 mobilized into another conveyance system like the MS4 and  
4 thereafter discharged into waters of the United States.

5 In other words, construction sites and the like  
6 are regulated in the MS4, not because they themselves are  
7 new sources, but because they may contribute pollutants to  
8 the storm sewer systems, and, therefore, it's appropriate  
9 to regulate upstream because of the unique requirements of  
10 402(p), (p)(2)(E) and (p)(3), which say that we are  
11 entitled in the MS4 permit to regulate upstream of the MS4  
12 to address the contents of that which goes into the MS4  
13 system.

14 And the very last issue was the one that Sam  
15 lobbed to me a minute ago about MALs and why they don't  
16 equal the maximum extent practicable. And I think in a  
17 very early iteration of this permit, it was the intent  
18 that they do, but staff has reassessed that considerably.  
19 The MALs are derived from the 80th percentile of  
20 performance across the country from selected sites and  
21 selected pollutants. And essentially it's a minimalist  
22 approach. And the theory is that if 80 percent of  
23 everyone out there can meet it, presumably most of them  
24 can. And so if there's a 20 percent exceedance rate at  
25 the major outfalls over a three-year period, basically

1 this prioritizes those violations or exceedances for  
2 specific action and a specific look.

3 I promised Tracy I would do one last thing, which  
4 is that on page -- I beg your pardon -- on pages 8-1020 to  
5 1032 of your agenda packet, we inadvertently included some  
6 comment letters that were late, and we'd ask you to remove  
7 them and exclude them from the record, as well as any  
8 related responses.

9 Thank you very much.

10 CHAIRPERSON LUTZ: Mr. Levy, what page again are  
11 we looking at?

12 SENIOR STAFF COUNSEL LEVY: 8-1020 through  
13 8-1032.

14 REGIONAL PROGRAMS SECTION CHIEF UNGER: I think  
15 we're just about ready to conclude basically. One thing,  
16 if Michael could help me get up, if not, you should have  
17 been handed a change sheet. I just want to go through  
18 those very quickly.

19 I'm embarrassed to admit as we go through --  
20 essentially, the very first change -- there's four changes  
21 that we'll ask you to consider. The first one is on the  
22 very first line of the permit.

23 (Laughter.)

24 REGIONAL PROGRAMS SECTION CHIEF UNGER: And  
25 basically it says -- it's in your Board package on page

1 824 where it says, "Ventura County Watershed Protection  
2 District Principal Permittee," it should say, "Principal  
3 and Co-permittee." It's a long story as to why this  
4 change is needed, but I'll save it for another day.

5           On page 826, essentially there was a -- in the  
6 fourth -- the sixth line under paragraph five, there's a  
7 missing reference. The reference is provided on your  
8 change sheet.

9           On page 886, essentially there is a statement --  
10 essentially, this has to deal with LID and the options for  
11 sites which are infeasible. And there's a statement that  
12 says, "a waiver for impracticability is granted." That is  
13 to be struck. It hasn't been defined for clarity.

14           And then the last one is on page 887 in the sixth  
15 line. Essentially, there's a cite to another paragraph,  
16 5(e)(3)(1)(c), it should be (5)(e)(1)(3)(B).

17           And with those changes, your alternatives for  
18 today basically and for this matter are to adopt the  
19 permit as proposed by staff, adopt the permit with changes  
20 as a result of a logical outgrowth from this proceeding,  
21 and, finally, take no action. So our staff recommendation  
22 for you today is to adopt the permit in accordance with  
23 staff recommendations.

24           Thank you.

25           CHAIRPERSON LUTZ: Thank you very much.



1           At this time, being 12:30, we will take our lunch  
2 break. And when we come back, we'll start with EPA and  
3 then the party presenters and then the electeds unless --  
4 let me ask Supervisor Long, would you prefer to speak  
5 prior to the parties or after, because I know your time  
6 is --

7           VENTURA COUNTY SUPERVISOR LONG: Prior.

8           CHAIRPERSON LUTZ: Then when we come back we'll  
9 have you speak along with the other elected  
10 representatives, and then we'll have the parties and the  
11 EPA. Okay.

12           SENIOR STAFF COUNSEL LEVY: And, Madam Chair and  
13 Board Members --

14           CHAIRPERSON LUTZ: Oh, we need to -- we will be  
15 closing -- not closing. We will be adjourning to closed  
16 session.

17           And, Mr. Levy, would you please report on the  
18 closed session for us.

19           SENIOR STAFF COUNSEL LEVY: Yes. And actually  
20 the report will relate to today or tomorrow, whenever we  
21 adjourn to closed session, and so I won't repeat the  
22 report if we re-adjourn to closed session. And during  
23 closed session we will be discussing Item 16.2, 16.4,  
24 16.5, 16.6, 16.8(c) one item, and 16.9.

25           Thank you.

1 CHAIRPERSON LUTZ: So we will return at 1:30, one  
2 hour from now, 1:30.

3 Thank you.

4 (Thereupon the Board recessed into a closed  
5 session and a lunch break was taken.)

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## 1 AFTERNOON SESSION

2 CHAIRPERSON LUTZ: Welcome back, everybody. I  
3 think we will get started.

4 Before we left, I did commit to Supervisor Long  
5 to be our first speaker back, so I will turn the floor  
6 over to Supervisor Kathy Long from County of Ventura.  
7 Thank you.

8 VENTURA COUNTY SUPERVISOR LONG: Yes, and thank  
9 you. And good afternoon. I hope you had an enjoyable  
10 lunch. And I know you have a full agenda, so I'll move  
11 through my comments as quickly as possible.

12 I'd like to welcome you here to our board room,  
13 and good afternoon to Chairwoman Lutz and the Board  
14 Members.

15 I am Kathy Long, Ventura County Supervisor for  
16 the 3rd District. And we welcome you to our board room,  
17 and thank you for holding the hearing today in our board  
18 room.

19 And, Chairperson -- Mr. Blois, you're sitting in  
20 my chair, and I hope you're comfortable.

21 (Laughter.)

22 VENTURA COUNTY SUPERVISOR LONG: But not too  
23 comfortable.

24 (Laughter.)

25 VENTURA COUNTY SUPERVISOR LONG: I am speaking

1 today on behalf of the entire Ventura County-wide  
2 stormwater program, and including the cities of Oxnard,  
3 Thousands Oaks, Simi Valley, San Buenaventura, Camarillo,  
4 Moorpark, Santa Paula, Port Hueneme, Fillmore, Ojai,  
5 Ventura County unincorporated areas, and the Ventura  
6 County Watershed Protection District.

7           And also with us in the audience, and they will  
8 not be speaking, but to acknowledge the other electeds who  
9 are present. We also have Supervisor John Zaragoza was  
10 here earlier. We also have Patti Walker the Mayor of  
11 Fillmore. And Mayor Pro Tem Gayle Washburn I believe was  
12 planning to join us. We also have Andres Herrera, the  
13 mayor pro tem of Oxnard. And Paul Miller, the mayor of  
14 Simi Valley. Jacqui Irwin, the councilmember of Thousands  
15 Oaks. Brian Brennan was here, the councilmember, Mayor of  
16 the City of Ventura. And we also have representatives  
17 from Senator Strickland and Assemblymember Smyth's office.  
18 So there's a good showing of the electeds representing  
19 this area.

20           At your April 2007 workshop in Burbank and at  
21 your September 2007 workshop in Ventura, I asked that you  
22 and your staff listen closely and work closely with our  
23 technical staff. As evidenced by the tentative permit  
24 that is before you today, we thank them for doing just  
25 that; and particularly, we wish to thank all of your staff

1 and the special efforts of Mr. Unger.

2           Everyone wants clean water and clean beaches; and  
3 while direct pollution sources have largely been  
4 controlled, the impetus has been placed on local  
5 government by the State to manage our stormwater.

6           Ventura County and its ten cities are recognized  
7 for environmental programs statewide and nationally. We  
8 enjoy a cooperative relationship between our agencies that  
9 allow us to implement our countywide programs to the  
10 benefit of the entire region. We intend to continue to  
11 advance this program, and we will continue to be leaders  
12 in the implementation of the stormwater quality programs.  
13 We also recognize, however, that not all of our limited  
14 resources can be committed to just one aspect of our  
15 environmental programs.

16           In 2206, the Regional Water Quality Control Board  
17 staff proposed in our estimation the most stringent and  
18 onerous stormwater permit in the nation for Ventura  
19 County, one that was significantly challenging for us to  
20 implement, precedent setting, and potentially onerous to  
21 every county property owner.

22           Over these last few years Ventura County and all  
23 ten cities have worked in concert with the Regional Water  
24 Quality Control Board staff and other stakeholders to  
25 reshape the draft into a more reasonable and workable

1 permit which accomplishes many of the same goals. We  
2 believe that is again reflected today in your staff's  
3 recommendations.

4           As you know, tremendous fiscal constraints face  
5 municipalities and private citizens in our county and  
6 across our state. As is the case with other State and  
7 federal mandates, local governments across Ventura County  
8 must now confront the challenge of paying for the water  
9 quality improvements required in this permit.

10 Implementation costs, as you know, estimates range  
11 anywhere from \$60 to \$100 per household countywide.

12           We hope you will carefully consider the  
13 implications associated with any modifications that you  
14 may make today. Each modification has a potential  
15 resulting cost increase and technical challenges. The  
16 tentative order before you today is not perfect, but it  
17 does reflect major compromise and a spirit of  
18 collaboration by all parties. It is still very  
19 technically challenging and will be costly to implement.  
20 And we believe this 120-page permit should be adopted as a  
21 living document, one that can be open to amendments as  
22 best practices prove to be successful or are found in need  
23 of corrections.

24           Overall, we must continue our progress towards  
25 safer and healthier beaches and rivers in our waterways

1 and our storm areas, our watersheds.

2           So we thank you for your work and the opportunity  
3 to address you.

4           Thank you.

5           CHAIRPERSON LUTZ: Thank you.

6           During the lunch break I was apprised of a  
7 situation that I believe our Attorney Michael Levy will  
8 explain.

9           SENIOR STAFF COUNSEL LEVY: Yes, thank you,  
10 Chair Lutz.

11           Shortly before the lunch break, Dave Beckman from  
12 NRDC requested that NRDC and Heal the Bay be granted a  
13 half an hour to cross-examine Sam Unger. I agreed to take  
14 it into the Board's consideration, and I want to present  
15 my recommendation about how to address the issue here.

16           He contended to me that the hearing notice was  
17 ambiguous or didn't address the issue. I disagree. The  
18 hearing notice says specifically, and I'll quote the  
19 relevant provisions, "When the agenda item is called,  
20 staff will present the matter under consideration after  
21 which oral statements from parties or interested persons  
22 will be heard." And then going down in that paragraph,  
23 "The parties are invited to contact staff not later than  
24 April 10th to discuss how much time they believe is  
25 necessary for their presentations, and staff will endeavor

1 to accommodate reasonable requests."

2           The next paragraph says, "Parties or persons  
3 with special procedural requests or requests for  
4 alternative hearing procedures should contact  
5 staff, who will endeavor to accommodate  
6 reasonable requests. Objections to any procedure  
7 to be used during the hearing must be submitted  
8 in writing not later than the close of business  
9 15 days prior to the date of the hearing. Absent  
10 such objections, any procedure not specified in  
11 this hearing notice will be waived pursuant to  
12 Section 648(d) of Title 23 of the California Code  
13 of Regulations." It also says, "Procedural  
14 objections will not be entertained at the  
15 hearing."

16           I'm only recommending that you give a brief  
17 entertainment of the motion because of the claim that the  
18 hearing notice is unclear. I want to mention though for  
19 the Board, that Mr. Beckman knows that we ordinarily do  
20 not include cross-examination without a timely request.  
21 It's burdensome. It's confusing to most of the  
22 stakeholders. And certainly all the parties, including  
23 NRDC, can present their own evidence. They don't need to  
24 argue with staff directly. They can present their  
25 evidence in a positive, affirmative matter rather than

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1 through the adversarial cross-examination.

2           Nevertheless, if a timely request is made, we  
3 tend to indulge it just because we want to give the  
4 parties to our proceedings what they believe is a fair  
5 opportunity to present their case. I would note that the  
6 times set for the hearing today and tomorrow were derived  
7 by staff in consultation with all of the stakeholders who  
8 had requested time, including NRDC. They did not  
9 contemplate an additional half an hour, which has been  
10 requested for NRDC, nor likewise half an hour presumably  
11 for the permittees, because I believe if you grant to one  
12 side, you have to grant parity.

13           But nevertheless, given the allegations about the  
14 adequacy of hearing notice, I would recommend that the  
15 Board allow Mr. Beckman two minutes to make an offer of  
16 proof with an equal two minutes for the permittees, if  
17 they wish to respond. And then if you have any questions  
18 about it afterwards that require legal considerations, we  
19 can go off the record for a private side bar.

20           CHAIRPERSON LUTZ: Just on my part, I know that  
21 the NRDC and Mr. Beckman has had numerous conversations  
22 with our staff prior to the hearing about when they would  
23 be speaking. When I gave the overview of what we would be  
24 doing today, there is a presentation by Mr. Beckman and  
25 others, and there also will be time for rebuttal.

1           So I will -- I'm mostly inclined to deny this,  
2 but I would like to have Mr. Beckman give us an offer of  
3 proof, and then should the permittee wish to speak as well  
4 for two minutes so we can address it, and then I will  
5 probably -- I may go in conference with counsel.

6           MR. BECKMAN: Thank you, Madam Chair and Members  
7 of the Board. There's no intent to be adversarial or  
8 argumentative. This is a formal adjudicative proceeding,  
9 and it was designated that way to allow parties to explore  
10 facts, since facts are an important part of your decision  
11 making.

12           The notice -- the part of the notice that Mr.  
13 Levy did not read to you, for reasons I'm not sure of,  
14 says, "The Board does not generally require the prior  
15 identification of witnesses or cross-examination." And  
16 that is, in fact, the case. It's usually dealt with just  
17 in the manner that we are trying to deal with it today.

18           There is no requirement for an offer of proof.  
19 That's a misapplication of a principle of law. That  
20 doesn't apply here. There's no discussion of that in any  
21 of the regulations that govern the conduct of these  
22 proceedings.

23           But the reason that we want to discuss some of  
24 the facts with Mr. Unger is because we believe staff  
25 misunderstands salient, critical issues, and as a

1 consequence is giving you advice about very important  
2 matters here which candidly is just wrong, not wrong in  
3 that we don't agree with it as a matter of opinion, but  
4 wrong as matter of fact.

5 An example would be that Mr. Unger indicated that  
6 NRDC and others agreed with a -- what is referred to as a  
7 Delta volume, Delta V approach similar to that which is in  
8 the permit. That's factually incorrect, and there's no  
9 evidence in the record that supports that. However, if  
10 you hear that, you think -- you might think, well, if NRDC  
11 and others agreed to something like what staff is  
12 proposing, it's more reasonable perhaps.

13 There's a whole series of those examples, and for  
14 that reason we think it would be fruitful not to argue  
15 with Mr. Unger or to be adversarial, but to have an  
16 appropriate conversation recognizing that this is a formal  
17 hearing, but not a court hearing. And for that reason, we  
18 would make that formal request.

19 CHAIRPERSON LUTZ: I would like to ask you just a  
20 couple of very quick questions and then ask if the  
21 permittees would like to make a statement.

22 Is it possible that the information that you  
23 would like to share with this Board be able for you to do  
24 during your initial comments, the time that you've already  
25 allotted, or during the rebuttal portion?

1 MR. BECKMAN: Well, we could, but I guess, to be  
2 honest with you, I think what we think is happening,  
3 particularly with the late creation of findings on the Low  
4 Impact Development is that there is a -- perhaps, an  
5 attempt to portray facts that might be used in the future  
6 if we don't all come to an agreement, against our  
7 interests.

8 And so in order to explore those facts, I don't  
9 know that it's entirely sufficient for me as an attorney  
10 simply to say that I disagree. I think it would be better  
11 to be able to say to Mr. Unger -- I have to ask him a  
12 question and see how he answers it, because he might  
13 correct some of what I think are misstatements, perhaps  
14 unintentional misstatements, and that would be a better  
15 way of making the record clear than for us to be arguing  
16 about it.

17 Your board typically relies on principles which  
18 we actually, in our letter, dispute apply here that grant  
19 deference to administrative agencies to varying degrees,  
20 particularly within the zone of their expertise. And so  
21 for that reason in addition, I think it's more appropriate  
22 for us to have an opportunity to ask Mr. Unger or the  
23 most -- maybe Mr. Swamikannu, if he's a more appropriate  
24 person to address some of these questions to, so that we  
25 can get clarity on facts. And then you can make the

1 decisions that you're going to make, but you'll have at  
2 least clarity on what the parties agree and don't agree  
3 to.

4 CHAIRPERSON LUTZ: Okay. Thank you.

5 MR. BECKMAN: Thank you very much.

6 CHAIRPERSON LUTZ: Does the permittee, County of  
7 Ventura -- or stormwater, County of Ventura, would you  
8 like to make a statement?

9 MS. DUNHAM: Thank you, Madam Chair. Tess Dunham  
10 with Somach, Simmons & Dunn, special counsel to the  
11 Watershed Protection District, the county and the  
12 co-permittees on the permit. And, you know, it's up to  
13 the Board's decision whether to allow the time for  
14 cross-examination or not. We will note though, and Mr.  
15 Levy will confirm, that I did call him last week and ask  
16 the specific question if anybody had requested time, so  
17 then I could prepare myself accordingly, so the permittees  
18 would not be prejudiced if cross-examination was to occur.  
19 Since no one had requested that time, he affirmatively  
20 said, no, no one has made that request. And therefore, I  
21 did not appropriately make sure that I was prepared for  
22 any type of a cross-examination scenario here at the  
23 Board. So the permittees may be prejudiced.

24 But in the event that the Board does decide to  
25 grant cross-examination time to NRDC, then we would

1 reserve the right as well to have some time as well if  
2 necessary.

3 CHAIRPERSON LUTZ: Thank you.

4 What I would like to do now is take a very quick  
5 couple of moments with our executive officer and myself  
6 and the attorney to discuss this briefly. And I will  
7 return.

8 (Thereupon a recess was taken.)

9 CHAIRPERSON LUTZ: In an effort to keep us moving  
10 along, I do want to tell Mr. Beckman and the permittees  
11 that we will waive the conditions under 648(d) and allow  
12 the cross-examination. But there's a point that I do want  
13 to make clear. Previously in the discussion of how much  
14 time each party would be given for their entire  
15 presentation and also rebuttal, there was a 45-minute cap.  
16 What I'd like to do is add an additional 15 minutes to  
17 both the permittee and the NRDC, Heal the Bay.

18 However you want to break up that full hour is up  
19 to you. If you want the half hour for cross-examination  
20 or half hour for your presentation, that's fine with us.  
21 If you want to reserve ten minutes for your rebuttal at  
22 the end, that's fine with us. But we are going to hold to  
23 one hour for both the permittee and for the Heal the Bay  
24 to include any cross-examination that you wish.

25 With that, we have several people still to speak

1 with us this afternoon before we even get into that aspect  
2 of it.

3 First on our agenda is John Kemmerer from EPA.

4 MR. KEMMERER: Good afternoon, Madam Chair and  
5 Board Members. My name is John Kemmerer. I'm an  
6 associate director at the EPA Water Division for EPA  
7 Region 9. As you probably know, that covers California,  
8 Arizona, Nevada and Hawaii and the Pacific Islands. I  
9 work down here in southern California in downtown Los  
10 Angeles with a small group of EPA folks.

11 So at EPA we recognize that controlling municipal  
12 stormwater is one of the most challenging and important  
13 priorities under the Clean Water Act. In California, our  
14 office has been working closely with all of the regional  
15 boards and the State Board on the renewal of stormwater  
16 permits. And we believe it's really important to build on  
17 our experience from previous rounds of these permits to  
18 make improvements to better protect water quality. And  
19 we're really encouraged by the work that staff here have  
20 been doing to take that to heart and really look closely  
21 about what's been done in the past and make these sorts of  
22 improvements.

23 A lot of our basis for reviewing permits,  
24 stormwater permits, is that we've done -- conducted audits  
25 of nearly 50 municipal stormwater programs in our region

1 over the past eight years. And what we found in these  
2 audits are often that there have been uncertainties among  
3 all of the parties, including the permittees, the  
4 developers, and the regulatory agencies as to some of the  
5 exact requirements of the permits. And we've concluded  
6 that when renewing these permits, it's really important  
7 for improvements to be made to include clear and  
8 quantifiable performance criteria, if we're going to be  
9 successful at better controlling stormwater.

10 In our review of the proposed stormwater permits  
11 that are now out for review across the state, we've been  
12 advocating for these clear, measurable, and enforceable  
13 permit provisions. Our focus has primarily been on two  
14 specific challenging aspects of these permits, which are  
15 the use of Low Impact Development and the incorporation of  
16 Total Maximum Daily Loads.

17 And here in the L.A. region, we appreciate that  
18 the staff have done extremely valuable work and have  
19 provided leadership for the, really, entire state and to  
20 some degree for the nation, especially in the way that  
21 they've come forth with requiring specific LID provisions.

22 We're supportive of this draft permit in most  
23 areas and agree conceptually with the approach that's  
24 proposed for LID; however, we have some concerns about the  
25 specific language in the LID section of the permit, and we



1 believe that it really is not as clear as it should be and  
2 would be open to misinterpretation if adopted as proposed  
3 here.

4           So I want to specifically mention our concerns  
5 are with language in one section of the permit. It's  
6 Section 5(e)(3)(1), which lays out the LID requirements.  
7 We provided some suggested changes in our April 9th  
8 comments on the permit, which we feel have not been fully  
9 incorporated. And in our view, the draft permit language  
10 could result in a loophole with respect to LID  
11 requirements for redevelopment projects.

12           We also see that the draft permit doesn't include  
13 clear procedures for alternative compliance when achieving  
14 the LID requirements are technically infeasible due to  
15 physical site constraints. We see that the outline for  
16 the alternative compliance is present, but without clear  
17 explanation of the process that must be followed, we're  
18 concerned that the permit creates opportunities for  
19 misinterpretation and ultimately disputes over exactly  
20 what is required by the permit.

21           So we've been thinking hard and long about what  
22 the solution to this is. And I originally was thinking  
23 about bringing some specific changes today to amend these,  
24 to kind of surgically revise this permit, but we also  
25 looked at the language that was submitted in the April

1 10th comment letter from the cities and the NGOs that was  
2 referred to earlier, and I should say, I guess, the  
3 municipalities in Ventura County and the NGOs.

4           And we believe that the text suggested in  
5 Attachment A to this letter could be inserted into the  
6 permit in place of existing Section 5(e)(3)(1). We  
7 believe that with those changes made, along with the  
8 deletion of the section entitled "Mitigation Funding,"  
9 which would be obviated by adding this new language, that  
10 the permit would deserve to be adopted.

11           I want to make it clear that we're not endorsing  
12 the recommendations in that letter about Municipal Action  
13 Levels solely the new language that's been suggested for  
14 LID and alternative compliance with LID.

15           And I'm not going to rebut some of the statements  
16 that were made earlier about that language in detail, but  
17 I do want to point out that we did a careful review of the  
18 language that was in Attachment A of those April 10th  
19 comments and do believe that it provides a sound basis for  
20 this permit. We don't agree that that proposal could be  
21 considered a zero discharge option, as was characterized  
22 earlier, and we also don't believe that it would be  
23 necessary -- that if it's managed properly, it would be to  
24 groundwater contamination, which was another concern  
25 raised.

1           So I really -- I appreciate the opportunity to  
2 discuss this permit with you today and tomorrow if  
3 necessary. And I realize that many of the parties  
4 involved in this permit have been and will be citing EPA  
5 guidance, requirements to kind of bolster their arguments  
6 I'm sure. And I know with respect to LID, your staff and  
7 your counsel are very familiar with EPA requirements. But  
8 if you would like to hear my perspectives on any of the  
9 issues that come up the next two days, I'd be glad to  
10 answer questions.

11           So once again, I really appreciate the hard work  
12 done by your staff on this permit. There's a lot of very  
13 excellent provisions in this permit we believe that are  
14 deserved of adoption. And with this change that I've  
15 recommended, we'd support adoption of the permit.

16           CHAIRPERSON LUTZ: Thank you very much. So you  
17 will be here for the next --

18           MR. KEMMERER: As long as it takes.

19           CHAIRPERSON LUTZ: As long as we need, because  
20 I'm sure the questions and answers will be coming a little  
21 later.

22           Just for staff -- for the Board's knowledge, the  
23 part he was talking about was on what page, Madelyn?

24           VICE CHAIRPERSON GLICKFELD: I just would -- I  
25 wish Mr. Kemmerer would come up for one minute and clarify

1 exactly what part of the attachment.

2 MR. KEMMERER: It's the version that -- the  
3 version I have is page -- I assume I have the correct  
4 version -- page 55. The new development, redevelopment  
5 performance criteria is Section 5(e)(3). What I'm  
6 suggesting is replacing Section 5(e)(3)(1) with the  
7 language that is in Attachment A of the April 10th letter  
8 to Chair Lutz and the Board Members from the cities,  
9 several of the cities and county and a couple of the NGOs.

10 VICE CHAIRPERSON GLICKFELD: Just to clarify,  
11 that's on our page 878 and 879.

12 CHAIRPERSON LUTZ: Well, he probably doesn't have  
13 our Bates' stamped document.

14 MR. KEMMERER: I don't know, it's page 853 on my  
15 version.

16 CHAIRPERSON LUTZ: Yes, I think it is page 888.

17 VICE CHAIRPERSON GLICKFELD: 878 and 879.

18 CHAIRPERSON LUTZ: Okay. Thank you very much.

19 Okay. Our next -- we will have a presentation of  
20 the cities and the NGOs for their agreement that they have  
21 submitted. That is scheduled for ten minutes.

22 And I do believe we have a number of people  
23 speaking, correct?

24 If you could each please introduce yourselves as  
25 you speak. We have four people speaking I believe.

1 MR. SEDELL: I think they are going to join me  
2 here at the dais.

3 Chair Lutz, Members of the Board, I'm Mike  
4 Sedell, city manager with the City of Simi Valley. Thank  
5 you for the opportunity to be here today to express our  
6 hopes, concerns and what we see as real opportunities for  
7 the Ventura County Stormwater permittees to operate in the  
8 next few years under an innovative and groundbreaking MS4  
9 permit.

10 (Thereupon an overhead presentation was  
11 presented as follows.)

12 MR. SEDELL: At your September -- or after your  
13 September 2002 hearing here in Ventura on the previous  
14 draft tentative order, the county and its cities, the  
15 co-permittees, began a series of meetings to try and find  
16 common ground for a new MS4 permit wherein we could both  
17 protect our environment and our taxpayers at the same  
18 time.

19 While our technical staff from the cities and the  
20 county began working on understanding the purpose and  
21 intent of the myriad of detailed conditions in the draft,  
22 the city managers and county executives began discussing  
23 the policy implications imbedded therein.

24 After extensive discussion and analysis, the city  
25 manager CEO group developed a belief that there were

1 several conflicting ideologies which we would need to  
2 navigate, if we were to find true common ground that would  
3 have acceptability to all sides. The outside ends of this  
4 ideological policy difference seem to us to be the  
5 development community, with the Building Industry  
6 Association as its primary spokesperson on the one end and  
7 environmental community, the so-called NGOs, largely  
8 represented by Heal the Bay and the Natural Resources  
9 Defense Council, on the other.

10 We, as local government representatives, have had  
11 a long-standing relationship with the Building Industry  
12 Association, both collegial and/or adversarial, depending  
13 on the issue. And we felt that we understood, to a large  
14 degree, the major concerns that this industry would have  
15 with the draft permit. Much of those concerns would  
16 involve the same concerns as local governments when it  
17 came to the cost of environmentally-sensitive development.

18 At the same time, it seemed at the other end of  
19 the spectrum, the ideological side that was allegedly less  
20 concerned with cost than with environmental protection,  
21 was less understood by us as to the limits of what was  
22 acceptable to them.

23 Additionally, the co-permittees believe that the  
24 Regional Board and your staff was both strategically, and  
25 from a policy perspective, more aligned with local

1 government somewhere between the aforementioned  
2 ideological ends.

3           As a result of that reasoning, the city managers  
4 and the CEO selected a smaller group to represent us in an  
5 attempt to reach out to the NRDC and HTB. Our goal was  
6 simply, at the time, to open a dialogue to better  
7 understand their concerns and to attempt to find common  
8 ground. And we found that our efforts were welcomed by  
9 the NGOs.

10           What began in January of 2008 as a simple  
11 discussion developed into a series of meetings over  
12 several months. After countless hours of debate and  
13 negotiation, both sides felt that they had given all that  
14 was possible in exchange for the concession of the other.

15           A carefully constructed agreement was put in  
16 writing by the parties, which both sides felt they could  
17 support, and the agreement was proposed to your staff and  
18 ultimately to your board for your consideration. Based  
19 upon this carefully and delicately crafted and constructed  
20 agreement, we mutually agreed that if any piece of the  
21 agreement needed to be modified, the give and take that  
22 transpired in our negotiations would be weighted  
23 differently and neither side would then support the  
24 outcome.

25           At this point, I'd like to ask Ventura City

1 Manager Rick Cole, who is here with me; Ventura County  
2 Public Works Director, Jeff Pratt; NRDC's David Beckman;  
3 and HTB's Mark Gold to outline for you in more detail what  
4 we worked so diligently for so many months to achieve as  
5 that common ground.

6 --o0o--

7 MR. BECKMAN: Hello again. This is sort of how I  
8 expected to be first addressing you.

9 CHAIRPERSON LUTZ: Mr. Beckman, can I just ask  
10 that each of you, as you speak, so we have it clear on the  
11 record and our Board knows who we're speaking to, please  
12 announce your name.

13 MR. BECKMAN: David Beckman, senior attorney with  
14 the Natural Resources Defense Council and co-director of  
15 the water program at NRDC.

16 I think what I'm going to do, just to move things  
17 along, is talk about what we've agreed to in terms of Low  
18 Impact Development and then just offer a quick comment  
19 about the significance in a more structural stakeholder  
20 dynamic reality. I think that's very important to how  
21 things happen or don't happen in this region.

22 So what we've agreed to, I think, we respectfully  
23 disagree with a lot of the characterizations you heard, so  
24 let us tell you what we think it is.

25 What we're requiring in this agreement for Low



1 Impact Development is the retention of the 85th percentile  
2 storm, which is a technical term that relates to the  
3 amount of water that you have to treat or capture. It's  
4 one that you've used in this region for nine or ten years,  
5 so there's nothing new there. The difference is that  
6 where feasible, where it's possible to do so, that water  
7 stays on site through Low Impact Development approaches  
8 that virtually every party agrees are the best approaches  
9 when they can be implemented.

10           What you'll hear perhaps later is that there may  
11 be some disagreement about feasibility, but nobody  
12 disagrees that if you can keep the water on site, you have  
13 all sorts of water resources benefits. In short, they  
14 include no pollution, and that's a critical issue with  
15 impaired watersheds. We have shown that that's a real  
16 benefit here. You also get water supply, potential water  
17 supply benefits too, which are increasingly important  
18 given the Governor's emergency drought declaration and his  
19 request to boards like yours to, quote, "Find water  
20 wherever you can." This is a way of literally responding  
21 to the Governor's request.

22           But what's -- where the rub was, and what I think  
23 is the benefit of the LID portion of this agreement is  
24 there are many of us, and particularly those representing  
25 the cities, that said, well, if we can't do it, we

1 shouldn't be forced to do it. You know, if we have an  
2 infill development where it's just not possible, or if  
3 there are legitimate, you know, integrity -- structural  
4 integrity issues with a slope, the sorts of things that  
5 were characterized, I think again inaccurately, as  
6 problems.

7           Where those things exist, we need an offramp.  
8 And so what we agreed to is an offramp. The cities get  
9 much more flexibility to make determinations about  
10 feasibility. They can allow exceptions from this  
11 retention requirement. And what this community gets as a  
12 whole, including the cities, is off-site compliance when  
13 you can't do it on site. So it's classic watershed  
14 management. If you can't get that pollution benefit on  
15 the site, you'll do it somewhere else. You'll contribute  
16 money or you'll do a project that generates the same  
17 approach overall.

18           So I think by providing some flexibility, but  
19 having an environmental management approach, we have a  
20 great agreement on Low Impact Development

21           Now, I'm going to turn it over to Mark. Before I  
22 do -- since I want to steal a line from Mark Gold, who I  
23 affectionately point out to him that's always telling you  
24 that he's been here for 15 or 20 years or something like  
25 that, but I will tell you that I have literally been

1 involved in MS4 proceedings in California, in San  
2 Francisco, Morro Bay, San Luis Obispo -- this is all in  
3 the last five years -- Santa Barbara, Morro Bay I  
4 mentioned, here in Ventura County, north Orange County,  
5 south Orange County, San Diego, and very familiar with the  
6 divisive stakeholder dynamics here in this region. I  
7 litigate some of those, mostly with these folks. So  
8 there's a little bit of role reversal.

9           Nobody has ever reached an agreement like this.  
10 So you have the opportunity to bless something which is  
11 really revolutionary in terms of the way we do business.  
12 Let the stakeholders make compromises, every significant  
13 disagreement doesn't have to result in litigation. And I  
14 have seen that happen not only here in ten years, but  
15 anywhere in California.

16           So beyond the nitty-gritty of what you're being  
17 asked to consider, I hope you consider the overall dynamic  
18 and the overall perspective that you have here an  
19 agreement that really is a step that I hope you would want  
20 to encourage. It will help your staff do their jobs. It  
21 will help you do your job. It will keep all the attorneys  
22 off in a corner. And for that reason alone, it may be  
23 worth your consideration.

24           So with that, I'll turn it over to Mark.

25           CHAIRPERSON LUTZ: Dr. Gold, just for some

1 perspective, you're down to two minutes.

2 MR. BECKMAN: Sorry.

3 DR. GOLD: Thanks, David.

4 My name is Dr. Mark Gold, and I'm the president  
5 of the environmental group Heal the Bay.

6 In light of the time constraints, what I would  
7 like to bring up is that, you know, focus has been LID,  
8 but obviously there are other components of this. We've  
9 been pleased obviously with the BMP design performance  
10 criteria. Finally, let's hold some accountability on what  
11 we're putting in the ground to clean up the water, and  
12 that's something that we all agreed on in this part of  
13 this deal, and that's in the permit right now.

14 On monitoring issues, just to bring your  
15 attention to the fact, right now in Ventura County,  
16 contrary to what you heard earlier in the day, there's no  
17 monitoring of your beaches in Ventura County. They  
18 absolutely positively stopped because of the budget  
19 crisis. And that's been a huge issue. And what we've  
20 seen as part of this agreement was a willingness by  
21 Ventura County and the cities to make sure at the least,  
22 ten of the most popular sites in front of flowing drains  
23 and creeks would be monitored on at least a year-round  
24 basis to protect public health. Right now it's 90  
25 degrees; you go to the beach, you don't know what the

1 water quality is. That's unacceptable.

2 MALs, probably the one thing that you would not  
3 expect to hear from the environmental community is that  
4 we're basically saying completely in the spirit of  
5 compromise in our negotiations is that we're willing to  
6 remove these provisions because the importance of the MAL  
7 provisions and the cost to the individual cities and the  
8 county in complying with the MAL provisions, that we felt  
9 that since that was a very strong request made by those  
10 folks, that we were willing to give up on that, even  
11 though you can imagine that's a pretty important issue to  
12 us as you've seen from our comments.

13 And so I'm not going to go much more into the  
14 detail, because we're out of time, and I know Rick needs  
15 to close.

16 MR. COLE: Chair Lutz, with all due respect,  
17 could we be held to the same standard as your staff on  
18 time limits?

19 (Laughter.)

20 CHAIRPERSON LUTZ: I'll give you an extra two  
21 minutes, how's that?

22 The agreement reached between these two  
23 environmental advocates and all 11 permittees has historic  
24 importance.

25 CHAIRPERSON LUTZ: I'm sorry, Mr. Cole, could you

1 please state your name.

2 MR. COLE: Rick Cole, city manager, City of  
3 Ventura, representing the permittees.

4 For too long our shared commitment to the  
5 environment has been hamstrung by adversarial processes  
6 and litigation. The mutual understanding and  
7 collaboration that went into reaching this agreement  
8 reflects the goodwill, shared interests, and common sense  
9 of all of the parties, as well as the constituencies that  
10 we represent.

11 Simply put, we all want cleaner water and we all  
12 want to follow the law. How we get there is the real  
13 challenge. By comprehensively approaching the key issues  
14 in this permit, we stand together with a unitary proposal  
15 that we sincerely hope will be given serious consideration  
16 by your Board.

17 We all respect and support the efforts of your  
18 own staff to put together the tentative order under  
19 consideration today. Prior to its release, we put in  
20 countless hours into an equally well-thought-out  
21 alternative through a unique and remarkable collaboration.  
22 Like the tentative order presented by your staff, it will  
23 be more expensive and difficult to administer than the  
24 current permit. All the jurisdictions will face  
25 challenges figuring out how to pay for it, but the path is

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1 now clear to move forward for the next five years to clean  
2 our waters and our beaches.

3           The two essential ingredients presented here  
4 today of this agreement are not LID and MAL, they are  
5 trust and connection. We established this through a  
6 spirit of trust in the good faith and integrity of all  
7 parties, that we were here for the same goal.

8           And the second issue is connection. We put these  
9 issues together recognizing that everybody has something  
10 to get and every one has something to give. By respecting  
11 what we have so carefully put together, I hope no one will  
12 try to take it apart.

13           The last permit expired in 2006. The last three  
14 years have been a long and difficult road. We stand here  
15 in agreement together today with great hope and  
16 expectation that we are finally on a new road, one that  
17 leads to Ventura County continuing to be a model for clean  
18 water and sustainable development and establishing a  
19 long-term partnership between the parties to work  
20 together, not just when the chips are down, but when the  
21 cameras are off, to work together for a shared goal, so  
22 that when we come back to you in five years, we'll come  
23 back to you with results.

24           Thank you very much.

25           CHAIRPERSON LUTZ: Thank you very much.

1           Okay. At this point, we will have the comments  
2 from the other elected officials that may or may not still  
3 be here. We'll start -- first, I have Patti Walker from  
4 Malibu -- or City of Fillmore. And I believe you said she  
5 is no longer here. Am I correct?

6           She is here?

7           FILLMORE CITY MAYOR WALKER: I waive my rights in  
8 the interests of time.

9           CHAIRPERSON LUTZ: We have a representative from  
10 Assemblywoman Strickland's office.

11           Three minutes; yes, three minutes.

12           MS. GUTHRIE: Good afternoon, Chairwoman Lutz,  
13 Members of the Board. Thank you for the opportunity to  
14 comment on behalf of Assemblywoman Strickland.

15           I really would like to thank the Board and staff  
16 for the collaborative and open process over the last three  
17 years in developing this permit. The draft before you  
18 appears to be a much more workable permit and one that can  
19 be more realistically implemented. Again, thank you for  
20 all of your work.

21           CHAIRPERSON LUTZ: Thank you.

22           VICE CHAIRPERSON GLICKFELD: Madam Chair, if I  
23 could, I'm having a little bit of trouble. I think in  
24 order for this to go well, I think that the Board has to  
25 understand what the testimony is.



1           So I'm hearing some elected officials saying  
2 you're supporting the staff report. I'm hearing other  
3 city representatives saying you're supporting the  
4 agreement. If it's both, say it. If it's not both, let  
5 us know that. I really am having a little bit of  
6 difficulty in understanding, in fact, what you're here to  
7 tell us.

8           CHAIRPERSON LUTZ: Okay. Jarrod DeGonia from  
9 Assemblymember Smyth's office.

10          MR. DeGONIA: Thank you, Madam Chair, Board  
11 Members, staff. My name is Jarrod DeGonia. I'm  
12 representing Assemblymember Cameron Smyth's office, 38th  
13 Assembly District.

14          I'm here today on behalf of the Assemblymember to  
15 kind of express his support for the staff -- staff  
16 agreement along with the permittees and the NGOs. The  
17 Assemblymember wanted me to state once again that Ventura  
18 County has proven to be a leader when it comes to  
19 watershed planning and watershed management, including  
20 stormwater and stormwater quality. The Calleguas Creek  
21 Watershed and the Watershed Coalition of Ventura County  
22 have proven that Ventura County is on the forefront when  
23 it comes to this sort of planning.

24          And once again, with this agreement that's moved  
25 forward, we've -- Ventura County once again has proven to

1 be a leader in this forum. So I'm here on behalf of  
2 Assemblymember Cameron Smyth to support the compromise  
3 between staff and the permittees.

4 Thank you very much.

5 CHAIRPERSON LUTZ: Thank you.

6 And on behalf of Senator Tony Strickland,  
7 Chris Collier.

8 MR. COLLIER: Good afternoon, Madam Chairwoman,  
9 and the Board, thank you for providing me the opportunity  
10 to speak.

11 On behalf of Senator Strickland of California's  
12 19th Senate District and as a lifelong Ventura resident, I  
13 want to thank you guys for the work you guys have done  
14 previously in keeping our beaches clean and safe and our  
15 water clean.

16 I'd like to also say that we are very much in  
17 support of the collaboration efforts and the transparency  
18 that has happened over the last three years in getting us  
19 the permit that we have today.

20 So with that, I'd like to thank the staff for  
21 their recommendations on this project.

22 CHAIRPERSON LUTZ: Thank you. At this time, we  
23 will have our presentation from the parties. Each party  
24 has been given, as I stated earlier, an hour for their  
25 presentation. Within that hour, you can break it up

1 however you want, your presentation, the cross-examination  
2 that was requested/ and/or the rebuttal.

3           The first presentation will be from the  
4 permittees. And I believe I have Jeff Pratt will be  
5 first.

6           And you have several people, correct, Mr. Pratt?

7           MR. PRATT: That's correct

8           CHAIRPERSON LUTZ: I would just ask again that  
9 when you speak, if anybody that comes up, would you please  
10 introduce yourself for our record. And if you are going  
11 to process with the -- continue with the  
12 cross-examination, please give us a little warning so that  
13 we can have whoever you're going to call -- let us know  
14 who you'd like to call so they can be here.

15           (Thereupon an overhead presentation was  
16 presented as follows.)

17           MR. PRATT: Good afternoon, Chair Lutz, Board  
18 Members, and Ms. Egoscue. For the record, my name is Jeff  
19 Pratt. I'm the public works director of Ventura County.

20           Before I start, I'd like to request for the  
21 record that 25 minutes of our presentation time be set  
22 aside for rebuttal and/or cross-examination. And before I  
23 do my part of this presentation, we have some comments  
24 from City Manager Mike Sedell.

25           MR. SEDELL: Again, Mike Sedell, City Manager,

1 City of Simi Valley on behalf of the co-permittees to  
2 answer your question, very well stated and requested.

3           The agreement that we worked with the NGOs on was  
4 very carefully constructed. And if that agreement stands  
5 as it is with everything in it as it stands, then we  
6 support that agreement. If that agreement has any piece  
7 of it removed, because of the concessions and the give and  
8 take that created that agreement, if one side or the other  
9 loses something they agreed to as part of it, neither side  
10 supports it. If that agreement doesn't stand in its  
11 entirety, then all of the co-permittees support the  
12 staff's recommendation with the exception of the comments  
13 that staff will give here.

14           Does that count as part of his time?

15           VICE CHAIRPERSON GLICKFELD: That thing is much  
16 better.

17           CHAIRPERSON LUTZ: Thank you.

18           (Laughter.)

19           BOARD MEMBER BLOIS: 'cause that counted as part  
20 of his time?

21           MR. SEDELL: I can do it again if you want.

22           (Laughter.)

23           MR. PRATT: All right. It looks like I can get  
24 by without my glasses, the light's pretty good up here.

25           My task today is to introduce you to Ventura

1 County and to give you a Ventura County-wide context for  
2 what follows me, the technical presentation.

3 --o0o--

4 MR. PRATT: I'll do this by presenting you with a  
5 high elevation overview, probably 100,000 feet, of Ventura  
6 County and its residents. I'll touch on our community's  
7 environmental ethos, our commitment to resource  
8 protection. I'll make you aware of some of our many water  
9 quality accomplishments and I'll briefly touch on some of  
10 our pending fiscal challenges.

11 --o0o--

12 MR. PRATT: Ventura County encompasses about  
13 1,900 square miles. We have a population of about 836,000  
14 people. Open space makes up the vast majority of our land  
15 area, about 80 percent; urban area accounts for about 12;  
16 and agriculture accounts for about 8.

17 It's important to note from the graphic the low  
18 density of developed area county wide. Those are the  
19 violet areas essentially. The lack of connectivity  
20 between cities, the way our cities are surrounded by  
21 agriculture, open space and/or green belts.

22 It's also important to note that the permittees'  
23 jurisdictional areas of authority are limited. It's  
24 essentially those areas in violet.

25 --o0o--

1 MR. PRATT: Ventura County is the leader in open  
2 space and agricultural area protections. Ventura County  
3 passed the SOAR initiative, Save our Open Space and  
4 Agricultural Resources in the late 1990s. SOAR put  
5 development limits around the cities, essentially  
6 containing them. The only way to develop outside these  
7 limits is through a vote of the people.

8 --o0o--

9 MR. PRATT: I'll skip that one.

10 --o0o--

11 MR. PRATT: Ventura County is second to none in  
12 the area of watershed planning. What you see here are the  
13 headwater major watershed divisions of Ventura County.

14 --o0o--

15 MR. PRATT: Our watersheds are known to us in  
16 great detail, from the subcatchments of just a few acres  
17 to large basins over a thousand square miles. Our river  
18 and creek basin and watersheds have been subdivided for  
19 the purposes of modeling literally into thousands of  
20 subcatchments.

21 --o0o--

22 MR. PRATT: All of our major watersheds have been  
23 or are in the process of being modeled hydrologically and  
24 hydraulically, including sediment transport and erosion,  
25 with advanced and well-calibrated continuous rainfall

1 record models, which allow us to model fate and transport  
2 of pollutants, as well as other aspects of the water  
3 budget.

4 At points along the water body, we can tell you  
5 hydro periods; that is, how deep, how long, and what time  
6 of year they occur. These are living predictive models  
7 that can be modified as changes with the watershed occur..

8 --oOo--

9 MR. PRATT: In addition to a sound technical  
10 basis for our watershed planning, Ventura County has an  
11 advanced political infrastructure for the advancement of  
12 the watershed's well-being. Of note is the fact that  
13 Ventura County has integrated regional water management  
14 plans for all of its major watersheds.

15 --oOo--

16 MR. PRATT: In 1992 the cities, the county, and  
17 the Watershed Protection District executed a visionary  
18 implementation agreement to protect water quality. That  
19 agreement is still in effect today. It is one of the  
20 bases for continuing cooperation and collaboration between  
21 all the local governments in the county.

22 --oOo--

23 MR. PRATT: One fine example of an outcome due to  
24 this collaboration and cooperation is that in 2003 the  
25 County-wide Stormwater Program received the Environmental

1 Protection Agency's national first place Clean Water Act  
2 recognition award.

3 --o0o--

4 MR. PRATT: Another accomplishment of the Ventura  
5 County-wide approach has been a very visible public  
6 outreach campaign. Our media campaigns are branded.  
7 They're focused on pollutants of concern, and they run as  
8 a media blitz, hitting radio, TV, newspaper, the web, and  
9 outdoor venues at the same time. What you see here are  
10 two examples from last year. You can see our new brand,  
11 "Community for a Clean Watershed, A Watershed Should Only  
12 Shed Water."

13 --o0o--

14 MR. PRATT: Our Coastal Cleanup Days continue to  
15 increase in number of participants, in miles of coverage,  
16 and yet our trash tonnage collected continues a downward  
17 trend. This is likely due to the effectiveness of our  
18 outreach efforts.

19 --o0o--

20 MR. PRATT: Our county-wide program is  
21 undoubtedly helped make our beaches the cleanest beaches  
22 in southern California. Here you see a comparison of  
23 southern California beach mile days posted. It includes  
24 Santa Barbara County. You see that Ventura County is on  
25 the far right with fewest postings.



1 --o0o--

2 MR. PRATT: Furthermore, the number of Ventura  
3 County beach postings has declined over the years and are  
4 staying at a low level as shown in this graphic, which  
5 covers the years 2003 through 2008.

6 --o0o--

7 MR. PRATT: Our county-wide program continues to  
8 be proactive in its approach. Here you see two water  
9 quality installations initiated by the permittees in a  
10 proactive and collaborative fashion. The project on the  
11 left is a trash skimmer placed in a major channel within  
12 the City of Oxnard. It was a multi-agency cooperative  
13 project.

14 The project on the right represents dry weather  
15 runoff diversions that have been installed to protect  
16 popular beaches within the City of Ventura and the City of  
17 Oxnard.

18 --o0o--

19 MR. PRATT: Other proactive projects within the  
20 county include this Low Impact Development in the City of  
21 Fillmore on the left. It's a reduced road section with  
22 grassy shoulders and grassy paver swales providing  
23 biofiltration. This was completed without any stormwater  
24 permit guidance. It's a very proactive approach.

25 The picture on the right shows a series of

1 stormwater quality extended detention basins to treat  
2 urban runoff. It's within the City of Camarillo in a  
3 sustainable community that includes commercial businesses,  
4 parks, an elementary school, and the recreational  
5 facilities and pedestrian bike paths that connect these  
6 amenities.

7 In fact, Ventura County applied for and received  
8 a grant from the local government commission to start to  
9 build Low Impact Development templates in each of its  
10 three watersheds that would be used as templates  
11 statewide. That effort is still underway.

12 --oOo--

13 MR. PRATT: Another example of the environmental  
14 ethos collaboration cooperation that exists in the county  
15 is the Ventura River Ecosystem Restoration Project, a  
16 federally-partnered project approved by Congress that will  
17 restore the riparian corridor of the watershed. It is a  
18 community partnership with extreme environmental and water  
19 quality benefit. It ranges over 30-plus miles of river  
20 tributaries and it includes a large concrete dam removal  
21 and restores natural functions to a system with more than  
22 26 special status species.

23 --oOo--

24 MR. PRATT: I believe that you're also aware of  
25 the fiscal context of your consideration of this matter.

1 The revised tentative order will double permit cost at a  
2 time when federal, State, and local governments face  
3 budget crises. Flexibility is demanded.

4 --oOo--

5 MR. PRATT: In summary, I'd like to leave you  
6 with a couple of thoughts. The Ventura County permittees  
7 are unique, their leaders committed to resource  
8 protection, and whose past efforts have achieved  
9 improvement and awards.

10 Finally, as proposed, costs of this permit will  
11 more than double from their current levels. Please retain  
12 the flexibility, if possible, in this permit.

13 Thank you very much for your time.

14 And with that, I'm going to introduce Gerhardt.  
15 He's going to take over, do the technical part of the  
16 presentation and give you our comments and thoughts on the  
17 draft.

18 CHAIRPERSON LUTZ: Thank you.

19 MR. HUBNER: Thank you, Jeff.

20 Good afternoon, Chair Lutz, Board Members,  
21 members of the public. My name is Gerhardt Hubner for the  
22 record, deputy director with the Watershed Protection  
23 District and chair of the Ventura County Stormwater  
24 Management Program.

25 With me today to answer any other technical

1 questions that you may have are Arnie Anselm, my water  
2 quality monitoring manager, we have Mr. Mack Walker, and  
3 Ashli Desai from Larry Walker & Associates,  
4 representatives from SCCWRP, county environmental health  
5 and other city reps. We have special counsel to the  
6 permittees, Ms. Tess Dunham who you met earlier, who will  
7 be able to answer any legal questions that you have.

8 --o0o--

9 MR. HUBNER: So my technical presentation today  
10 before you I'll be describing for you some of the revised  
11 tentative order and how it is groundbreaking. I'll be  
12 describing some of the themes and objectives when we went  
13 through the permit process. I'll talk a little bit about  
14 Municipal Action Levels BMP performance standards, the  
15 planning and land development section, TMDLs, and  
16 concluding with monitoring.

17 --o0o--

18 MR. HUBNER: Before jumping into the tentative  
19 permit requirements and our thoughts on the revised  
20 tentative, I would just like to highlight some of the  
21 overall themes that the permittees use to guide in our  
22 discussions with your staff and other stakeholders.

23 These themes included, how could we best provide  
24 water quality protection in an effective manner;  
25 essentially, what was the water quality bang for the buck.

1 Also, to ensure that the tentative order was relevant to  
2 Ventura County and provides flexibility for local  
3 conditions. Very important to us. And to ensure that the  
4 tentative order was technically feasible and alternative  
5 proposals were provided to you. And finally, to provide  
6 for program integration that led to better program  
7 effectiveness. So all the pieces fit together.

8 --o0o--

9 MR. HUBNER: It's fair to say that the permit  
10 process has been long and comprehensive. Here are some of  
11 the relative activities. As you know, there was four  
12 draft orders. There was extensive written comments on  
13 each. You held two workshops in April 2007 where I spoke  
14 before you in Burbank as well as in September of 2007 in  
15 the City of Ventura. You had the two-day meetings in  
16 February, as Mr. Unger indicated, and most recently the  
17 fall 2008 and recent winter discussions with the  
18 stakeholders.

19 --o0o--

20 MR. HUBNER: The revised tentative order, as I  
21 mentioned before, is ground breaking. As I mention again,  
22 all these things are ground breaking. We feel that the  
23 Municipal Action Levels that you have before you are for  
24 the first time State or nationally being used as an  
25 assessment tool. You have treatment control BMP

1 standards. You have comprehensive integration of Low  
2 Impact Development strategies. TMDLs are incorporated.  
3 And you have an expanded monitoring program. I will  
4 address each of these elements in the following slide.

5 --oOo--

6 MR. HUBNER: In terms of the Municipal Action  
7 Levels and the approach, it's an approach to assess  
8 program performance tool versus a compliance tool. It's  
9 used to assess programmatic problematic discharges instead  
10 of a numeric metric of compliance. We believe, as noted  
11 in our previous comment letters, this revised approach is  
12 consistent with current U.S. EPA guidance and more  
13 recently the report prepared by the blue ribbon panel  
14 convened by State Water Resource Control Board. And that  
15 the current list of constituents subject to MAL assessment  
16 is relevant to water issues in Ventura County.

17 --oOo--

18 MR. HUBNER: I've included and excerpt here from  
19 the State Board's blue ribbon panel. The blue ribbon  
20 panel's report clearly states the position, "It is not  
21 feasible at this time to set enforceable numeric effluent  
22 criteria for municipal BMPs and in particular urban  
23 discharges," and, "setting a numeric limit for municipal  
24 stormwater discharges is basically not possible".  
25 However, the report did agree that action levels may be

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1 used to identify upset or bad-actor catchments. We  
2 believe the revised tentative order correctly captures  
3 these conclusions.

4 --o0o--

5 MR. HUBNER: And as I noted previously, the MALs  
6 were carefully derived from a subset of a national  
7 database. They're reflective of arid southwest conditions  
8 similar to Ventura County. They are statistically  
9 relevant to identify bad actors, what the State Board's  
10 blue ribbon panel report advised, and they focus on  
11 relevant pollutants to our stormwater program.

12 --o0o--

13 MR. HUBNER: I know you can't read the text on  
14 this slide. I'm sorry.

15 (Laughter.)

16 MR. HUBNER: Legal advised that I needed to bring  
17 this up here. We've include it as part of your slide  
18 package.

19 CHAIRPERSON LUTZ: It is easier to read there.

20 MR. HUBNER: It is easier to read there.

21 So although the revised tentative order language  
22 is consistent with the principles described above, the  
23 language in the fact sheet that explains the MAL language  
24 is inconsistent with the language as it appeared in the  
25 revised tentative order. To make sure that there was no

1 confusion as to the intent and the purpose of the MALs, we  
2 believe it is important that language in the fact sheet be  
3 consistent, so we've provided these recommended edits, and  
4 your staff has reviewed -- received this -- reviewed this  
5 language in advance if they have any questions.

6 --o0o--

7 MR. HUBNER: And this next slide is just a  
8 continuation of those edits.

9 --o0o--

10 MR. HUBNER: Let's turn to BMP performance  
11 standards.

12 We support the concept of performance standards.  
13 The revised tentative order provides the appropriate  
14 structure for the BMP performance and hold the development  
15 community accountable for BMP design. We think that's  
16 important. We do believe that they are not reflected as  
17 effluent limitations, so we want to make that clear. And  
18 so we support the revised tentative order establishing for  
19 the first time in California performance standards for  
20 treatment control BMPs.

21 I do want to note, please note that the BMP  
22 performance criteria should not be confused with the MALs  
23 or water quality standards.

24 --o0o--

25 MR. HUBNER: Okay. Lets's talk about the





1 hydromodification criteria.

2           So these are some of the guiding principles. And  
3 I'll return towards the end of this section to talk about  
4 them again.

5                               --o0o--

6           MR. HUBNER: During the course of the various  
7 draft orders, the permittees evaluated the feasibility of  
8 different LID metrics for Ventura County. This evaluation  
9 resulted in the preparation of a white paper, "Low Impact  
10 Development Metrics in Stormwater Permitting."

11           We examined the feasibility of implementing the  
12 LID strategies for a variety and range of development  
13 projects under various rainfall conditions in both Ventura  
14 County and Orange County. The report also identified  
15 other approaches used across the country to establish LID  
16 metrics.

17           The paper, we believe, is very even-handed  
18 demonstrating the feasibility of certain LID strategies in  
19 urban environments but also identified some of the  
20 challenges associated with the various strategies.

21           By the way, we included a copy of this report as  
22 part of our -- the program's comment letters.

23                               --o0o--

24           MR. HUBNER: We also looked at a couple permits  
25 in California that most closely reflect LID definition and

1 also reflect similar intent in the revised tentative  
2 order.

3 San Diego Final Stormwater Permit was adopted in  
4 January 2007. The key words here are "provide retention,  
5 slow runoff, minimize impervious footprint."

6 The State Water Resources Control Board just  
7 recently released its newest version of the general  
8 construction permit. Key words here are "replicate the  
9 pre-project water balance."

10 --o0o--

11 MR. HUBNER: I have a graphic here where -- that  
12 I had my groundwater section staff prepare for me with a  
13 series of overlays. And it's looking at areas amenable to  
14 infiltration and some of the challenges. So here you have  
15 a county base map with several of our rivers and lakes in  
16 blue.

17 --o0o--

18 MR. HUBNER: Next is the county soil map, types 1  
19 to 3 in orange showing us impermeable. You have types 3  
20 through 7 shown as green as permeable. So the impermeable  
21 is orange, permeable is the green.

22 We have the municipal boundaries in yellow, areas  
23 of rising groundwater -- rising water in black, and  
24 groundwater recharge areas in red.

25 Other LID challenges include health and safety

1 codes, fire codes, and geotechnical.

2

--o0o--

3 MR. HUBNER: With this photograph I just want to  
4 highlight, this is north of the City of Santa Paula in a  
5 creak appropriately called "Mud Creek." Note that the  
6 sediment transports, scour, and erosion occurring here are  
7 not a result of improved or urban development upstream.  
8 The point I want to make here is that several of our major  
9 rivers and creeks where sediment contribution from our  
10 urban landscape is relatively minor.

11

--o0o--

12 MR. HUBNER: So coming full circle again, we  
13 believe the revised tentative order incorporates the  
14 development principles I described to you earlier. It  
15 protects streambed ecosystems. It mimics natural runoff  
16 before the site was developed. It provides flexibility  
17 for infill redevelopment projects. It provides clear and  
18 implementable standards, and it integrates LID treatment  
19 control and hydromodification criteria.

20

--o0o--

21 MR. HUBNER: Regarding the TMDL Program, we  
22 support the revisions to the TMDL section of the revised  
23 tentative order. We feel that the revisions are  
24 consistent with the Clean Water Act, and that all the  
25 effective TMDLs in Ventura County have been appropriately



1 I apologize for the readability. We did provide  
2 a hard copy for your consideration and as well as to your  
3 staff in advance.

4 --o0o--

5 MR. HUBNER: And this is just a second part of  
6 the edits that I've provided for you. Sorry.

7 --o0o--

8 MR. HUBNER: Turning to our monitoring program.  
9 We believe we have an exemplary program with a  
10 state-of-the-art data management system. Our goal is to  
11 continue to enhance this program over time to further  
12 support and measure our stormwater program effectiveness.  
13 The revised tentative order reflects a great deal of work  
14 to resolve many of the previous outstanding technical  
15 issues that were out there. And the new monitoring  
16 stations that are proposed will greatly expand our efforts  
17 while we're still retaining our current receiving water  
18 stations.

19 --o0o--

20 MR. HUBNER: Here we have a slide of our water  
21 quality stormwater monitoring staff in action. The left  
22 side you have a refrigerated automated composite sampler  
23 triggered by flow. Right side top, the picture, we have  
24 wet weather grab samples being collected and field  
25 measurements. Right side bottom, you have staff

1 collecting the composite samples after the storm.

2 --oOo--

3 MR. HUBNER: I have a series of overlays to show  
4 you with the graphic, to show you the scope of water  
5 quality monitoring that's occurring and proposed for  
6 Ventura County. First, you have the base map with our  
7 rivers, creeks, tributaries with each of the watersheds  
8 defined. Ventura River, Santa Clara River, Calleguas  
9 Creek Watershed.

10 --oOo--

11 MR. HUBNER: I will first add our current  
12 stormwater monitoring site includes a combination of mass  
13 emission, receiving water, and land use slides. Let's  
14 add our bioassessment sites in the Ventura River  
15 Watershed. Here comes the TMDL Program with our irrigated  
16 ag monitoring program. POTWs. These are our new  
17 stations, proposed monitoring in the revised tentative  
18 before you with each of the stations, we will be doing  
19 water chemistry and toxicity. Next, the pyrethroid  
20 special studies. And we have 15 sites for the  
21 bioassessment. Each will be sampled for water chemistry,  
22 constituents, and toxicity. And the beach water quality  
23 sampling.

24 What I haven't actually added on here is the City  
25 of Oxnard. They do ocean outfall monitoring, their SWAMP

1 monitoring that the Regional Board conducts, and SCCWRP is  
2 conducting their Bight '08 sampling, which is not  
3 reflected. So the point here is we do provide -- we do  
4 conduct a significant amount of monitoring throughout  
5 Ventura County.

6 --o0o--

7 MR. HUBNER: And to further highlight this, we  
8 spend close to \$4 million a year in Ventura County on  
9 monitoring with the wet weather component. Current permit  
10 on your left. The tentative permit essentially, as we  
11 mentioned, it will be double that with the special  
12 studies. And if you include all the other monitoring  
13 efforts in Ventura County you can see you have that --  
14 those bars go up.

15 --o0o--

16 MR. HUBNER: Okay. I would like to then talk to  
17 you a little bit how we did our urban outfall selection  
18 and the criteria we used. We utilized the Ventura  
19 County's GIS system overlaying the jurisdictional  
20 boundaries in land uses and watershed boundaries. The  
21 result is that each of the monitoring locations would  
22 capture a significant portion of the permittee's urban  
23 runoff or signature independent of other land uses or  
24 pollutant sources.

25 So I have a series of slides that I'm going to





1 study will examine sediment in local watersheds.

2 So with that, I conclude my technical  
3 presentation. And I'd like to turn it over to Mr. Sedell  
4 and Mr. Cole who will have concluding remarks.

5 MR. SEDELL: We'll try and make this brief again.

6 Chair Lutz, Members of the Board, Mike Sedell,  
7 city manager, City of Simi Valley on behalf of the  
8 co-permittees.

9 As we noted earlier, as a result of both the  
10 co-permittees and the NGOs' agreed inability to support  
11 any modifications to agreement, both sides felt that it  
12 was in our respective self-interests to communicate to  
13 your Board our independent comments on what was to be.  
14 And I would note that when most of our negotiations took  
15 place, the vast majority, we were under the potential of  
16 the previous revised order, not the current one, the  
17 version four that's come out since. And in that revised  
18 tentative order, our comments were largely what Gerhardt  
19 Hubner just reviewed with you. When that latest revised  
20 tentative order was released, and we had the opportunity  
21 to analyze its comments, the co-permittees recognized that  
22 your staff had listened to input of the various  
23 stakeholders and significantly modified their previous  
24 draft revised tentative order.

25 While our fears of increased economic cost to

1 both government and community development remain with the  
2 latest version, they remain to a much lesser degree than  
3 the previous version, as we now estimate costs to the  
4 taxpayers of about 60 to \$75 per household per year  
5 compared to about \$600. That's 60 to \$75 for a city of  
6 100,000 people is about \$2,500,000 a year. Still an  
7 expensive and unfunded concern.

8           In addition, it appears that there is much  
9 greater value to the public and to our environment for  
10 those proposed expenditures. We feel that your staff has  
11 kept in their new draft much of the environmental  
12 protection that we are all in agreement as desirous of.

13           In summary, we have attempted to work with your  
14 Board, with your staff, and with other stakeholders to  
15 deliver to you a compromise that could be supported by  
16 both the co-permittees and the NGOs. While we believe  
17 that we have delivered such an agreement for your  
18 consideration, we must also recognize that your staff has  
19 done much the same thing in a slightly different version  
20 has, in fact, built upon what we have brought forward.

21           We offer our support to your Board and your staff  
22 in working with you toward the implementation of the new  
23 MS4 permit and to continuing our county's prolific and  
24 exceptional stewardship of environmental protection.

25           Thank you again for your consideration.

1 I defer to Ventura City Manager Rick Cole for a  
2 final summary.

3 MR. COLE: Thank you. I think one thing that all  
4 of us chief executives of the ten cities in the county can  
5 stand in complete agreement and say is we have enormous  
6 respect and sympathy for your executive officer, Tracy  
7 Egoscue. This is not an easy job.

8 In this complex and contentious setting, let's  
9 not lose site of two salient facts. In 2003, the  
10 Countywide Stormwater Program in Ventura received the  
11 United States Environmental Protection Agency National  
12 Clean Water Act Award for stormwater management  
13 excellence.

14 And according to Heal the Bay's latest annual  
15 beach report card, Ventura County beaches continue to have  
16 the best water quality in southern California.

17 We are committed to working not just in this  
18 setting but over the next five years with your Board and  
19 staff to continue our award-winning efforts to pursue  
20 improved water quality.

21 The tentative order, as we've discussed, with the  
22 modifications we have suggested will continue our progress  
23 in ensuring clean and healthy waters, as my colleague, Mr.  
24 Sedell, has just said, so would the joint agreement we  
25 presented earlier today.

1           The common thread between both of these  
2 approaches is that we have consistently worked in a spirit  
3 of collaboration with all parties during the more than  
4 three years of effort that lead us here today.

5           We have consistently, as cities, embraced major  
6 compromises. In his legal arguments this morning -- and I  
7 recognize we all have lawyers -- Mr. Levy said the reason  
8 we should not be counted under State mandates is when  
9 we're here before you today, we're not government stewards  
10 of the environment, we're polluters. He said that we  
11 should be treated just as private parties, that because we  
12 convey pollution through our stormwater system, that we  
13 should not have any special consideration. In fact, I  
14 think the opposite is true and has been clearly  
15 demonstrated throughout the last five years and throughout  
16 these efforts. And again, that's not a personal comment  
17 to Mr. Levy, I'm just talking about the legal arguments  
18 that he is making.

19           We have been stewards of the environment. That  
20 is our commitment. And that's why we're appealing to you  
21 to treat us differently, to treat us how we have acted in  
22 our spirit of collaboration with your staff and with other  
23 parties in this very difficult and contentious process.

24           So we need to emphasize as we close that the  
25 tentative order is one of the most ambitious and costly

1 stormwater permits ever considered in this nation. We've  
2 simply outlined a small number of remaining issues that  
3 need to be addressed.

4           This permit comes during the worst economic  
5 downturn in decades, at a time of both State and local  
6 budget crises that affect your staff and they affect our  
7 staff's ability to implement these ambitious requirements.  
8 Nonetheless, at a time when our jurisdictions are cutting  
9 staff and budgets, we are prepared to take on additional  
10 responsibility.

11           We ask you in turn to recognize that willingness,  
12 that flexibility, that integrity of safeguarding our  
13 environment, and to consider our requests and help us to  
14 continue to be successful partners in achieving our shared  
15 goal of clean water.

16           Thank you very much.

17           CHAIRPERSON LUTZ: Thank you very much.

18           That was perfect timing by the way.

19           SENIOR STAFF COUNSEL LEVY: Chair Lutz, may we  
20 make some recommend changes in the order of proceedings in  
21 view of the Board's and your previous order about  
22 cross-examination.

23           We'd like to recommend that cross-examination  
24 occur after interested person comments. And we'd also  
25 like to recommend in view of the timing that the Building

1 Industry Association go after the other interested  
2 persons. And our purpose is for the interested persons  
3 who may be here to get their three minutes of time to  
4 talk, we don't want to force them to come back tomorrow.  
5 So out of deference to them, to get them out if they  
6 choose to as soon as we can.

7 CHAIRPERSON LUTZ: Okay. So what you're  
8 suggesting is that after the presentation -- after the  
9 presentation from the NGOs, the DRC -- or I'm sorry, the  
10 NRDC and Heal the Bay, that we then have the interested  
11 parties comments, and those are the people that I have the  
12 blue cards from. After that, then have BIA, which has  
13 requested 30 minutes, then have a separate time to afford  
14 the cross-examination.

15 And the purpose for this, I understand, is so we  
16 really only have to have one cross-examination, it doesn't  
17 get bifurcated.

18 SENIOR STAFF COUNSEL LEVY: That's right.

19 CHAIRPERSON LUTZ: Okay. And so then we will  
20 after -- we have the interested parties, and I think the  
21 interested parties of the cards, then the  
22 cross-examination, and then go to BIA?

23 SENIOR STAFF COUNSEL LEVY: Do the interested  
24 parties, including BIA; but do the cards first, then BIA,  
25 then cross-examination, then rebuttal.

1           And Steve is trying to get a copy of the printout  
2 to circulate. That's our recommendation.

3           CHAIRPERSON LUTZ: Because we're being nimble  
4 here, if you can't tell.

5           SENIOR STAFF COUNSEL LEVY: So what I would  
6 recognize, if you're inclined, is to ask NRDC how much  
7 time they wish to reserve, as permittees set for both  
8 cross-examination and rebuttal, and then let them do the  
9 rest of the presentation now and then do cross-examination  
10 after the IPs have had their three minutes each to testify  
11 and BIA.

12          CHAIRPERSON LUTZ: Mr. Beckman.

13          MR. BECKMAN: We'll do it whatever way you want.

14          We don't anticipate many questions, and we  
15 thought it might actually be most useful if we could ask  
16 those questions at the beginning, because if there's some  
17 clarifications, it would help us then in presenting our  
18 pre-prepared presentation to you. I mean, it would be  
19 more logical for us to be able to address some of the  
20 things that we've heard now than later. And I think it's,  
21 you know, six or seven, eight questions, I don't think  
22 it's going to take very long. So just for your  
23 information.

24          CHAIRPERSON LUTZ: Well, in light of that, let me  
25 ask Ventura if you anticipate cross-examination much



1 longer than that, if any at all.

2 MS. DUNHAM: Our intent was only to reserve some  
3 time for cross-examination, if necessary, based upon what  
4 comes through the NRDC cross-examination. We don't have  
5 any specific questions that we intend to do. It would be  
6 if something came up during their cross-examination that  
7 we felt it was necessary to ask a question of Mr. Unger as  
8 well.

9 CHAIRPERSON LUTZ: One of the things that I think  
10 this is trying to do is have the cross-examination and our  
11 staff members who would be cross-examined only have to do  
12 this once, not get up and down and up and down and up and  
13 down.

14 In light of that, I will recommend a different  
15 change. And I'm telling you, we're being nimble here.

16 Let's go ahead and have, prior to the NRDC's  
17 regular presentation, go ahead, do your cross-examination.  
18 We'll put that in with the total minutes. And tell us  
19 when you come up here if you want to reserve any for your  
20 rebuttal, but the rest we'll put in, so it will be the  
21 total hour. Then we'll have the County of Ventura, should  
22 you require. And then you can go into your full  
23 presentation. And then, at that point, we will go to the  
24 comment cards that we have.

25 Okay. Is everybody on board here? I hope so.

1 Thank you.

2 MR. BECKMAN: Thank you, Chair Lutz. David  
3 Beckman again for NRDC and Heal the Bay.

4 So we would like to reserve the ten minutes for  
5 rebuttal as was set forth in the notice of hearing. And  
6 we don't think the questions that we have will take very  
7 long, but obviously that will come out of the 50 minutes  
8 that would be left. So I assume that we're going to  
9 operate under a formal/informal proceedings here and that  
10 Mr. Unger can either come forward at counsel's pleasure or  
11 we can somehow --

12 SENIOR STAFF COUNSEL LEVY: Are you calling him  
13 now?

14 MR. BECKMAN: Yeah, I would like to.

15 SENIOR STAFF COUNSEL LEVY: Then why don't we  
16 have Sam go sit in Steve's chair over there. I will join  
17 him.

18 And if I can have the Board's indulgence to just  
19 make a statement for the record about how this will work  
20 because of some of the Government Code provisions that  
21 apply to the functions of staff, and just really briefly,  
22 an explanation.

23 Government Code 11425.30 requires the separation  
24 of the investigative, prosecutorial, and advocacy  
25 functions from the decision-making functions of the Board

1 in quasi-adjudicative hearings. But for the record, in  
2 this proceeding, staff has not been designated a party and  
3 staff is not serving in any of those roles. All staff are  
4 only here as advisors to the Board. Nevertheless, given  
5 the change of procedures and given the fact that some  
6 questions might be objectionable, if objections are  
7 raised, especially by me, it's appropriate that somebody  
8 other than I advise the Board on the ruling on those  
9 objections. So if that becomes necessary, Mr. Ogata,  
10 senior staff counsel, will give you that advice.

11 Thank you.

12 CHAIRPERSON LUTZ: Okay. You may proceed. So we  
13 have 50 minutes on -- Jack will have 50 minutes on this  
14 one.

15 CROSS EXAMINATION

16 BY MR. DAVID BECKMAN, ESQ., representing the Natural  
17 Resources Defense Council:

18 Good afternoon, Mr. Unger. I'd like to ask first  
19 of all, for the record, state your position and role on  
20 the permit that is before the Board today?

21 REGIONAL PROGRAMS SECTION CHIEF UNGER: My  
22 position is the section chief of the regional program  
23 section. I'm classified as supervising water quality  
24 control engineer.

25 MR. BECKMAN: And are you the most knowledgeable

1 person on the Regional Board staff regarding the contents  
2 of the permit before the Board?

3 REGIONAL PROGRAMS SECTION CHIEF UNGER: In  
4 general, yes.

5 (Laughter.)

6 MR. BECKMAN: Okay. Is there anybody else who is  
7 more knowledgeable than you, in your estimation?

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: In  
9 specific areas, yes.

10 MR. BECKMAN: And who would that person be and in  
11 what areas?

12 REGIONAL PROGRAMS SECTION CHIEF UNGER: I think,  
13 Tracy Woods is very knowledgeable about the monitoring  
14 program. Ivar Ridgeway is very knowledgeable about the  
15 MALs.

16 MR. BECKMAN: Okay. EPA testified after lunch,  
17 and they endorsed the inclusion of the NGO county and city  
18 proposal. That's a paraphrase. Does that change your  
19 perspective for or your recommendation to the Board  
20 regarding that proposal?

21 And if you don't know the answer to the question,  
22 it would probably be better if you -- or if you have  
23 question for me, than to have side bars during each of the  
24 questions.

25 SENIOR STAFF COUNSEL LEVY: If Mr. Unger wants to

1 talk to me, he may do that.

2 MR. BECKMAN: You know, I don't want this to be  
3 testy, but that's not appropriate. For the record, Madam  
4 Chair, that is not appropriate in a cross-examination.  
5 But we'll proceed. I don't want turn this into a, you  
6 know, an adversarial proceeding to the extent that it's  
7 possible not to.

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: My  
9 recollection of the EPA presentation was that they only  
10 endorsed the LID portion, not the entire proposal.

11 MR. BECKMAN: Fair enough. Does that change your  
12 recommendation to the Board regarding the LID proposal?

13 REGIONAL PROGRAMS SECTION CHIEF UNGER: My  
14 recommendation to the Board is based on the proposal in  
15 whole as it was presented to us.

16 MR. BECKMAN: Okay. Do you have a perspective  
17 based on either your own opinion or EPA's endorsement  
18 about whether the NGO, county and city proposal and LID  
19 would be appropriate for inclusion in the permit?

20 SENIOR STAFF COUNSEL LEVY: I'm going to have to  
21 object because I think that calls for deliberative process  
22 privilege.

23 CHAIRPERSON LUTZ: I'm sorry, Mr. Levy, I  
24 couldn't hear you.

25 SENIOR STAFF COUNSEL LEVY: I'm raising an

1 objection based upon deliberative process privilege. The  
2 nature of the objection is Mr. Beckman is asking Sam for  
3 his own opinions about what the staff recommendation is,  
4 which were generated by all staff under the approval of  
5 the assistant executive officer and the executive officer.  
6 And to ask him to piecemeal in this manner is not really  
7 appropriate.

8 CHAIRPERSON LUTZ: I am inclined to agree.

9 MR. BECKMAN: Okay. Well, then let me just, for  
10 the record, state that Mr. Unger purported to give you the  
11 staff's recommendation. And to object to a question that  
12 asks him whether that recommendation would change based on  
13 testimony of the Environmental Protection Agency strikes  
14 me as inappropriate. And from a broader perspective, if  
15 this is truly an effort to try to figure out which way to  
16 go, perhaps impairing the Board in making a decision based  
17 on all the facts, but I will move on.

18 CHAIRPERSON LUTZ: Well, maybe you could rephrase  
19 the question to where you're asking just for his opinion  
20 of whether he could change -- he would recommend a  
21 change --

22 MR. BECKMAN: Well, sure, I'd be happy to.

23 CHAIRPERSON LUTZ: -- as opposed to having him  
24 respond on behalf of other staff members.

25 MR. BECKMAN: Thank you.

1 Mr. Unger, would you, based on your own opinion  
2 as the lead on this permit, change your own view of the  
3 suitability of the NGO, county and city LID proposal based  
4 on EPA's endorsement a few moments ago?

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: I do not  
6 think that the proposal on the LID area is representative  
7 of the best engineering as currently applied to stormwater  
8 permits in the LID arena at this time.

9 MR. BECKMAN: Is that a no, you won't change your  
10 opinion? If you can just help by summarizing, are you  
11 answering yes or no? I take it it's a no.

12 SENIOR STAFF COUNSEL LEVY: The problem is that  
13 the staff recommendation is not entirely Mr. Unger's, it's  
14 an entire staff recommendation. And what you're asking --

15 MR. BECKMAN: Mr. Levy, that was just dealt with  
16 by the Chair, that was just directly dealt with by the  
17 Chair. It's a question, simple question.

18 SENIOR STAFF COUNSEL LEVY: Madam Chair, what the  
19 problem is is that what Mr. Beckman is asking him to do  
20 potentially is to contradict his executive officer on  
21 recommendations that were derived behind closed doors from  
22 a staff perspective. And his own opinion is not  
23 necessarily the staff opinion.

24 MR. BECKMAN: Madam Chair, I'll move on. I think  
25 I have a good enough answer. Thank you.

1 Mr. Unger, you characterized in your presentation  
2 and in the proposed finding, B19 that you presented today,  
3 that there is a debate, essentially, and this is to  
4 paraphrase, between a standard of retaining a fixed amount  
5 of water on the one hand, and on the other hand allowing  
6 for the discharge of water through LID, BMPs consistent  
7 with the predevelopment hydrology. Is that more or less  
8 correct?

9 REGIONAL PROGRAMS SECTION CHIEF UNGER: I believe  
10 so, yes.

11 MR. BECKMAN: But your approach would allow, in  
12 fact in some cases, it would prioritize infiltration and  
13 reuse of water on site, i.e., retention; isn't that  
14 correct?

15 REGIONAL PROGRAMS SECTION CHIEF UNGER: I believe  
16 so, yes.

17 MR. BECKMAN: And the approach that the NGOs and  
18 others have come up with that you've characterized as a  
19 retention standard, in fact, doesn't require the retention  
20 of all rainfall on site; isn't that correct?

21 REGIONAL PROGRAMS SECTION CHIEF UNGER: Not of  
22 all rainfall.

23 MR. BECKMAN: You stated that the proposal, the  
24 fixed retention standard as you characterized it, and this  
25 is to paraphrase, was a first of its kind; isn't that



1 right? That was your statement, correct?

2 REGIONAL PROGRAMS SECTION CHIEF UNGER: I can't  
3 recall whether I characterized it as --

4 MR. BECKMAN: Do you think it's a first of its  
5 kind?

6 REGIONAL PROGRAMS SECTION CHIEF UNGER: Within a  
7 stormwater permitting context, I believe that it's rather  
8 unique.

9 MR. BECKMAN: Are you familiar with the draft  
10 proposed Phase 2 permit for West Virginia that was cited  
11 in comments?

12 (Laughter.)

13 REGIONAL PROGRAMS SECTION CHIEF UNGER: To  
14 some -- I have peripheral knowledge.

15 MR. BECKMAN: It's a yes or no. Yes or no?

16 SENIOR STAFF COUNSEL LEVY: Chair, I would just  
17 ask Mr. Unger to answer the question however he wants and  
18 to, not be caged in by Mr. Beckman's admonitions.

19 CHAIRPERSON LUTZ: Fine. Just --

20 REGIONAL PROGRAMS SECTION CHIEF UNGER: I've read  
21 a summary of that permit. I understand it's still in  
22 draft.

23 MR. BECKMAN: Right. As it's drafted, does it  
24 require the retention of water on site?

25 REGIONAL PROGRAMS SECTION CHIEF UNGER: I don't

1 know.

2 MR. BECKMAN: Are you familiar with the standards  
3 for Anacostia, Washington, D.C.?

4 REGIONAL PROGRAMS SECTION CHIEF UNGER: No.

5 MR. BECKMAN: Are you familiar with the standards  
6 for Philadelphia, Pennsylvania?

7 REGIONAL PROGRAMS SECTION CHIEF UNGER: No.

8 MR. BECKMAN: Are you familiar with the standards  
9 for Pennsylvania as a whole?

10 REGIONAL PROGRAMS SECTION CHIEF UNGER: No.

11 MR. BECKMAN: Are you familiar with the standards  
12 for New Jersey?

13 REGIONAL PROGRAMS SECTION CHIEF UNGER: No.

14 MR. BECKMAN: What about Santa Fe, New Mexico?

15 REGIONAL PROGRAMS SECTION CHIEF UNGER: No.

16 MR. BECKMAN: What about the central coast of  
17 California?

18 REGIONAL PROGRAMS SECTION CHIEF UNGER: I have  
19 some knowledge there.

20 MR. BECKMAN: In and around 2001, the Regional  
21 Board adopted, what we all in this world called, the  
22 SUSMP, the Standard Urban Stormwater Mitigation Plan. Are  
23 you familiar with that?

24 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

25 MR. BECKMAN: Does that standard allow for

1 infiltration of the design storm, the 85th percentile  
2 storm, on site?

3 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

4 MR. BECKMAN: Were there issues raised at that  
5 time regarding vectors, potential slope instability,  
6 flooding, and ponding, and the like?

7 REGIONAL PROGRAMS SECTION CHIEF UNGER: I don't  
8 know if those issues were raised at that time.

9 MR. BECKMAN: Okay. Do you know whether there  
10 have been any problems with flooding and vectors and slope  
11 instability, or has the Regional Board staff provided for  
12 technical guidance that addresses those issues?

13 REGIONAL PROGRAMS SECTION CHIEF UNGER: I would  
14 have to consult with other staff on that to give you a  
15 complete answer there.

16 MR. BECKMAN: Okay. So you don't know one way or  
17 the other whether those issues have been addressed  
18 yourself.

19 REGIONAL PROGRAMS SECTION CHIEF UNGER: I would  
20 like to consult with my other staff, if possible.

21 MR. BECKMAN: Okay. Fair enough.

22 You stated in your proposed findings, and I think  
23 sort of summarized during your presentation, this again is  
24 B19 on your change sheet, May 7th, that you couldn't  
25 find -- well, let me rephrase that. You didn't state.

1           The staff is proposing that the Water Board adopt  
2 a finding that states that the Board can't find -- the  
3 staff cannot find that if a fixed retention volume versus  
4 a standard that attempts to release surface water at a  
5 predevelopment level would result in a greater reduction  
6 of stormwater pollution. This is on page 1 of 12 of your  
7 proposal. Are you with me?

8           REGIONAL PROGRAMS SECTION CHIEF UNGER: I need  
9 another minute.

10          MR. BECKMAN: Okay. Sure.

11          SENIOR STAFF COUNSEL LEVY: What document are you  
12 referring to, Mr. Beckman?

13          MR. BECKMAN: This is your proposed, "your" being  
14 the Regional Board's proposed change sheet, County of  
15 Ventura, MS4 Tentative Permit Change Sheet May 7, 2009,  
16 12-page document. You had it out on the counter today.

17                 There aren't any more copies or I'd give you a  
18 copy. I say there aren't anymore; you don't have enough  
19 copies for everybody. I can show you mine if you'd like.

20          REGIONAL PROGRAMS SECTION CHIEF UNGER: No, no,  
21 let me go get a copy, please.

22          MR. BECKMAN: I hope this isn't going to count  
23 against my time.

24                 Mr. Unger, while you're reading these did you  
25 have anything to do with drafting this finding, B19?

1 SENIOR STAFF COUNSEL LEVY: Relevance.

2 CHAIRPERSON LUTZ: Well, to what purpose?

3 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

4 MR. BECKMAN: So are you with me now? Do you  
5 have the document?

6 REGIONAL PROGRAMS SECTION CHIEF UNGER: I do.

7 MR. BECKMAN: Can you tell me the basis, the  
8 factual basis and what evidence in the record supports the  
9 finding that you propose, specifically that final sentence  
10 regarding the fixed retention versus a standard that  
11 attempts to release subsurface flows?

12 REGIONAL PROGRAMS SECTION CHIEF UNGER:

13 Basically, the last sentence of that  
14 sentence -- of that paragraph of that finding -- well,  
15 first of all, let me say that finding was drafted in  
16 response to one of your comments that said that we did not  
17 have a finding regarding LID. So that's why the finding  
18 is there, first of all, and I appreciate the comments so  
19 that we were able to include that.

20 The references are in the finding, and the basis  
21 for that statement is basically that the references are  
22 not cited to actual analytical data to support a  
23 reduction -- that show a reduction in pollution. They're  
24 based on engineering analysis.

25 MR. BECKMAN: Okay. Do you agree that the

1 engineering analysis provided by Dr. Richard Horner in  
2 February 2007 that you cite and that we have submitted and  
3 that he prepared regarding Ventura County, supports the  
4 idea that retaining water on site means no pollution  
5 discharge for the amount retained, and discharging water  
6 even through very good BMPs will allow pollution off site,  
7 so verified Dr. Horner? Do you agree with that?

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: Not  
9 entirely.

10 MR. BECKMAN: What don't you agree about it?

11 REGIONAL PROGRAMS SECTION CHIEF UNGER: I think  
12 that on some sites where there are pollutants on the land  
13 surface, if they are infiltrated, those pollutants could  
14 be transported to the subsurface into the groundwater,  
15 which I'm presuming you mean by "off site."

16 MR. BECKMAN: I meant surface water. So that's  
17 an interesting point. So let me make it very clear what  
18 I'm asking you.

19 Do you agree with what Dr. Horner presented to  
20 you and the Board and his basic conclusion that the  
21 majority of sites that he did an engineering analysis of,  
22 that the LID methods would allow for the design storm to  
23 retain on site and so no pollution would be off site to  
24 surface waters?

25 REGIONAL PROGRAMS SECTION CHIEF UNGER: You're

1 asking a technical question which is not exactly amenable  
2 to a simple yes or no answer.

3 Dr. Horner's analysis was based on assumptions,  
4 many of those assumptions being on soil permeability in  
5 areas outside of Ventura County as well.

6 And so in that sense, I think -- I don't really  
7 agree or disagree with his analysis. I think that there's  
8 limitations on the level of his analysis that can be  
9 derived.

10 MR. BECKMAN: Let me try one more time, real  
11 simple.

12 If a certain amount of water falls on a site,  
13 let's call it the design storm, and that water is put in a  
14 cistern or is infiltrated according to appropriate  
15 technical means, will any pollution flow off that site  
16 into Ventura County waters?

17 REGIONAL PROGRAMS SECTION CHIEF UNGER: I'm  
18 sorry, Mr. Beckman. Can I ask you to repeat that  
19 question?

20 MR. BECKMAN: Yes. What I'm asking, Mr. Unger,  
21 is if water is retained on site and not discharged to  
22 surface waters, isn't it true, doesn't it follow that  
23 there will not be pollution in the water that doesn't  
24 escape the site? Isn't it true that maintaining water on  
25 site when you can do so reduces pollution compared to

1 methods that merely reduce some of the pollution in a  
2 water discharge that goes off site? Isn't that a very  
3 basic point? Do you agree or do you disagree?

4 REGIONAL PROGRAMS SECTION CHIEF UNGER: I  
5 disagree in the manner in which you've stated it. You say  
6 does it reduce pollution? No, it doesn't reduce  
7 pollutants. It reduces the impacts to surface waters,  
8 yes, that I agree with, but it does not reduce the  
9 pollutants.

10 In fact, I would say that some of the other  
11 methods for LID, such as biofiltration, do more to reduce  
12 pollution than simple infiltration does.

13 MR. BECKMAN: Okay. So I think buried in there I  
14 have my answer, and I appreciate that.

15 REGIONAL PROGRAMS SECTION CHIEF UNGER: Glad to  
16 help.

17 MR. BECKMAN: A question about your proposal, or  
18 let's just call it staff's proposal that you've  
19 recommended the Board adopt on LID. Would the staff  
20 proposal in situations of infeasibility where the five  
21 percent EIA standard is not met at a site, would it  
22 require that a comparable level of pollution reduction  
23 occur within the same watershed or within the same county?

24 REGIONAL PROGRAMS SECTION CHIEF UNGER: Not at  
25 this point. Those documents are to be developed during



1 the course of the permit. I'd have to look and tell you  
2 exactly how many days for executive officer approval.

3 I think those ideas and concepts have a lot of  
4 merit.

5 MR. BECKMAN: Okay. So it's fair to say now that  
6 the in-lieu programs and the other forms of alternative  
7 compliance have not been formulated as we stand here  
8 today.

9 REGIONAL PROGRAMS SECTION CHIEF UNGER: Again,  
10 it's a question of the degree. There's a requirement for  
11 the County of Ventura to come forth with a plan for  
12 executive officer approval during the life of the permit.

13 MR. BECKMAN: Okay. Did you take into  
14 consideration the Governor's emergency drought declaration  
15 when you formulated the development, redevelopment  
16 provisions of the permit? And by "you," I mean you and  
17 the staff.

18 REGIONAL PROGRAMS SECTION CHIEF UNGER: As  
19 Regional Board staff, we do.

20 MR. BECKMAN: How did you incorporate and respond  
21 to the drought declaration in the LID section, if at all?

22 REGIONAL PROGRAMS SECTION CHIEF UNGER: We set  
23 forth a series of priorities in which infiltration and  
24 capture and reuse is amongst the highest of the  
25 priorities.

1 MR. BECKMAN: So would it be -- this is my final  
2 question.

3 So would it be fair to say that both in the  
4 proposal you have before the Board and the ones that the  
5 NRDC and others have proposed, that infiltration and  
6 capture are the leading first-rank approaches to  
7 satisfying the standard?

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: At sites  
9 where it's appropriate. My concern is basically with the  
10 technical infeasibility that you've set forth in your  
11 proposal is not comprehensive enough to really determine  
12 some areas that may be more problematic and the effects  
13 would be detrimental rather than beneficial.

14 MR. BECKMAN: Okay. But you were familiar with  
15 the fact that there is technical infeasibility allowances  
16 in both your proposal and ours.

17 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes, I  
18 am.

19 MR. BECKMAN: Okay. Thank you very much.  
20 Appreciate your time.

21 CHAIRPERSON LUTZ: Okay. Mr. Beckman, we will  
22 now go to the county to ask any questions they have. And  
23 when we return back to you, Mr. Beckman, for your  
24 presentation, you will have 32 minutes remaining of your  
25 time.

1 Let's see. You reserved --

2 MS. DUNHAM: I think 10 minutes for rebuttal, so  
3 it would be 15.

4 CHAIRPERSON LUTZ: Okay. So let's put 15 on  
5 here.

6 MS. DUNHAM: And hopefully we'll be done much  
7 sooner than that, Madam chair.

8 SENIOR STAFF COUNSEL LEVY: Is there a glass of  
9 water we can get for Sam?

10 Thanks, Steve.

11 MS. DUNHAM: Shall I begin? Thank you.

12 CROSS EXAMINATION

13 BY MS. TESS A. DUNHAM, ESQ., representing the County of  
14 Ventura as follows:

15 Mr. Unger, could you please let us know if you  
16 have been assigned to oversee the development of this  
17 stormwater permit since it first began its inception back  
18 in 2006?

19 REGIONAL PROGRAMS SECTION CHIEF UNGER: Not at  
20 that time, no.

21 MS. DUNHAM: And can you tell us exactly when you  
22 took over this project?

23 REGIONAL PROGRAMS SECTION CHIEF UNGER: Sometime  
24 in late spring of 2008.

25 MS. DUNHAM: So is it fair to say that a good

1 amount of the permit was developed by others when you were  
2 not overseeing them as part of your staff?

3 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes, it  
4 is a fair statement.

5 MS. DUNHAM: And you are chief of your unit; is  
6 that correct, Mr. Unger?

7 REGIONAL PROGRAMS SECTION CHIEF UNGER: It's  
8 technically called a section. There are several units in  
9 the section.

10 MS. DUNHAM: How many staff do you oversee?

11 REGIONAL PROGRAMS SECTION CHIEF UNGER: Too many.

12 (Laughter.)

13 REGIONAL PROGRAMS SECTION CHIEF UNGER: I think  
14 on the order of about 20.

15 MS. DUNHAM: Are you intimately familiar with  
16 everything that all 20 of your staff do at all times on  
17 all issues and projects?

18 REGIONAL PROGRAMS SECTION CHIEF UNGER: No.

19 (Laughter.)

20 MS. DUNHAM: I'm glad to hear it.

21 And so, therefore, you end up relying on your  
22 staff for a fair amount of expertise that they provide on  
23 all of the projects that are under your watch; is that  
24 correct?

25 REGIONAL PROGRAMS SECTION CHIEF UNGER:

1 Absolutely.

2 MS. DUNHAM: Thank you. And moving on to the  
3 agreement, is it your understanding that the agreement  
4 that the city managers and the NGOs put before the  
5 Regional Board from consideration was put forward as an  
6 agreement in whole, in that it was taken to be considered  
7 as one. And if any piece was taken out of it, that the  
8 supporters of the agreement would not support the elements  
9 within it?

10 REGIONAL PROGRAMS SECTION CHIEF UNGER: That's my  
11 understanding, yes.

12 MS. DUNHAM: So with that understanding then, is  
13 it your understanding if EPA's recommendation, which I  
14 believe, and I paraphrase, was to adopt the LID language  
15 that appears in the agreement, but maintain the MALs, that  
16 that would mean the agreement as a whole would no longer  
17 be supported by all of its entities?

18 REGIONAL PROGRAMS SECTION CHIEF UNGER: That is  
19 my understanding.

20 MS. DUNHAM: Thank you.

21 And there is one other question I had for you.

22 On going to one of the last points that  
23 Mr. Beckman had, in the revised tentative order that was  
24 released recently, there were some amendments to the  
25 mitigation funding portion of the planning and development

1 I believe.

2 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes,  
3 there were.

4 MS. DUNHAM: And that was a -- you added a new  
5 provision in the mitigation funding that basically, if  
6 I -- I will read it here if that's all right for the  
7 Chair. "When a permittee determines that a project is  
8 infeasible in accordance with 5(e)(3)(1)(c) --" or I think  
9 (d), we've referenced the fact -- or to (b) "-- the  
10 project applicant shall provide sufficient funds to the  
11 permittee for a public project that will retain or  
12 mitigate a volume of stormwater equivalent to the on-site  
13 retention volume that was not retained on site."

14 With that change, would you believe that that is  
15 intended to mean that where we cannot meet a 5 percent  
16 EIA, because it's infeasible, that there will be some  
17 mitigation that takes place within the watershed for that?

18 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

19 MS. DUNHAM: Thank you. No more questions.

20 CHAIRPERSON LUTZ: Okay. Thank you very much.

21 MR. LEVY: Chair Lutz, I have just about three  
22 questions for Mr. Unger.

23 CHAIRPERSON LUTZ: Okay. As we're being nimble,  
24 yes, okay.

25 MR. LEVY: Thank you.

1 CHAIRPERSON LUTZ: And just so everybody is  
2 aware, when Mr. Levy has completed his questions, we will  
3 be taking a short break.

4 DIRECT EXAMINATION

5 BY MR. MICHAEL LEVY, SENIOR STAFF COUNSEL, representing  
6 the Los Angeles Regional Water Quality Control Board  
7 staff:

8 Mr. Unger, what is your specific title?

9 REGIONAL PROGRAMS SECTION CHIEF UNGER: Section  
10 Chief of the Regional Programs Section.

11 SENIOR STAFF COUNSEL LEVY: Is the Regional  
12 Programs Section responsible for surface water,  
13 groundwater, or both?

14 REGIONAL PROGRAMS SECTION CHIEF UNGER: Surface  
15 water primarily.

16 SENIOR STAFF COUNSEL LEVY: Does the fact that it  
17 is responsible for surface water primarily mean that you  
18 are not supposed to look at impacts of groundwater in the  
19 decisions you do?

20 REGIONAL PROGRAMS SECTION CHIEF UNGER: Not at  
21 all. In fact, you may recall several months ago we looked  
22 at a TMDL that had a very strong surface water/groundwater  
23 interaction component to it in the upper Santa Clara  
24 River, and we definitely had to look at groundwater  
25 impacts there.

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1 MR. LEVY: And is the Regional Board obligated to  
2 protect groundwater as well as surface water?

3 REGIONAL PROGRAMS SECTION CHIEF UNGER: That's my  
4 understanding, yes.

5 SENIOR STAFF COUNSEL LEVY: Thank you, Mr. Unger.

6 CHAIRPERSON LUTZ: Okay. Thank you very much.  
7 We will take a 15-minute break and be back here at  
8 approximately quarter to 4:00.

9 Thank you.

10 (Thereupon a recess was taken.)

11 CHAIRPERSON LUTZ: If you'd like to take your  
12 seats, we are going to resume.

13 Just so we're all clear on where we're going from  
14 here, let me again reiterate our process from here on out.

15 The NRDC has 32 minutes remaining on their -- for  
16 their time. After that, what we will do is I have several  
17 speaker cards here from interested parties from the  
18 community and all over, and I would like to give them an  
19 opportunity to make sure they have an opportunity to  
20 speak, so I will then call up the speaker cards.

21 After that, we have a presentation by -- from  
22 BIA, and that is allotted 30 minutes. And then should  
23 rebuttal be necessary, each side has a 10-minute rebuttal.

24 At that point, we will go right to the Board's  
25 questions, answers and deliberation.

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1 Mr. Beckman.

2 MR. BECKMAN: Thank you.

3 CHAIRPERSON LUTZ: Thank you, Madam Chair. So I  
4 have 32 minutes, right?

5 CHAIRPERSON LUTZ: Yes.

6 MR. BECKMAN: Okay. So why was it necessary to  
7 talk to Mr. Unger?

8 Well, I think you heard at least part. We felt  
9 that what we heard this morning was counter-factual, and  
10 in a moment I'll tell the ways in which I think Mr. Unger  
11 himself confirmed. But some of what he said either was an  
12 overstatement or a misstatement, but I think those are  
13 important clarifications.

14 But before I begin and before I start, I want to  
15 know how many of you in the room or among the Board have  
16 seen the Little Hoover Report. If you haven't, you should  
17 read it. It's an independent report on the regional  
18 boards. And in the transmittal letter to the Governor of  
19 California, the nonpartisan commissions says, among other  
20 things, that the current regional board structure places  
21 too little emphasis on accountability and outcomes. This  
22 isn't NRDC saying there's too little emphasize, this is  
23 the independent commission.

24 They go on to say that no one is holding regional  
25 boards truly accountable for protecting and improving

1 water quality. This is a particularly damning assessment.  
2 And I think, unfortunately, that it's true or has been  
3 true of regional board actions here and other places.  
4 There has not been a focus on accountability.

5           And the animating theme of what you're going to  
6 hear from us is, and the reason why we're asking you to  
7 make changes to the permit before it's adopted, including  
8 those that we've agreed upon in a historic agreement with  
9 the permittees, is because it is time to stop pushing the  
10 decisions down the lane. It is time to make decisions  
11 clearly, to debate the standards, but to set standards.

12           And with all due respect to your staff, the  
13 present -- the proposal you have before you is half-baked.  
14 It is full of typographic errors. It is full of  
15 references that were left in. It betrays in every sense  
16 the need for more time at a minimum. And with respect to  
17 critical components like Low Impact Development, things  
18 that could actually fix the water quality problems, it is  
19 incomprehensible. That's why I think EPA recommends some  
20 pretty significant changes and why we do.

21           Now, let me tell you that there are things going  
22 on outside the Regional Board that should be taken into  
23 consideration, and which the staff proposal, particularly  
24 on Low Impact Development that's what my focus will be on,  
25 and Mark will then expand our focus to some other

1 points -- there's recognition that these are critical  
2 things that need to be permits. So let me show you some  
3 of them.

4 (Thereupon an overhead presentation was  
5 presented as follows.)

6 MR. BECKMAN: The Ocean Protection Council, which  
7 is a function of the State, found that LIDs are  
8 practicable and a superior approach to addressing runoff.  
9 This is just last year.

10 --oOo--

11 MR. BECKMAN: EPA has similarly looked at the  
12 cost involved in Low Impact Development found that they  
13 are, in most cases, either comparable to traditional  
14 approaches or in many situations less costly than  
15 traditional development approaches. So here, the  
16 environmental community is coming forward, not with a  
17 proposal that costs more money, but with a proposal that  
18 actually is, in most cases, a cost savings to developer  
19 and to communities, and yet it is a superior pollution  
20 approach.

21 You'll hear later from the BIA -- and I know  
22 because Mark Grey are like traveling -- it's like a  
23 traveling show, so I do my thing, he does his -- and he  
24 will tell you in part that LID is being circumscribed by  
25 the NGOs, that we're trying to focus on retention of water

1 when we should be broader.

2 Well, first of all, the question before you is  
3 not what the definition of LID is, the question is a  
4 permit that meets water quality standards and is  
5 consistent with MEP. And the things that do that best are  
6 retaining water, infiltrating it, or putting it in  
7 cisterns and reusing it in every situation in which that  
8 can be done. And when you can't do it, nobody, including  
9 NRDC and Heal the Bay, are saying you should.

10 The suggestion that you got from Mr. Unger, I  
11 think, was a misstatement. We do not have a no-discharge  
12 standard, and he agreed a moment ago.

13 The standard that the Regional Board is proposing  
14 does include water on site. So all those issues about  
15 vectors that he tried to suggest were really issues about  
16 our proposal are equally issues with his proposal and the  
17 staff's, and equally issues with LID.

18 The good news is the world has figured out ways  
19 to deal with those issues. When we infiltrate water, we  
20 don't pollute groundwater basins, because we do it  
21 consistent with technical requirements. We don't flood  
22 homes, because we have technical knowledge about how that  
23 is to be avoided. And we do not put water in the ground  
24 when it's going to mobilize pollutants, of course. So the  
25 fact of the matter is that what we're proposing is not





1 meeting the requirements established by the permit.

2 My friend Mark Grey in a letter to the Orange  
3 County board said that, you know, if you're using  
4 conventional means, you should make up the difference  
5 somewhere else. EPA says the same thing.

6 The permit proposal that you have in front of you  
7 doesn't even go as far as Mark Grey from the BIA is  
8 willing to go. And I don't mean that in a negative way.  
9 I think Mark actually is a productive stakeholder in these  
10 debates. But when your permit doesn't do as much as the  
11 Building Industry Association is on record saying should  
12 be done, how can you consider that to be MEP?

13 --o0o--

14 MR. BECKMAN: Mr. Unger indicated in my recent  
15 conversation with him today that some of the these things  
16 are going to be developed, some of these plans are going  
17 to be developed. Well, EPA said to you a moment ago, and  
18 has said in writing in California, that they've seen that  
19 approach not work out time and again. This is pushing the  
20 decision down the path. Kicking the can down the street.  
21 All the key issues staff are proposing to work out later,  
22 and it is isn't coming back to you. And there isn't even  
23 any public review. And that's totally illegal, and it's  
24 also bad policy. Those decisions should be here. And we  
25 should all have a chance to engage on them.

1 --o0o--

2 MR. BECKMAN: Very briefly, because I don't want  
3 to -- I could go on forever.

4 Dr. Horner, who is an eminent stormwater  
5 scientist, member of the National Academy of Sciences  
6 Panel, which Xavier Swamikannu was also a member of,  
7 looked at these issues in Ventura County. It's in the  
8 record. The short summary is in most every situation he  
9 found that you can feasibly retain the design storm, 85th  
10 percentile storm on site.

11 The point is, that's a reasonable and appropriate  
12 standard, particularly when all are in agreement that  
13 there should be exceptions when that can't be done. So  
14 we're not asking for something that hasn't been verified  
15 generally by EPA, and we're not asking for something that  
16 hasn't been specifically investigated by a leading  
17 engineer in Ventura County.

18 I'll skip over the performance.

19 ---o0o--

20 MR. BECKMAN: Suffice to say that Dr. Horner's  
21 conclusion is that even if you use the best performing  
22 biofiltration approaches that Mr. Unger talked about, they  
23 don't do as well from a pollution prevention approach as  
24 retaining water on site.

25 What I should have said to Dr. Unger, as Mark



1 Gold pointed out, but, you know, he can come up and do it  
2 next time, is that if you discharge no pollution versus  
3 discharging some pollution, which is less pollution? And  
4 the idea that that pollution is going to get suspended  
5 into groundwater basins is -- would only mean that the  
6 Regional Board staff haven't done their job in providing  
7 the appropriate limitations for infiltration.

8           Infiltration is done all over the country. It's  
9 done in California. It's done everywhere. And the way  
10 you do it safely is you make sure you don't pollute  
11 groundwater basins. We are all in agreement. But when  
12 it's done safely, it is a superior approach, and the  
13 record shows it's a superior approach, and staff's refusal  
14 to acknowledge that is troubling.

15   --o0o--

16           MR. BECKMAN: National Association of  
17 Homeowners -- of Home Builders likes LID. Mark Grey will  
18 tell you himself that they like it, a little different  
19 than we like, but they like it too.

20   --o0o--

21           MR. BECKMAN: I asked Mr. Unger about some of the  
22 standards because I thought that maybe he wasn't familiar  
23 with the fact that what we're proposing is weaker, weaker  
24 than what has been implemented or is being considered  
25 across the country.

1           These are some examples. Anacostia, Washington,  
2 ultra urban, low income to large extent requiring the  
3 infiltration or the retention of water on site; one-inch  
4 storm, bigger storm than here. That's in place.

5                               --o0o--

6           MR. BECKMAN: West Virginia, Phase 2 permit,  
7 Phase 2 permit West Virginia. It is a draft permit,  
8 on-site retention. And if you can't do it, you mitigate  
9 off site 1.5 times the volume. If they can do it in West  
10 Virginia, they can do it here.

11                              --o0o--

12           MR. BECKMAN: Philadelphia - you get the point.  
13 The point is that I think in staff's characterization of a  
14 first of its kind sort of out there potentially  
15 catastrophic impacts is factually incorrect. The record  
16 doesn't support it, and it's a disservice to you,  
17 candidly, to get that kind of advice.

18                              --o0o--

19           MR. BECKMAN: So I think you understand our  
20 concerns. Let me just summarize them. We want a clear,  
21 internally consistent standard that will minimize  
22 pollution. We want pollution minimized in every instance  
23 that it can be, particularly because LID can do it  
24 practicably and without a lot of expense. That should  
25 apply to all regulated projects, development and

1 redevelopment. And if it can't be done, there can be  
2 tailored exemptions that are appropriate so that nobody  
3 has to float their building away by retaining water in  
4 situations where it really shouldn't be done.

5 --o0o--

6 MR. BECKMAN: I won't go over this because of  
7 time, but I would just say that in criticizing the permit,  
8 I don't do that in a personal way to staff. But I've read  
9 a lot of permits, and the West Virginia permit -- you can  
10 see this if you read our letter -- compare it to the  
11 language that you're asked to consider. Just read both of  
12 them when you have a moment.

13 One is very clear, very simple, and the other is  
14 totally complicated without all of the connections made,  
15 so you end up not knowing what's going to happen. And as  
16 EPA points out, when that happens, you don't get a level  
17 performance. It's not trying to be letter perfect to be  
18 letter perfect. It's because if you're not reasonably  
19 clear, you won't get environmental performance.

20 --o0o--

21 MR. BECKMAN: This is just a quick example. West  
22 Virginia. The first one inch of rainfall must be 100  
23 percent managed with no discharge of surface waters.  
24 That's clear regulatory language; compare it to your  
25 permit, and I think you'll see a difference.

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1 sort of subjectively by asking people to prioritize and to  
2 infiltrate when they can. Under your permit language, you  
3 can treat and release even when it's practicable to  
4 infiltrate, even when that water might be used to offset  
5 drought. Does that make any sense? Is that responsive to  
6 the Governor's emergency drought declaration? I don't  
7 think so.

8 --o0o--

9 MR. BECKMAN: I mentioned already, but to  
10 summarize, the provisions that are going to be developed  
11 in the future are supposed to come back to the Board.  
12 There's all sorts of law on that, 9th Circuit, I won't get  
13 into it. It's pretty straightforward. That's not going  
14 to happen, and there's no provision for most of the new  
15 development requirements for even the public to be kept in  
16 the loop, with one exception, the RPAMP where there is.

17 Mark will talk about hydromodification, which is  
18 another big loophole, but I'll skip over it.

19 There are other issues, but I think because of  
20 the time and all of the people that are left to be heard  
21 that I'm going summarize the rest of the arguments, but  
22 will say this: When you look at the arguments we're  
23 making, we make others about non-stormwater discharges,  
24 about new sources of pollution and impaired watersheds,  
25 about being wishy-washy, yet again, about whether TMDLs





1 to meet with staff to help them better understand our  
2 joint proposal and to gauge their concerns.  
3 Unfortunately, they didn't take us up on this offer, and I  
4 think we're kind of seeing the result of that here today.

5 I think they should have at least vetted this  
6 agreement with the person who used to be working on this  
7 permit, which is the National Academy of Sciences' expert  
8 on your own staff, to better understand the proposal.  
9 Because clearly Xavier had a great deal, and still has a  
10 great deal, of stormwater expertise that I think would be  
11 useful from the standpoint of clarifying this provision on  
12 LID.

13 A couple of different issues in relation to LID,  
14 in Heal the Bay and NRDC's proposals, our comments I  
15 should say, is that we agree -- we basically stated that,  
16 as you had in your earlier drafts, that LID should apply  
17 projects 5,000 square feet or greater. You guys flipped  
18 it to 10,000 square feet in this latest version.

19 Also, on the issue of the Redevelopment Project  
20 Area Master Plan, the RPAMP, approach as you've heard a  
21 little about today. Once again, this is a really  
22 ambiguous approach. It's unclear what this even is. And  
23 what it really means for you guys and your staff is it's  
24 very labor intensive. There's no clear, positive,  
25 definitive outcome of implementing any of these plans.



1 It's another big burden for you guys to review that and  
2 then approve it and see if it's functionally equivalent to  
3 five percent EIA.

4           That's the exact approach that David was talking  
5 about that the Hoover Commission was saying we need to get  
6 away from that. And so that really needs to be deleted as  
7 an alternative as a means to comply with new  
8 development-redevelopment performance criteria. So we've  
9 got to get rid of that.

10           On stormwater recharge, you heard a little bit  
11 about that and the concerns there. I have to admit I was  
12 very, very surprised by that. I don't know of aquifer  
13 problems that are occurring except for things with  
14 chloride as well as with nutrients. And, as you know,  
15 that's generally not coming from stormwater. That's  
16 coming from drinking water with high chloride  
17 concentrations, or it's coming from nutrients from POTWs  
18 or from ag runoff. It's not coming from urban runoff.

19           And so I was more than a little bit surprised on  
20 that, and very inconsistent with the water recycling  
21 policy that I had the privilege of help negotiating, that  
22 the State Water Resources Control Board just approved,  
23 which basically said, please, let's recharge stormwater as  
24 much as possible. Guess what? That's what this approach  
25 is all about that's being brought forward to you by the

1 permittees as well as the environmental community. Yet  
2 somehow there seems to be some disagreement that that's  
3 the best way to deal with this issue.

4           The other thing I want to add is it's not just  
5 the State Water Board and all those various different  
6 entities that agreed on that, including the POTW community  
7 and the water supply community, et cetera, on how  
8 important that was; but even locally within your region,  
9 the Bureau of Reclamation, Federal Bureau of Reclamation,  
10 did a 5-year study for the L.A. San Gabriel River  
11 Watershed Council that showed that really there was  
12 negligible risk to recharging stormwater and the impacts  
13 to groundwater supply. Doesn't mean that you don't  
14 monitor and it keep an eye on it. But from the standpoint  
15 of trying to say that this is some red herring we should  
16 really be worried about, it's pretty ridiculous at this  
17 point.

18           All right. Moving to hydromodification, just to  
19 remind you that SUSMP and LID provisions minimally impact  
20 hydromodification concerns. Those are all dealing with  
21 small storms. What we're really concerned about on  
22 hydromod is what happens when we have these major storms,  
23 major sedimentation and erosion that are basically  
24 severely degrading our riparian habitats. So that's the  
25 big issue.



1 five. And you see what those are. So no more cadmium, no  
2 more chromium, etc., etc., no more nickel. So there's a  
3 wide variety of toxic metals that have been dropped, as  
4 well as other sorts of constituents, like total coliform  
5 and E.coli and the like. So it's been severely, severely  
6 weakened, and that's obviously a major concern.

7 --o0o--

8 DR. GOLD: MALs, at the beginning of year three  
9 after order adoption date, each permittee shall submit a  
10 MAL action plan with the annual report to the executive  
11 officer for those subwatersheds with a running average of  
12 20 percent or greater of exceedances.

13 So it's not even when you meet -- you know,  
14 basically nobody's going to say we're doing a good job  
15 nationally on stormwater pollution. So 80th percentile  
16 may sound like a decent thing, but overall we're not doing  
17 a very good job. And even then, if you exceed a number, a  
18 MAL, you got to exceed a bunch to basically get to that  
19 point. So it's not even a matter of you're exceeding one  
20 and that's enough, you've got to be at 20 percent. So  
21 right now the way these MALs are written are very, very  
22 weak. And that's a major, major concern to the  
23 environmental community and something that we had  
24 recommended. So this gives you an idea of how weak they  
25 are.

1 --oOo--

2 DR. GOLD: What we've seen is that they've -- in  
3 comparison, you can tell right here that the MAL numbers  
4 are much, much higher than CTR numbers, on California  
5 Toxics Rule numbers. For biofiltration, just to give you  
6 an idea of performance and what those levels are, you  
7 know, even the -- every single one of these 90th  
8 percentile treatment for those constituents on the left is  
9 obviously better than the proposed MAL.

10 --oOo--

11 DR. GOLD: So we're basically saying it's no  
12 relation whatsoever to MEP, and that's obviously a big  
13 concern in that regard. And it's not just biofilters, it  
14 could be hydrodynamic devices. And frankly, we could have  
15 put every BMP and ASCE, EPA database up there and showed  
16 you the same sort of trend, which is, even at the 90th  
17 percentile of effluent, it's still better water quality  
18 than what you see in the proposed MAL. So not very  
19 protective of water quality in any way, shape or form.

20 --oOo--

21 DR. GOLD: So the recommendations that we have  
22 here for the MALs is don't set the MALs based on failing  
23 MS4 program water quality. So in other words, the fact  
24 that we're doing a mediocre job nationally doesn't mean  
25 that that's where we should tie this to. Obviously, the



1 DR. GOLD: On monitoring, we have a bunch of  
2 issues in regards to monitoring. Actually, before I get  
3 that, on TMDLs I would also like to bring up something in  
4 relation to monitoring.

5 Monitoring tests is still unclear. We've been  
6 asking for the monitoring information. You've got a  
7 little bit of a summary of that today from Ventura County  
8 in their presentation. We've been asking for this for  
9 well over a year, almost two years at this point, and we  
10 haven't been provided with that information from either  
11 Ventura County or from your own staff on what are the TMDL  
12 monitoring programs that are out there, and how do they  
13 dovetail with the monitoring program that's within this  
14 permit, so we can figure out is everything covered that  
15 we're concerned about in the public or not.

16 We don't have that picture. We have, you know,  
17 something like this, which is a bunch of dots on a map,  
18 which doesn't give us any idea on the frequency of  
19 monitoring, or what's -- the constituents that are  
20 actually being monitored for. I mean, this is something  
21 my kids would come up with. You know, this is not  
22 anything that's going to help us make a technical analysis  
23 to make sure that water quality and public health has  
24 actually been protected. And so that's obviously a big  
25 concern.

1           And I'm glad that Ventura County must have  
2 together, because they just showed it today, but we've  
3 never received that, and certainly we've been requesting  
4 it from who should have it, which is your own Regional  
5 Board staff, for the last couple years.

6           Also, on TMDLs, waste load allocations are limits  
7 that must be met. Allowing permittees to implement BMPs  
8 in lieu of moving forward on enforcement actions is  
9 unacceptable, ineffective, and illegal. In section -- in  
10 part 6, basically starting -- it's in about over half a  
11 dozen different places in all the individual TMDL  
12 sections -- following these -- it basically says that  
13 following the actions of TMDL implementation, it says,  
14 "Regional Board staff will evaluate the need for further  
15 enforcement."

16           So the permit makes it clear that enforcement  
17 won't even be contemplated until yet another BMP process  
18 is initiated. We've got to get away from that. I mean,  
19 if we're seeing exceedances and violations can we move  
20 forward immediately, not have another plan before we then  
21 decide to move forward on compliance assurance?

22           So exceedances of waste load allocations in TMDLs  
23 must lead to compliance assurance action by the Board  
24 immediately, not years later after more BMPs are  
25 implemented. And that's something that we keep falling



1 into as a mistake here.

2 --o0o--

3 DR. GOLD: All right. On the monitoring, as you  
4 see here, there are prohibitions that we're supposed to be  
5 determining through the monitoring program, you know, are  
6 discharges causing or contributing to conditions of  
7 pollution, contamination, or nuisance and those sorts of  
8 issues?

9 --o0o--

10 DR. GOLD: These are some of the monitoring  
11 objectives right here. We talked a little bit about that  
12 already. Assessing overall health of receiving water and  
13 long-term trends.

14 --o0o--

15 DR. GOLD: Beach water quality obviously is a  
16 very critical issue to us. You heard me talk about that  
17 already. Very strange to me that we have the  
18 environmental community, the cities, and the county  
19 agreeing to something, hey, let's do -- let's monitor ten  
20 beaches year round. And yet the staff recommendation was  
21 that this basically -- this is the one you're not going to  
22 believe --

23 --o0o--

24 DR. GOLD: -- "...it's therefore a wasteful  
25 expenditure of public monies." Because basically, I

1 guess, to monitor to see what water quality is at beaches  
2 to protect public health is somehow a waste of money. I'm  
3 not really understanding that. And to me, I frankly find  
4 that quite offensive. I mean, this is one of the most  
5 effective monitoring programs that we have in the entire  
6 State of California.

7           And right now, the beaches in Ventura are not  
8 being monitored right now. And, yes, they've had a good  
9 history, but there are specific beaches here, like Kiddie  
10 Beach, like the Rincon, like Surfer's Point that have  
11 water quality problems that right now have not -- are not  
12 being monitored, which is absolutely unconscionable, and  
13 these guys are willing to do it, and yet your staff is  
14 telling them no. That's ridiculous.

15   --o0o--

16           DR. GOLD: On bioassessment -- and I know I'm  
17 running out of time here -- we had a longstanding  
18 disagreement on bioassessment. Basically, what everyone's  
19 going with is the SCCWRP approach here, which is not going  
20 to help you determine whether -- what the impacts are of  
21 stormwater on specific biological communities. And you  
22 need fixed sites for that, and that we've pretty much lost  
23 with the recommendations here of rotating sites on  
24 randomized sites.

25   --o0o--

1 DR. GOLD: On other monitoring issues, I won't  
2 get into them in details here, but we have a couple of  
3 other issues that we think are pretty important that were  
4 not called -- were not changed in the last version, and  
5 actually some of them were even weakened.

6 And finally on the year-round -- the final  
7 recommendations, as you see, year-round weekly beach  
8 monitoring, six fixed bioassessment sites per watershed to  
9 really assess what the impacts of runoff are on aquatic  
10 life, which right now their current permit program does  
11 not do.

12 Additional receiving water stations, you heard  
13 about TMDLs and making sure that that gets fixed, enhanced  
14 dry-weather monitoring program. And please use the  
15 toxicity recommendations from the working group that you  
16 brought all those people to meet half a dozen times to  
17 make recommendations. You guys have ignored it in every  
18 single permit.

19 So in conclusion, I would like to say the  
20 following, which is that we strongly urge you to accept  
21 the precedent-setting agreement and every single aspect of  
22 it that was provided by the group of the environmental  
23 community as well as the cities and Ventura County. We  
24 think that's really critical and best for all.

25 But that agreement as well as what we're

1 recommending here, NRDC and Heal the Bay, that the Board  
2 must realize that the EIA LID approach reduces stormwater  
3 pollution moving towards green solutions to protecting  
4 public health and aquatic life. It augments local water  
5 supply through stormwater recharge and use, and it  
6 provides greater flood control protection.

7           So this is the exact direction that we need to be  
8 moving in as a regional board, as the State of California.  
9 And we strongly urge you to do that and realize that the  
10 agreement that's been brought forward, again, it's pretty  
11 much -- we all brought it together, every single aspect to  
12 it is sacred to all of us. And we hope you can adopt the  
13 whole agreement as part of your deliberations later today.

14           Thank you.

15           CHAIRPERSON LUTZ: Thank you very much.

16           Okay. As outlined earlier, at this time I will  
17 go to the blue speaker cards, and I'm calling them in the  
18 order that I received them, which I hope is the order you  
19 turned them in.

20           First to speak is Dr. Gerald Greene. After that,  
21 Richard Watson.

22           DR. GREENE: Again, I'm Dr. Gerald Greene. I'm  
23 speaking here on behalf of the Executive Advisory  
24 Committee of Los Angeles County MS4 permittees.

25           I would like to say we were excited to see the

1 permittees all working together and working with the  
2 Board; unfortunately, it seems like we've had a little  
3 break up here this afternoon.

4           Having said that, I think that there has been a  
5 real effort to try to communicate, which is commendable,  
6 and I hope that -- when I listen to this, I feel like I  
7 see a similar discussion that often occurs back in my own  
8 city where we have policy issues that diverge from  
9 technical implementation. And I don't have a right answer  
10 for you, but I hope that you will consider that maybe  
11 everybody has got great ideas and great intents, but  
12 you're trying to put it down on a piece of paper going  
13 from a couple-of-page short letter into an 80-some-odd  
14 page permit, there's a breakdown occurring.

15           We talk about whether it's always perfect to  
16 implement. Well, even just if your groundwater, if your  
17 soils could accept it, if your groundwater was high, there  
18 are problems that happen. We've had developers come into  
19 our city, swear on a stack of Bibles that the soil  
20 underneath this development site is clean; the engineer  
21 gives us a document, and lo and behold, the last step in  
22 the game we find out it's not. And I have engineers sign  
23 documents saying that the site is clean and ready for  
24 redevelopment with infiltration. It's not an easy  
25 process. Selenium in soils, they come out. You put more

1 water in, they're going to come out faster.

2           We've had some of these <sup>l</sup>same challenges with some  
3 of the same staff that were referenced in the original  
4 writing of this permit and gave them examples of how this  
5 could indeed exacerbate the conditions.

6           We have a very, very complex situation here. And  
7 it's very hard to come up with a technical document that's  
8 going to be applied to all. But I really do feel that the  
9 staff has tried very hard to work with the permittees.  
10 And I think permittees have tried to identify some big  
11 policy issues with some of the non-regulatory agencies.

12           I hope that the Board will consider what the  
13 staff has tried to do and take their recommendations.  
14 Perhaps if they're seeing too much disagreement, that  
15 there's room for trying to tweak down and reset some of  
16 the things to maybe comply, but I think the staff has put  
17 together a real important technical document that complies  
18 with a lot of the goals of both the permittees and the  
19 Board.

20           Thank you for your time today.

21           CHAIRPERSON LUTZ: Thank you.

22           Richard Watson, and following him, Saira Gandhi.  
23 I am just going to remind everybody in these cards -- for  
24 these cards, three minutes is the time limit that we've  
25 put.

1 Mr. Watson.

2 MR. WATSON: Chair Lutz, Members of the Board, my  
3 name is Richard Watson. I'm here before you today  
4 representing the City of Signal Hill and 38 other cities  
5 in the Coalition for Practical Regulation. And although  
6 we have concerns with the revised tentative permit, we do  
7 support the staff's recommendation for the revised  
8 tentative permit.

9 It was developed in a transparent, collaborative  
10 process, very much like you expressed interest in at your  
11 April 2nd workshop on the triennial review. The city  
12 manager/NGO process appears to have been a closed process  
13 with I think it was three of the city managers and a  
14 couple of the NGOs involved. And as I recall, neither  
15 your staff -- your staff wasn't there, and I don't think  
16 the staff from the permittees was there very often. Not  
17 sure too much about all of the discussion behind that.

18 One of the things I'd like to say in a technical  
19 way is there's been a lot of discussion of Low Impact  
20 Development. And I don't think there's any disagreement  
21 that that is a really important element of solving our  
22 water quality problems, particularly in dry weather if we  
23 can eliminate the runoff. However, it's not necessarily a  
24 fully agreed-upon process at the moment. It's evolving.

25 There is a new manual being developed for

1 southern California, and the person who's chairing that  
2 program is here, and he may be speaking. But it involves  
3 a manual for Low Impact Development for the six southern  
4 California coastal counties. And it's not done yet.  
5 There's been a lot of work put into that.

6 As we mentioned in our letter, April 10th letter,  
7 there are a lot of concerns with this permit that we have.  
8 We're just not totally happy with it. But it appears that  
9 your technical staff and the technical staff for the  
10 co-permittees in this county have determined that it is a  
11 workable permit for this county at this time. And so  
12 that's the reason we're supporting it. In a way, we think  
13 it will serve as a demonstration project -- or  
14 demonstration, yeah, project if you will, to see how these  
15 new elements in the permit work, which ones work well,  
16 which ones don't work at all. And so we're looking  
17 forward to seeing the results of that.

18 I don't think you're pushing off the decisions to  
19 the future. There are a lot changes in this permit. Each  
20 permit cycle evolves and includes new stuff. This permit  
21 certainly does include a lot of new material and it was  
22 evolved over a period of time with a lot of participation.  
23 In the early meetings, we were even involved, the folks  
24 from L.A. County. And so, as I say, we support the staff  
25 recommendation.



1 Thank you.

2 CHAIRPERSON LUTZ: Thank you.

3 Saira Gandhi, and then Geoff Brosseau.

4 Saira Gandhi, going, going, gone. So Geoff

5 Brosseau. And following him will be Shaun Kroes.

6 SENIOR STAFF COUNSEL LEVY: Chair Lutz, to the

7 extent commenters have left, you might read if they

8 specified on their card whether they're support, opposed

9 or qualified, if that's specified there.

10 CHAIRPERSON LUTZ: Sure, I will.

11 No comment on that one.

12 (Laughter.)

13 CHAIRPERSON LUTZ: Mr. Brosseau.

14 MR. BROSSEAU: Obviously, I'm not Saira Gandhi, I

15 am Geoff Brosseau. I'm the executive director for the

16 California Stormwater Quality Association, or CASQA.

17 Thank you very much for the opportunity to speak with you

18 about this permit. We have been before you several times

19 in the past.

20 We're a statewide association of stormwater

21 quality agencies. Our members are primarily the technical

22 staff at the cities and the counties and the special

23 districts and the consultants that help them and the

24 vendors that sell equipment to them.

25 We really come as stormwater quality

1 practitioners. We're the ones who don't argue about the  
2 legal aspects and the planning aspects. We actually are  
3 on the ground doing the work of trying to protect  
4 stormwater quality. So that's where we come from, to give  
5 our comments some context.

6 We generally support the position that the  
7 Ventura County's co-permittees have taken on the permit as  
8 expressed by Gerhardt Hubner, the program manager. I  
9 won't talk much about the -- in the past, we've commented  
10 about the design standards and EIA and Municipal Action  
11 Levels I won't talk about the first two, just to say that  
12 we generally support the comments from the co-permittees  
13 about design standards and EIA.

14 I would like to talk about MALs, however though,  
15 because we do support the revised TO, including MALs, in  
16 the permit, and that's for an important reason. It's  
17 because they really match very well, as you've heard  
18 today, with the blue ribbon panel's report. Your own  
19 water board expert panel said that this is what an action  
20 level should look like. They were the ones who thunk up  
21 the idea in the first place, if you will, and described  
22 how they should be used.

23 And the permit -- this permit for the first time  
24 actually matches your own blue ribbon panel's  
25 recommendation or how those things should be designed, how

1 they should be used. They were very supportive of MALs  
2 being included in this permit, as is EPA, as you heard  
3 earlier from John Kemmerer as well as your staff as well.

4           So we would hate to see those come out of this  
5 permit. We do not view the current version of the MALs as  
6 a weakening of the MALs, but we view it with the changes  
7 in the MALs. Since the first versions of permit are a  
8 correction in the derivation and the use of MALs, a  
9 correction to matching them up with the blue ribbon panel  
10 is what they should be used for.

11           So in our sense, it's not a weakening. Like if  
12 you took MALs out of this permit, we would see that as a  
13 weakening in terms of stormwater quality management,  
14 because we see them as very powerful accountability  
15 mechanism, a metric that can be used to help drive  
16 stormwater programs to help them focus on the worst  
17 problems and designed in a very, very smart way, based on  
18 the expert panel's recommendations to help you focus and  
19 focus on your worst problems. We actually would be --

20           SENIOR STAFF COUNSEL LEVY: Pardon me, Mr.  
21 Brosseau. Would you have a little mercy on the court  
22 reporter and talk just a little bit slower.

23           MR. BROSSEAU: Pardon me. I'm sorry.

24           I may be done with what I was going to say  
25 anyways.

1 (Laughter.)

2 CHAIRPERSON LUTZ: Now that we've made you  
3 completely made you lose your train of thought.

4 MR. BROSSEAU: Bottom line, I would just  
5 encourage you to keep the MALs in the permit and generally  
6 support the co-permittees' recommendations about the staff  
7 version of the permit.

8 Thank you

9 CHAIRPERSON LUTZ: Thank you.

10 Shaun Kroes, and after that is Kevin -- I think  
11 it's Gieschen.

12 MR. KROES: I waive my comments.

13 CHAIRPERSON LUTZ: Shaun Kroes has waived. Okay.

14 Kevin Gieschen followed by Bill O'Brien.

15 Kevin, and you, no comment. Thank you.

16 Bill O'Brien.

17 MR. O'BRIEN: I also waive.

18 (Laughter.)

19 CHAIRPERSON LUTZ: Well, great. We may get this  
20 done before midnight.

21 John Franklin followed by Mr. Allen I think, or  
22 Vaikko Allen? I'm sorry if I --

23 MR. FRANKLIN: Good afternoon, Chairwoman, and  
24 Board. My name is John Franklin. I'm a real estate  
25 developer; been doing it for about 30 years now and have

1 been in Ventura County for about ten now.

2 I've been closely tracking the MS4 permit update  
3 process. And although I have disagreed with a number of  
4 items in the past, I feel the current fourth draft of the  
5 permit on balance is workable. However, it will still be  
6 expensive for all to achieve and will prevent some  
7 projects from being financially and technically feasible.

8 The revisions to the permit as proposed by the  
9 agreement letter will take the permit requirements to a  
10 point where it will be infeasible for projects to proceed  
11 by making them too expensive, technically infeasible, or a  
12 combination.

13 A study was just done by the City of Simi Valley  
14 using a recently completed 70DU medium-density residential  
15 project. It showed that the incremental costs of the  
16 current fourth draft requirements increase costs about  
17 \$570,000 or about four and a half percent. And the  
18 requirements of the agreement letter could increase costs  
19 by about \$660,000 to over \$2 million depending on soils  
20 conditions and other factors, a range of 5 to 20 percent  
21 increase.

22 Based on this study, using the lower end  
23 estimates, the cost for this item of work, and it's not  
24 even the complete storm drain system, can equal or exceed  
25 the typical cost of land for a project. So I hope you can

1 see why developers are concerned and how the permit  
2 requirements can otherwise kill a project.

3           My partners and I are proposing 160 acre, 2500DU,  
4 100 percent affordable mixed use residential project in  
5 Oxnard. It's called Jones Ranch. Jones Ranch is being  
6 designed as a green environmentally-sensitive urban  
7 village focusing on transit-oriented walkable, bikeable  
8 design. Jones Ranch will be a key element in the city's  
9 and the region's response to meeting local housing  
10 requirements and recent State laws like AB 32 and SB 375,  
11 aimed at reducing greenhouse gases and global warming.  
12 Jones Ranch will help increase transit use, reduce vehicle  
13 miles traveled, provide critically-needed affordable  
14 housing the next ten years.

15           The MS4 permit and its requirements are a  
16 critical element in the design and ultimate feasibility of  
17 Jones Ranch as performed -- as proposed in the fourth  
18 draft of the permit. It will be expensive to achieve, and  
19 I hope it will be doable.

20           For my perspective, the proposed changes in this  
21 agreement letter, mainly the virtual zero runoff  
22 requirement, will be impossible to Jones Ranch to meet and  
23 be financially feasible, deliver 100 percent affordable  
24 homes and achieve other critical goals of the project.

25           I urge you all to support the fourth draft of the

1 permit, and I thank you for your time and consideration.

2 CHAIRPERSON LUTZ: Thank you very much.

3 Vaikko Allen? I probably said that really wrong.

4 And followed by Paul Jenkin.

5 MR. ALLEN: Good afternoon. My name is Vaikko  
6 Allen representing Contech Stormwater Solutions. We are  
7 providers of a wide range of stormwater infiltration,  
8 detention, treatment devices.

9 I have three specific comments that I'd like to  
10 make, and I will direct you to the specific sections in  
11 the permit where I think some necessary changes should be  
12 made.

13 The first is part 5, Section E.3.1.C.4. And to  
14 clarify where that is, it's page 56. It's in the new  
15 development-redevelopment performance criteria section.

16 The Section C here identifies the way in which  
17 you can disconnect an impervious area and lists four  
18 options, the last of which is biofiltrate. I would  
19 suggest that "biofiltrate" be changed to "filter". The  
20 only difference being that presumably one has a plant and  
21 one doesn't. The purpose for the change is that whether  
22 or not a system has a plant has relatively little bearing  
23 on its effectiveness.

24 According even to Attachment C, which lists  
25 effluent quality for various types of BMPs, media filters

1 actually outperform biofilters, according to those  
2 categories, for several important pollutants, including  
3 total suspended solids, phosphorous removal as well, and  
4 are relatively similar for metals removal. So I don't  
5 think that there's a performance basis for distinguishing  
6 between biofilters and filters. So to be clear, the  
7 change that I am requesting is replacing the word  
8 "biofiltrate" with "filter."

9           The second change that I'd like to suggest is in  
10 the Stormwater Quality Management Program implementation  
11 section, that's part 4, and that's Section A3.

12           In here, this is the section where they identify  
13 those performance standards in Attachment C. The change  
14 that I think should be made is that there's only a  
15 provision in this section for sizing treatment systems  
16 based on a water quality volume. There are treatment  
17 systems out there that can also be sized based on a water  
18 quality flow rate, as is noted later on in the permit,  
19 where it gives the 85th percentile design storms. I think  
20 that allowance for sizing a system based on a water  
21 quality flow rate as well as volume needs to be added to  
22 that section.

23           Finally, the last change I'd like to suggest is  
24 on the other end of the permit, in part 5, Section  
25 G.5.E.1. This is regarding retrofits for trash removal.



1           The opening part, opening sentence there says,  
2 "Each permittee shall install trash excluders or  
3 equivalent devices on or in catch basins or outfalls to  
4 prevent discharge of trash, et cetera."

5           I would suggest that trash excluders be changed  
6 to full-capture devices. Full-capture devices are  
7 identified in TMDLs for L.A. River, Ballona Creek, you  
8 know, trash TMDLs that this Board is aware of. Trash  
9 excluders are I think referring to those devices that go  
10 in the opening of a catch basin generally at the inlet.  
11 They just keep trash in the street. They don't actually  
12 remove anything, and they will not get you in compliance  
13 with trash TMDLs.

14           So to be clear, the change I am asking for is to  
15 remove "trash excluders" and put "full-capture device"  
16 there.

17           Thank you for your time.

18           CHAIRPERSON LUTZ: Thank you.

19           Paul Jenkin, followed by a trio, Mark Grey,  
20 et al.

21           MR. JENKIN: Good afternoon, Board. My name is  
22 Paul Jenkin. I represent the Surfrider Foundation here in  
23 Ventura County.

24           I'm sure that many of you probably saw the recent  
25 PBS special called "Poisoned Waters." It really

1 highlights our failure over the past 40 years to deal with  
2 this problem nationwide.

3           This permit that, from what I can tell -- I don't  
4 know, it's hard to read. Did you guys all read the whole  
5 thing? I mean, wow. I think it's a small step, very  
6 small step in the right direction, but it's so unclear, I  
7 think it needs a lot of work.

8           I think, you know, with this stormwater thing,  
9 there's two primary issues that we're dealing with. One  
10 is the issue of future development and how we're going to  
11 build. The other is what we have on the ground today.

12           This LID requirement that's in here is a bare  
13 minimum of this permit, and I highly support all the LID  
14 recommendations we've heard today. Those need to be legal  
15 requirements under CEQA, because every time I try and  
16 comment on a development in Ventura County, they cite the  
17 Regional Water Quality Control Board and the minimum  
18 requirements by law. So we're not going to get anymore  
19 than what is required by law. So this is a critical piece  
20 of that.

21           However, you know, you heard today the permittees  
22 claiming to be great stewards of our environment here in  
23 Ventura County. You know, 80 percent of the impervious  
24 areas in our watershed is transportation related. And I  
25 have not taken the time to add it up, but I'm sure there's

1 probably, you know, over 10,000 acres of new parking lots  
2 that have been built in Ventura County, completely  
3 connected to storm drain systems since 1992 when the  
4 original permit went online. So there has not been any  
5 legal mandate for them to change the way that they do  
6 that.

7           We have basically now requirements for new  
8 development, and the burden is placed on developers. But,  
9 for instance, when cities go through and redo their  
10 streets or redo their storm drains or when the county has  
11 to do flood control, there is no requirement in this  
12 stormwater permit to deal with low flows. So any time you  
13 have single-purpose high-flow storm drain channel, you end  
14 up directly connecting low flows to the ocean.

15           The City of Ventura is working on a pilot project  
16 that I've been working with them on. And part of the  
17 problem is funding. So, you know, we need some funding  
18 like SEP or other mechanisms in order to be able to get  
19 some of this retrofit stuff on the ground. And that's one  
20 of the sticking points with really solving this stormwater  
21 problem.

22           So I think that NRDC and Heal the Bay gave some  
23 great testimony today, and I certainly appreciate them  
24 taking lead on this in Ventura County, but I do believe  
25 that this permit at least needs to be made more clear,

1 because it's hard to understand. And I don't think it's  
2 going to achieve the goals of actually improving water  
3 quality in Ventura County.

4 Thank you.

5 CHAIRPERSON LUTZ: Thank you.

6 Mark Grey and his party. And following that,  
7 Carmen Ramirez.

8 DR. GREY: Thank you, Chair Lutz. You're aware  
9 we have 30 minutes?

10 CHAIRPERSON LUTZ: Are you -- this is the BIA  
11 presentation?

12 Then I'm going to ask that you refrain now, and  
13 we'll have you after we --

14 DR. GREY: And I was just getting geared up, and  
15 David teed me up, and we're ready to go. You're sure?

16 CHAIRPERSON LUTZ: I'm sure.

17 DR. GREY: It's late. You're going to want my  
18 entertaining presentation.

19 (Laughter.)

20 CHAIRPERSON LUTZ: You know what, we will really  
21 want it in a few minutes from now.

22 DR. GREY: Okay, excellent.

23 Carmen Ramirez.

24 MS. RAMIREZ: Good afternoon. I'm Carmen  
25 Ramirez. I'm with CAUSE, Central Coast Alliance United

1 for Sustainable Economy. And we're all about social,  
2 environmental, and economic justice.

3 In the course of these proceedings it just occurs  
4 to me that we really do need to do a better job of  
5 cleaning up the water, which we all so totally depend on.  
6 After air, it's water, and then everything else.

7 And we are suffering from greater pollution,  
8 which causes health problems for the humans as well as the  
9 aquatic species and just a general degradation of the  
10 environment. But I would like to ask for consideration  
11 for vulnerable populations who need housing, just as Mr.  
12 Jenkin referred to, a lot of our problem is the  
13 transportation system, both the fuel that's burned off and  
14 what it does to the environment, and then it, you know,  
15 filters down into the water as well as the surfaces that  
16 are impermeable.

17 So while I do think we need to consider how to  
18 reduce runoff, how to do a better job, engage the public  
19 in cleaning up the environment and not considering the  
20 storm drains just trash dumps, which I see every day,  
21 people just throwing stuff down there, be creative with  
22 development, but do not put the entire burden, economic  
23 burden, on people who do need affordable housing, and let  
24 other people off the hook. But we all need to do a better  
25 job of working on cleaning up the environment, cleaning up

1 after ourselves, whether we're a big business or a  
2 homeowner or an apartment dweller, teach our children what  
3 happens to things that go into the drains and onto the  
4 street.

5           And I'm basically here to just make sure that  
6 whatever we do, we don't put the entire burden on the more  
7 vulnerable. Our county is predominantly minority low  
8 income, particularly Oxnard where I reside, and I want to  
9 have those considerations taken into concern.

10           Thank you.

11           CHAIRPERSON LUTZ: Thank you.

12           Jason Weiner, and then Shelley Luce.

13           MR. WEINER: Good afternoon, Regional Board  
14 Members and Madam Chair. My name is Jason Weiner. I'm  
15 the associate director and staff attorney for the Ventura  
16 Coastkeeper.

17           Overall, we don't support this permit as drafted  
18 as it does not protect the aquatic life and health of  
19 Ventura County residents. In taking this time to  
20 collaborate with other environmental interests speaking  
21 today, we would like to voice a couple main points and  
22 concerns.

23           First, we would like to emphasize our utmost  
24 support for the cities, counties, and environmental  
25 communities' letter agreement, especially on the LID

1 provisions and requirements and the Ventura County beach  
2 monitoring provisions.

3           This substance is commendable and necessary to  
4 protect water quality, but we also believe that bottom-up  
5 stakeholder policy making that includes -- you know, that  
6 is supportive and more enforceable when you have  
7 stakeholders who are involved in the process and are  
8 behind the policy. You know, we would strongly urge the  
9 Board takes their recommendations into consideration and  
10 takes their commitment into consideration in looking at  
11 whether the permit can be enforced and is achievable and  
12 will be very protective of water quality standards. And  
13 in this instance, you know, the agreement, the joint  
14 agreement between the environmental communities, the  
15 counties and the cities is commendable and is more  
16 protective of water quality standards, especially in  
17 regards to the LID provisions of the permit.

18           Second, we would like to point out that the  
19 permit's iterative solution to dealing with discharges  
20 from the MS4s that cause or contribute to a violation of  
21 water quality standards are a nuisance needs to be further  
22 strengthened to stop the persistence on ongoing and  
23 continuing water quality violations.

24           For example, in Santa Monica Bay Keeper's NRDC  
25 cases versus the Malibu and L.A. County permittee

1 violations of water quality standards continuously  
2 persisted and reoccurred. The permittees didn't timely  
3 implement BMP control measures that achieve the MEP  
4 standard, and they didn't ensure compliance with receiving  
5 water quality -- receiving water limitations are --

6 CHAIRPERSON LUTZ: Mr. Weiner, I know you're  
7 trying to get this all in for us, but please slow down  
8 just a hair.

9 MR. WEINER: Absolutely.

10 CHAIRPERSON LUTZ: Thank you.

11 MR. WEINER: The permittees, you know, they  
12 didn't, you know, ensure compliance with receiving water  
13 limitations, RWLs, but always submitting a RWL report is  
14 required. And when they did submit an RWL report, they  
15 did not adequately describe the BMPs that permittees were  
16 implementing and additional BMP that they would implement  
17 to prevent or reduce the pollutants that are causing or  
18 contributing to the exceedance of water quality standards.

19 And then the Regional Board, with its  
20 discretionary authority, did not use its authority to ID  
21 the types of BMPs that must be implemented to achieve the  
22 MEP standard and to mandate the BMPs' implementation. So  
23 compliance required mitigation.

24 Our concern in Ventura County is that the permit  
25 does a good job in setting forth adequate scientific-based



1 BMP performance design standards, but lacks a strong  
2 enough iterative compliance mechanism in the RWL section  
3 to ensure the retrofitting of existing stormwater  
4 infrastructure with BMPs or off-site treatment controls  
5 that are necessary to ensure the permittees don't violate  
6 water quality standard on an ongoing and continuing basis.

7 We fear that the litigation will be the only  
8 mechanism to ensure BMPs will be implemented that achieve  
9 the MEP standards and to stop permit violations.

10 CHAIRPERSON LUTZ: Mr. Weiner, I'm sorry, your  
11 time is exceeded.

12 MR. WEINER: Just let me conclude very quickly.

13 CHAIRPERSON LUTZ: Very quickly.

14 MR. WEINER: Thank you very much.

15 Because the existing stormwater infrastructure is  
16 such a major contributor to stormwater pollution and the  
17 impaired state of our water bodies, what we would like to  
18 see as a mandatory component of the RWL report under 3.3A,  
19 Section 3.3A, is that a certified independent consultant  
20 or entity identify additional BMPs that achieve the MEP  
21 standard that need to be implemented to prevent or reduce  
22 any pollutants that are causing or contributing to  
23 exceedance of water quality standards and that the permit  
24 mandates that the permittees implement these BMPs.

25 As seen in the Malibu and L.A. County cases, we

1 feel that the Regional Board staff is too overburdened to  
2 identify BMPs that must be implemented to achieve the MEP  
3 standard.

4 In conclusion, we'd just like to make sure the  
5 TMDL fact-finding section is consistent with Section 6 of  
6 the permit to include all of the TMDLs listed in Section  
7 6. And additionally, Madam Chairman and Regional Board,  
8 we also want to make sure that the TMDL section clearly  
9 states that the permittee must attain the waste load  
10 allocations mandated by --

11 CHAIRPERSON LUTZ: Mr. Weiner, I'm sorry. You've  
12 exceeded by a full minute.

13 MR. WEINER: Thanks.

14 CHAIRPERSON LUTZ: Thank you.

15 Shelley Luce? Is Shelley still here?

16 Okay. I'm sorry. I will tell you if there's a  
17 comment, and there is none.

18 Heather Wylie, and followed by a no name person  
19 speaking on affordable housing.

20 MS. WYLIE: Hello, Madam Chair, Members of the  
21 Board. Hi, Tracy.

22 I am here today representing Southern California  
23 Watershed Alliance. I'm the director of the Ventura  
24 County Chapter. My name is Heather Wylie.

25 And we -- to avoid redundancy, we are in

1 agreement with NRDC and Heal the Bay's comments. We do  
2 not support the current version of this permit to be  
3 approved.

4           And also to avoid redundancy, I think I just want  
5 to jump into giving you a specific example of how LID is  
6 the only ecologically sustainable and economically  
7 sustainable solution that we really need in order to  
8 recover our water bodies from impairment and meet the  
9 Clean Water Act standards.

10           So, for example, on the Calleguas Creek, over  
11 time Simi Valley is the most upstream city, and over time  
12 they have actually put the city of Moorpark downstream  
13 from them in the 100-year year floodplain. The same thing  
14 has happened to downstream City of Camarillo and the same  
15 thing has happened to the downstream City of Oxnard,  
16 followed by Point Mugu to the tune of \$600 million of  
17 floodplain liability damage estimated by the Ventura  
18 County Flood Control Department -- or Watershed Protection  
19 District I mean.

20           So given that, what we need to do is not to  
21 channelize the river as they have proposed in their  
22 integrated watershed protection plan, which has taken a  
23 look at the Calleguas Creek as a whole and they have  
24 piecemealed little projects. When you line them all up,  
25 it's a combination of levees, dams, debris basins, and

1 flood control projects for approximately about 11 miles or  
2 so to alleviate this problem.

3           But the problem is when you choose to channelize  
4 the river as a solution for the increased flows caused by  
5 development to alleviate these flooding problems, you  
6 forego all of the water quality benefits that are achieved  
7 through the natural filtration in the plants and in the  
8 sediments and the microorganisms that are present in the  
9 system.

10           So the only solution, really, to recover our  
11 water bodies from impairment and to maintain integrity, is  
12 to implement LID, not only on existing -- not only on  
13 future development, but actually to go back and do  
14 retrofits on the existing development to address the  
15 impairments. So that's our main comment.

16           And I also wanted to point out too, you may be  
17 unaware that there are about 80 percent of the current  
18 parcels in Ventura County that are zoned for residential,  
19 commercial, or industrial use that are under an acre. And  
20 we think that the one-acre thresholds to trigger these  
21 future developmental LID retro -- the LID requirements is  
22 not enough. We think it's arbitrary, and we think it  
23 should be 5,000 square feet for all development, not just  
24 high risk.

25           Thanks.

1 CHAIRPERSON LUTZ: Thank you.

2 Again, I'm sorry, I don't have a name for  
3 somebody speaking for affordable housing.

4 MS. MACRI-ORTIZ: I put in a card, but I put my  
5 name on it.

6 CHAIRPERSON LUTZ: I'm sorry. What was your  
7 name?

8 MS. MACRI-ORTIZ: Barbara Macri-Ortiz.

9 CHAIRPERSON LUTZ: I do not have a card with your  
10 name, so might this be you?

11 MS. MACRI-ORTIZ: But I'll take this.

12 CHAIRPERSON LUTZ: Please tell your name one more  
13 time.

14 MS. MACRI-ORTIZ: My name is Barbara Macri-Ortiz.

15 I am an attorney in private practice in Oxnard. I am a  
16 specialist in affordable housing development in  
17 representing development -- affordable housing developers  
18 and families that are trying to find decent, safe, and  
19 sanitary housing that they can afford last 20 years.

20 I'm not a technician. I've reviewed the  
21 information. What I'm very concerned about is --  
22 actually, with respect to the staff recommendation, I  
23 think you're getting pretty close, and I think I'd be able  
24 to support that. It would be nice if it could be tweaked  
25 a little bit to provide a little leeway beyond that to

1 affordable housing, but I think there is some stuff in the  
2 agreement that we could rely on a little bit.

3 I wanted to speak -- I was mostly concerned with  
4 this alternative agreement, with the, quote,  
5 "stakeholders," and I don't see how you have agreement  
6 with the stakeholders when you normally deal with one  
7 stakeholder. And it's interesting that I don't believe  
8 there was anybody involved in the negotiations that, as a  
9 practical matter, does anything in terms of creating  
10 housing, and certainly not affordable housing.

11 So, you know, you can't I think have selective  
12 stakeholders and expect that the non- -- or the absent  
13 stakeholders get to shoulder the burden.

14 You know, in terms of affordable housing, I think  
15 Mr. Franklin gave you some statistics out of Simi Valley,  
16 and I just want to give you like a little perspective on  
17 that, because that development that was done, I guess,  
18 five, six years ago was at 13.5 units to the acre.

19 Okay. When we're talking about infill  
20 development, which is what we're going to be doing now,  
21 we're talking 25, 30 units to the acre. And if the  
22 alternative plan would add, you know, up to a million  
23 dollars to development that's at 13 and a half, you can  
24 imagine. It just basically will make housing, the working  
25 people in this county, infeasible. And I think that's a

1 concern, because, yes, we've got to take care of our  
2 water. And my good friend, Carmen Ramirez, I think she  
3 said it very well in terms of balancing and looking at  
4 everything. But at the end of the day, we have to house  
5 our people somewhere. And we have to have practical  
6 solutions.

7           And, you know, in your positions, I think when  
8 you look at regulation, you have to look at regulation  
9 that has a chance of working and meeting, you know, the  
10 other objectives, because there's a lot of laws. And, you  
11 know, SB 375 and global warming, we've got to deal with  
12 all of that.

13           And so they're saying get us closer together, and  
14 let's build like that, which we're going to do. But at  
15 the same time then, we're going to need to be able to do  
16 it in a way that's feasible. And I think there are a lot  
17 of issues when you look at holding everything on site and  
18 mold issues and, you know, so it's not that simple. And  
19 we appreciate, you know, you taking it, thinking about  
20 those that normally don't get heard from that really do  
21 need the housing that you need to build.

22           Thank you.

23           CHAIRPERSON LUTZ: Thank you.

24           Matt Yeager, and then Matthew Breiner, which I  
25 really should wear my glasses.

1 MR. YEAGER: Good afternoon, Madam Chair, Members  
2 of the Board. My name is Matt Yeager, and I work for the  
3 San Bernardino County Flood Control District. And I'm  
4 here because I'm the lead on a project that is developing  
5 a Low Impact Development manual. And I just want to make  
6 sure you're aware that this manual is coming out, and it's  
7 going to come out in -- no later than September of this  
8 year. It's also -- the manual has been prepared with some  
9 funding from the State Water Board under the Prop 40  
10 grant.

11 Also, a number of our stakeholders, which include  
12 the six southern California coastal counties, includes a  
13 couple cities including the City of L.A., City of Long  
14 Beach, they're also partners in funding this project.

15 And so we've been working on it for quite a  
16 while. We have a technical advisory committee, which  
17 includes several regional board folks from Region 8 and  
18 Region 4. We have stakeholders, including developers and  
19 engineers and municipal agencies folks, that have been  
20 meeting -- we've met about eight times so far to develop  
21 this manual.

22 And I guess what I wanted to say is you have some  
23 folks out there that know LID is coming. We've been  
24 working on this since before 2006, and they're interested  
25 in being able to implement this. They need training.



1 They need guidance on how to do this. And what I would  
2 suggest to you is that the technical issues which you hear  
3 a lot about are one problem, which engineers can typically  
4 solve if you give them some time and some money; but  
5 what's going to be more difficult is going to be  
6 implementation through our development process within our  
7 individual municipalities. It's a fairly complex process,  
8 and LID doesn't always fit neatly into the categories we  
9 have right now.

10 So you keep that in mind; implementation will not  
11 be easy, but we have a manual coming your way. And we  
12 just want to make sure you're aware of it and hope that  
13 you keep that in mind if you're requiring manual permits.  
14 This should be a good functional manual for those people  
15 with a lot of southern California stakeholders.

16 And it's going to eventually end up in the hands  
17 of California Stormwater Quality Association, which is  
18 CASQA, which Jeff Brosseau was just here and talked to  
19 you. So it will have a life beyond just this one project.  
20 And it will be out there. It will be available on the  
21 web, and hopefully it will be very helpful for everyone  
22 involved.

23 Thank you very much.

24 CHAIRPERSON LUTZ: Thank you.

25 Matthew Breiner followed by Mark Pumford.

1 MR. BREINER: Thank you, Madam. Madam Chair and  
2 Members, thank you very much.

3 First I'd like to speak basically to the proposed  
4 agreement between the cities and the NGOs. And let me say  
5 firstly, I've been a developer in Los Angeles and Ventura  
6 counties for 23 years, so I am aware of this process.  
7 I've been following this process for the last several  
8 years with the Board and the four drafts of the agreement.

9 And I think I want to say first of all, I agree  
10 with the comments of Ms. Macri-Ortiz. I think she had  
11 very cogent comments to say with regard to the process and  
12 how this -- and what we need to look at as we go through  
13 adopting this new agreement.

14 I'd like to say that the agreement between the  
15 NGOs and the cities doesn't really line up from what I'm  
16 hearing from Mr. Beckman. What I'm hearing about the  
17 agreement and what Mr. Beckman said today doesn't really  
18 seem to match up to me.

19 They NRDC says that they only want to use -- have  
20 and reuse infiltration where it makes sense and it's  
21 feasible. And they say that the agreement looks -- you  
22 know, says that it has alternatives for compliance if you  
23 can't comply. I think, yes, it does look like the  
24 agreement has alternatives for compliance, alternative  
25 pathways to compliance. But when I read it closely, it

1 appears to me that there's no exception to a standard of  
2 30 percent effective impervious area.

3           So, you know, if you have a site where  
4 infeasibility criteria would apply, you still would be  
5 required to retain 70 percent of the water on your site.  
6 I find that that, as a developer, that could be very --  
7 it's impractical and could be inconsistent with the actual  
8 development standards and requirements of city and other  
9 issues that may arise. And again, I find that's an  
10 inconsistency between what we're saying -- hearing from  
11 Mr. Beckman of the NRDC and what the agreement -- you  
12 know, what we're hearing -- what he's saying the agreement  
13 says and what the agreement actually says.

14           I think that in general, I want to say that after  
15 four drafts, I think that the staff and the -- all the  
16 people who have been involved have come up with something  
17 that actually makes some sense. And this last-minute  
18 project of the cities and the NGOs coming in with --  
19 wasn't vetted by all the interested parties. It wasn't an  
20 inclusive process. It was -- when you do that kind of  
21 thing, it leads to this kind of, you know, higher  
22 probability of unintended consequences. And I -- again, I  
23 think, looking at just the idea of getting rid of the MALs  
24 makes no sense to me. How else are you going to measure  
25 whether you are complying, what areas are working, what

1 things aren't working? If you don't have MALs under  
2 proposal, how can you even do that?

3 So I think that this whole -- this last-minute  
4 kind of agreement should be thrown away. And I think I  
5 would recommend you approve your staff's recommendation.

6 Thank you.

7 CHAIRPERSON LUTZ: Thank you.

8 Mark Pumford, and our final speaker is Don  
9 Jensen.

10 MR. PUMFORD: May I hold my comments for  
11 rebuttal, please.

12 CHAIRPERSON LUTZ: Yes. It still continues in  
13 that ten minutes.

14 Then our final speaker, Don Jensen.

15 MR. JENSEN: Madam Chair, Members of the Board,  
16 my name is Don Jensen. I'm a civil engineer in Ventura  
17 County. I'm a native of Ventura County. I've been  
18 practicing engineering about as long as the Clean Water  
19 Act in 1972 came into effect in this county.

20 I've seen all different kinds of develop and  
21 design as a design engineer, actually implementing  
22 programs like this in the field as we try to do the  
23 implementation of these permits at whatever level, from  
24 the Regional Water Quality Control Board all the way down  
25 to the city standards and whatnot that we have to put into

1 a system.

2 I think that the staff has done an admirable job  
3 with this draft as it is written. I'd support it as it is  
4 written. I know it is a step in the right direction for  
5 the next few years as we continue to increase the  
6 safeguards we all want into our storm drain systems.

7 You know, as a lifelong resident of this county,  
8 it means as much to me as anybody in this room that we  
9 have good, solid requirements and stormwater quality  
10 conditions. And I think that's the goal of everybody I've  
11 heard speak here today. No matter what their posture or  
12 perspective on it is, everybody has their own reason and  
13 rationale for being here, but we all want it to be a  
14 better stormwater system at the end of the day, and I  
15 think this new permit will get us there. So I support  
16 staff's recommendation and encourage you to do the same.

17 Thank you.

18 CHAIRPERSON LUTZ: Thank you very much.

19 Thank you, everybody. I think our reporter  
20 deserves a very well-deserved break.

21 (Applause.)

22 CHAIRPERSON LUTZ: So we will come back at 20  
23 minutes after 5:00, and I will ask that we are prompt so  
24 that we can continue. We really would like to complete  
25 that this evening, and we are working our way that way.

1 Thank you.

2 (Thereupon a recess was taken.)

3 CHAIRPERSON LUTZ: Please take your seats so we  
4 can continue. May we please come to order?

5 Thank you very much. Thank you for allowing us  
6 to be prompt.

7 And we will have now Dr. Grey who promised us had  
8 a very entertaining program with the BIA.

9 And you have 30 minutes.

10 DR. GREY: Go ahead. Holly, go ahead.

11 MS. SCHROEDER: Actually, Chair Lutz, I'm Holly  
12 Schroeder with the Los Angeles and Ventura Counties of the  
13 BIA. I'm your local representative, and Mark gave me a  
14 couple minutes to introduce. And we will try to keep it  
15 as close to the 30 minutes. We do hope, given the goings  
16 on, we'd have a little indulgence from the Chair given how  
17 much activity there's been today.

18 We want to thank you obviously for the time to  
19 present. And I just want to sort of step back and give  
20 for just one moment and reflect on where we stand today  
21 and note that the proposal of the draft before you is a  
22 significant change from the way the current permit is  
23 drafted and from we -- operations are today. And I just  
24 want to make sure we don't lose site of how big a change  
25 we're talking about here.

1           We expect this permit is going to be expensive  
2 and challenging and fraught with uncertainty and really  
3 difficult for us to do in any event. So it's a really --  
4 we are moving the ball forward in a significant way. And  
5 I want to thank your staff for trying to pursue that  
6 change in a very transparent manner.

7           As you were reminded this morning, over a year  
8 ago, there was a transparent process that was started with  
9 a two-day stakeholder meeting here, culminated in the  
10 stakeholder meeting in December. We were really a  
11 participant in that. We've invested a tremendous amount  
12 of our increasingly scarce resources in addressing this,  
13 because we want a permit that's done right, that we can  
14 implement, and that we can be successful in moving Low  
15 Impact Development strategies, that you've heard so much  
16 today, forward.

17           And I think when you don't have a transparent  
18 process, you get some of the confusion that you guys have  
19 been hearing about throughout all day and you have the  
20 misunderstandings that can arise when you have a -- what  
21 was a unilateral process in this agreement that was  
22 reached between the city managers and the NGOs.

23           And I want to respectfully disagree with Mr.  
24 Sedell from Simi Valley who said he thought they had an  
25 understanding of the BIA's interests as they entered into

1 those negotiations. And given the results that we see, we  
2 have to say clearly not.

3           When I pressed Mr. Sedell on some of the cost  
4 implications, and you heard some references to this  
5 earlier, they did an analysis of an affordable housing  
6 project in Simi Valley that was a 70-unit project, and  
7 they estimated that the cost on that would be an  
8 additional million dollars. That is -- these are  
9 tremendous increases in costs that clearly we recognize  
10 they did not understand the implications, and because we  
11 didn't have practitioners at the table at the those  
12 negotiations, we think that there is, you know, it's just  
13 very -- it's going to be very difficult and we really urge  
14 you to rely on a more technical analysis rather than a  
15 political process in your deliberations.

16           You're going to hear in a moment from Dr. Grey  
17 also going to hear from Eric Strecker with Geosyntec  
18 talking about our -- some of our concerns, both with the  
19 fourth draft as it is presented today, and many of those  
20 concerns also relate to the agreement between the cities  
21 and the environmental groups.

22           A couple of the things you're going hear I just  
23 want to call your attention to in advance because of some  
24 of the statements that have been made earlier.

25           You've heard that the agreement doesn't require



1 infiltration in all cases and that it doesn't require it  
2 where it doesn't make sense. When you read it closely, it  
3 does, it does have a no exceptions to a 30 percent EIA.  
4 It has a very limited sense of infeasibility criteria.

5           You've heard that infiltration is always better  
6 and that no discharge means no pollution. I think you're  
7 going to hear about some scenarios from Mr. Strecker about  
8 where that may not always be the case even though it may  
9 be seen that way on its surface.

10           You've heard that this is not the most stringent  
11 proposal in the country. We believe it is the most  
12 stringent proposal. The other examples that are cited had  
13 exceptions or they're drafts or there are waivers, there  
14 are other ways of dealing with those infeasibility  
15 scenarios.

16           And finally, I just need to comment briefly on  
17 the comments from EPA because I was a little shocked by  
18 their comments and their support for one slice of that  
19 agreement, which I have to say as a political strategist  
20 was very pretty impressive because then NRDC got to  
21 cross-examine Mr. Unger on that and ask whether that would  
22 change their recommendation.

23           But I found it really shocking because it was  
24 complete -- it was very inconsistent with the letter that  
25 EPA submitted, their April 9 comment letter during the



1 areas of remarks, and I think I've passed the presentation  
2 out to all of you. I hope you all have the presentation  
3 in front of you, and for your notes.

4 I want to talk briefly about the progress that  
5 we've made so far. I want to talk -- and we've been very  
6 consistent over the past three years about our problems as  
7 an industry, building industry, with effective impervious  
8 area as a strict LID performance standard.

9 I'm going to support the volume, capture, and  
10 treatment approach as the performance standard. That's  
11 the performance standard that exists throughout the  
12 country and throughout California. And we're going to  
13 support the full use of all LID BMPs.

14 And I'm going to talk a little bit about LID  
15 definition, and not the narrowing of those BMPs. And what  
16 I hope to -- and I prepared this presentation today for  
17 you, the Board members, to hopefully educate you about  
18 our -- where we're coming from on this issue.

19 We've heard a lot of different comments and  
20 angles today. My goal today is to educate you on a couple  
21 simple points where we have some disagreements and where  
22 we think the permit can be improved.

23 And then Eric, I think, is going to do a fabulous  
24 job educating you about some of the hydrological water  
25 balance aspects that I think you need to be aware of in

1 terms of evaluating LID BMP principles.

2 --o0o--

3 DR. GREY: We made a lot of progress here in  
4 Ventura, I think there's no doubt about that, over the  
5 past two years. We've done it in a very public process  
6 and a very public way. We're very proud of that.

7 The group that I represent supports LID as a  
8 priority stormwater management solution. I appreciate --  
9 I have to -- just an aside, I have to appreciate being  
10 mentioned three, four times in Mr. Beckman's presentation;  
11 I'm must be doing something right. But, again, I'm not  
12 here for accolades. I'm here to educate you on this  
13 permit and where we have some issues with that.

14 And finally, I think it's something that gets  
15 lost, and I'm glad Gerhardt in the Ventura Watershed  
16 Protection District, who's been a stakeholder in this  
17 process, supports master planning and prioritizing what  
18 we're doing in terms of clean water. We support that  
19 master planning effort. And we need to do master planning  
20 where infiltration is feasible, where harvest and reuse  
21 are feasible, where other types of measures are feasible.  
22 Master planning is essential.

23 And something that you always hear from us is  
24 contextual analysis is very important. One size fits all  
25 does not work for us. Contextual analysis works for us.

1 That's something that's very important.

2 / --o0o--

3 DR. GREY: All right. I'm going to turn to LID  
4 implementation and using EIA as a performance standard.  
5 And I'm going to talk about four general concepts in the  
6 next two slides after this. I'm going to talk about why  
7 effective impervious area as a strict standard is vague  
8 and confusing. I'm going to talk about that you can have  
9 different interpretations of what it means. I'm going to  
10 introduce that no program in the United States uses EIA as  
11 an LID performance standard. There's serious peer review  
12 lacking in this concept.

13 I know it's sexy. I know it sounds cool. I know  
14 EPA likes it. They also like volume capture. I'll get to  
15 that. And I think we need to simplify this to make it  
16 easily implementable for all scales of development to do,  
17 from the one-woman or man show, contractor, all the way up  
18 to the biggest, you know, Donald Trump type developer..

19 Finally, that impervious cover may be a guidance  
20 principle, but it's just not suitable as a performance  
21 standard.

22 --o0o--

23 DR. GREY: Number 1. We think EIA is being  
24 misapplied as a performance standard because its  
25 foundation came from a watershed study really based on

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1 hydromodification impacts to stream systems in southern  
2 California. I have never heard Dr. Stein, Ken Schiff, any  
3 of staff at SCCWRP talk about EIAs as a performance  
4 standard for LID. I've never seen them testify to that.  
5 I've never seen that in writing.

6 EIA, as all of us have pointed out in this --  
7 over these last two years, needs a hydraulic translator to  
8 make it relevant. You need a design storm. You need a  
9 volume capture amount to make it relevant. Why use it  
10 when you need a translator to make it work?

11 And finally, the EIA case studies, with all due  
12 respect from another good scientist from the University of  
13 Washington, with all due respect, EIA case studies that  
14 are done have been idealized. The conclusions rely on  
15 generous, optimistic assumptions about LID design  
16 features. You just don't see a lot about it -- a lot  
17 about it in the literature related to a performance  
18 standard. More about broader scale ecological impacts to  
19 receiving waters. There it has traction. There it has  
20 meaning.

21 --o0o--

22 DR. GREY: Number 2, last slide on EIA. Strict  
23 EIA is confusing to stormwater professionals, planners,  
24 and engineers, and as I pointed out, it is untested.  
25 About four months ago I was in a stakeholder group meeting

1 in Orange County working on their permit. About 20  
2 professionals around the table. Guess what? We all had a  
3 different interpretation of EIA. It's confusing. That's  
4 the bottom line.

5 Multiple regulatory proposals that we've seen  
6 contain conflicting definitions. That adds to the  
7 confusion. The stakeholders in the MS4 process can't  
8 agree on what it means or how to implement it, again,  
9 without a hydraulic translator. And, finally, just to  
10 reemphasize, no national programs, and certainly none in  
11 California, except the guidance memo from the Central  
12 Coast District, uses -- the central coast region uses this  
13 as a performance standard for LID implementation.

14 --o0o--

15 DR. GREY: So what are we proposing? What's our  
16 solution? Our solution is a volume capture and treatment  
17 performance standard. And this is a standard using the  
18 85th percentile storm that's easily understood, acceptable  
19 to industry, regulatory agencies, and the general public.  
20 We find this in the Orange County permit. Mr. Beckman  
21 introduced a number of national programs where volume  
22 capture is used. We've also introduced those on the  
23 record from these other national programs.

24 EPA supports volume capture. We have that in  
25 writing. They -- EPA wants a number. I don't blame them.

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1 Numbers help us evaluate our performance, in all aspects,  
2 my weight, my daughter's grades, you know, our checkbook  
3 numbers can be good. We don't disagree with that.

4 Volume capture and treatment applies to the whole  
5 projects. With EIA there's some bit that doesn't apply,  
6 can runoff. Volume capture applies to the whole site.

7 So what we ask you and what we've asked in our  
8 written material is to consider using equivalency language  
9 in this permit. Use volume capture. If you want to use  
10 EIA, you can. Volume capture is the standard. That  
11 should be the standard, not EIA.

12 ---o0o---

13 DR. GREY: Okay. Next thing, LID definitions and  
14 guidance. Why is this so important? Well, it's important  
15 because we've got this side of the room associated with  
16 these folks back here who want to kind of narrow the  
17 definition of LID.

18 Okay. This late proposal for discharge of the  
19 85th percentile storm, make no mistake, it's zero runoff  
20 without any discharge. We just don't think that that  
21 makes sense on a number of different levels. It means  
22 limiting which BMPs you can use at a given site. It's a  
23 universal retention mandate.

24 The EPA, the State, the scientific literature  
25 never intended LID BMPs just to be zero discharge. Let me



1 reemphasize what that is. That's infiltration, that's  
2 harvest and use, and that's evapotranspiration. What  
3 we're asking for is to also include those filtration  
4 treatment BMPs that release some water in under-drains or  
5 over-drains. Those are a critical component in LID BMPs  
6 and in the LID BMP toolbox. Those are recognized.  
7 They're in the EPA literature. They're in the scientific  
8 literature. There's a tremendous amount of support for  
9 that.

10 Filtration and treatment of water, through  
11 engineered BMPs is an essential tool, and we just -- that  
12 is why the definitions are so important.

13 I'm going to show you just a couple quick  
14 definitions.

15 EPA definition. LID, "A comprehensive stormwater  
16 management and site-design technique within the LID  
17 framework. The goal of any construction project is to  
18 design a hydrologically functional site." I added  
19 emphasis, "that mimics predevelopment conditions." "This  
20 is achieved by using design techniques that infiltrate,  
21 filter, evaporate, and store runoff close to its source."  
22 Filter is clearly in this definition.

23 Now, EPA has multiple definitions. A little more  
24 than half of them use "filter." Some of them don't say  
25 it, and others don't address it at all. Most of their

1 guidance -- and Eric will show you this, most of their  
2 guidance documents all contemplate some filtration of the  
3 water, not total capture.

4 --o0o--

5 DR. GREY: Our State Board. "The goal of LID is  
6 to mimic a site's predevelopment hydrology by using design  
7 techniques that infiltrate, filter, store, evaporate, and  
8 detain runoff close to the source of rainfall." That's  
9 pretty clear.

10 So again, to reiterate, I just don't see in EPA's  
11 definition any support of zero discharge, certainly not in  
12 their comment letters here in California, but mostly in  
13 their guidance document. Certainly EPA supports LID. We  
14 all do. They also support the full use of LID BMPs as we  
15 read it.

16 --o0o--

17 DR. GREY: On this slide, universal retention  
18 standard isn't technically appropriate. And I'll just  
19 summarize here. Restricting LID BMPs to the three that I  
20 brought up, harvesting, infiltration, and ET can lead to  
21 unintended consequences. I've talked to a number of the  
22 resource agencies. California Fish & Game, they're  
23 concerned about zero runoff. We need water for our  
24 streams.

25 The ground -- agencies, we're responsible for

1 groundwater management, they're concerned about this.  
2 Very important -- you know, of unchecked infiltration a#1  
3 over. There are many instances where coordinated control  
4 of stormwater is essential to augment our water supplies.  
5 What we're setting up here with the universal retention  
6 standard with a zero discharge standard, we're setting up  
7 problems relative to where we do groundwater recharge.

8 Universal retention would intentionally block  
9 natural flow of stormwater. There's a strong legal basis  
10 in California water law for allowing some water to  
11 discharge from your properties. And I already brought up  
12 about the water districts and resource agencies.

13 --o0o--

14 DR. GREY: Just a couple slides that aren't in  
15 your packet. And Sam was questioned about the various  
16 national programs. There's a tremendous amount of  
17 information that we've submitted on actually what the  
18 national programs are saying.

19 I think I will say that I think we tend to pick  
20 and choose what's there, both sides. I mean, let's just  
21 be honest about that. We tend to pick and choose. David  
22 picks what he wants. We pick what we want.

23 But when you break it all down, the way I see it,  
24 in many cases, filtration and treatment of water. And  
25 water is allowed to leave using LID, in most of these

1 instances around the country. They're either draft or  
2 contemplated, and programs are draft or contemplated. And  
3 Anacostia, the special district's been dissolved. So  
4 there's this relativity that goes on in these national  
5 programs.

6 The bottom line is they all support LID, they all  
7 use volume capture, and most of them allow feasibility  
8 exceptions with some water allowed to leave the site.  
9 That's the point I'm trying to make.

10 --oOo--

11 DR. GREY: Okay. In my summary remarks, we  
12 support the full conception of using LID BMPs in managing  
13 stormwater, not narrowing it to zero discharge. I hope  
14 I've made that clear.

15 There's a strong technical and legal foundation  
16 for allowing some runoff from properties. We're not  
17 saying allow untreated runoff. In fact, what David was  
18 talking about -- David put up a slide that showed our  
19 comment letter in Orange County. Yes, you would mitigate  
20 that volume that you weren't able to treat in LID BMPs, so  
21 long as you could use filtration on treatment BMPs as that  
22 first line of LID. In a hierarchy, infiltration, harvest  
23 and use, ET, biotreatment, biofiltration. We all agree  
24 with that. Where the divide exists that is zero  
25 retention. That's really clear. And I think that's a

1 judgment call that you're going to have to make, and I  
2 just hope you use good judgment in determining how high of  
3 a bar and how steep a hill we want to climb in this next  
4 generation of permit.

5 Thank you for your time today. Eric's going to  
6 follow up with a much more technical presentation on some  
7 of the water balance and hydrological considerations with  
8 the LID performance that we see here in the permit.

9 Thank you.

10 (Thereupon an overhead presentation was  
11 presented as follows.)

12 MR. STRECKER: Thank you, Board Members. My name  
13 is Eric Strecker, and I'm going to give a talk from  
14 Geosyntec Consultants and give a talk on some technical  
15 considerations regarding the -- particularly regarding the  
16 retention requirement.

17 --oOo--

18 MR. STRECKER: And I think what Mark meant to say  
19 is 100 percent keep it on site, not 100 percent detention.

20 So just a little background on myself. I'm a  
21 registered civil engineer in California since 1987. I've  
22 got almost 25 years of experience focusing on urban  
23 stormwater management, including 24 years of working on  
24 stormwater projects in southern California from San Diego  
25 to Santa Barbara. I was a member of the blue ribbon panel

1 that's been referenced quite a bit today. And I'm also a  
2 principal investigator for the International BMP Database,  
3 as well as multiple WERF and NCHRP stormwater research  
4 projects.

5 --o0o--

6 MR. STRECKER: So just to back up a little bit,  
7 when we look at the effectiveness of stormwater BMPs, we  
8 really need to think about all these characteristics.  
9 It's a function of the runoff patterns that we see, the  
10 pollutant types and forms that we're interested in  
11 addressing. You have to think about storage volume that  
12 you have to capture that water and do something with it.

13 And then I think a thing that really has not been  
14 analyzed enough is the hydraulics of recovering that  
15 storage. It all comes down to you've got to recover that  
16 storage within three or four days or you will start  
17 bypassing BMP systems. So I'll get more into that a  
18 little bit later.

19 But how do we recover that storage when we can  
20 infiltrate? Let's say we have an infiltration  
21 retention -- a bioretention system. We can infiltrate to  
22 recover the storage. We get some evapotranspiration. We  
23 can harvest and use. And I like the word -- to use the  
24 word "use." I'm not sure what first use was when rain  
25 falls on the roof other than transporting pollutants,

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1 but -- so we might recommend the word "use" there.

2 ~~And~~ then the last one is draw-down or the  
3 discharge rate, if we're going to choose to have  
4 under-drain or some way to discharge a system through  
5 extended detention.

6 Then it's also very important to pay attention to  
7 the treatment processes for any release flows, whether  
8 those flows are surface releases or groundwater releases.  
9 So what are the physical and biochemical unit processes  
10 that we have to actually address the pollutants.

11 --oOo--

12 MR. STRECKER: So let's talk about some factors  
13 that affect stormwater management in southern California.  
14 First, the weather here. We get our storms, they  
15 essentially arrive in clusters. You know, the high  
16 pressure ridge is up, we don't get a lot of rain. When it  
17 comes down, we get a series of storms tracking through.  
18 And so that -- it comes all in short bursts basically.

19 It also -- most of that rainfall occurs in  
20 December through March, and, in fact, January and February  
21 are usually the big months when you look at long-term  
22 rainfall or precipitation records. So the results of that  
23 is it makes harvest and use via irrigation difficult.  
24 We're getting all the rain in clusters. It's hard to use  
25 it for irrigation when everything is soaked already from









1 creatures like the Arroyo toad, who likes a dry wash. And  
2 if we put a lot more water into the ground and we change  
3 it to a perennial or longer-duration flow regime, we might  
4 convert it to a willow, or worse yet, an arundo thicket.  
5 And I'd like to say Mr. Toad isn't going to be so happy  
6 anymore.

7 --o0o--

8 MR. STRECKER: We have other issues with over  
9 irrigation that lead to that as well.

10 So if we don't match ET rates, this is another  
11 issue. So if you think about the water balance and so  
12 much of it's evapotranspiring, if we don't match the  
13 evapotranspiration rates, somehow lose it some other way,  
14 then if we're going to maintain surface discharges the  
15 same, that means I'm actually going to have to infiltrate  
16 more than natural. Okay. Is that a good idea?

17 Well, that could be a good idea if I'm in an  
18 aquifer that's being managed for water supply and I can do  
19 it safely. Great. You know, central valley California,  
20 I'd be putting as much water in the ground as possible.  
21 They over-pump that thing like crazy.

22 Another situation, if I was connected to a big  
23 receiving water and I could infiltrate and it would  
24 quickly get into a big receiving water and not cause an  
25 issue, great. But in other cases, I may actually, you

1 know, cause the change either in habitat issues or, you  
2 know, up -- increasing groundwater heights, geotechnical  
3 issues, all those kinds of things. So we need to think  
4 about those.

5 --o0o--

6 MR. STRECKER: The next question is, if you're  
7 going to do infiltration, you need to do it carefully.  
8 And so we've got to think about in areas above the water  
9 supply, you know, how do we do it in such a way that it  
10 works with our water supply agencies and making sure  
11 they're comfortable with the fact that we're going to have  
12 these distributed infiltration systems all over the place  
13 and it's done in a way that we protect water slides -- or  
14 water agencies and our water supplies.

15 So the bottom line is infiltration should be done  
16 carefully through -- on a watershed-by-watershed and site  
17 basis. We really need to think it through.

18 --o0o--

19 MR. STRECKER: So let's say I'm on a site where I  
20 can't infiltrate, so then I may look at  
21 evapotranspiration, or these could all be done in  
22 combination as well. So after development, we're going to  
23 have less area to evapotranspire. Even if we do green  
24 roofs and as much of that as we can, we're still going to  
25 have less area. And so again, I mentioned this earlier,

1 it's really not appropriate to compare monthly values of  
2 rainfall as well as evapotranspiration rate.

3 --oOo--

4 MR. STRECKER: So this is a pilot. And it's down  
5 in Irvine, California. That's been in some of the memos  
6 flying around, which shows monthly evapotranspiration in  
7 green and monthly precip in purple, and it's been pointed  
8 out because we're relatively close here in southern  
9 California, that we ought to be able to use  
10 evapotranspiration effectively.

11 Well, this is a weekly look at it, and this is  
12 for a year in 2001 where we had 12.3 inches of rain. And  
13 as I mentioned, the cluster of rainfall comes through, and  
14 I'll focus in on that. You can see the first little  
15 element; you know, I'm pretty close there. The second of  
16 it -- I'm not going to focus in on this one.

17 --oOo--

18 MR. STRECKER: But the point here is we have a  
19 long period of time where the precipitation totals on a  
20 weekly basis far exceed evapotranspiration rate. So that  
21 makes using that as a loss mechanism relatively tough.

22 --oOo--

23 MR. STRECKER: I mentioned the horizontal water  
24 balance considerations on the left-hand side, you know,  
25 natural conditions. I'm going to have that whole site

1 available for evapotranspiration. The other side,  
2 depending on how much bioretention, or you can add green  
3 roofs to it and some other things, but you're not going to  
4 get back to, you know, the whole site being available.

5           And then you have to think about the vertical  
6 scale too where I've got this sponge spread out over the  
7 whole site. It's inverse. I'm going to try to focus in  
8 on some bioretention systems and things like that and  
9 think that I'm going to do matching of ET rates is very  
10 tough.

11                           --o0o--

12           MR. STRECKER: So back to the water balance.  
13 Let's say, I'm being a little generous here, that ET is  
14 only 70 percent, deeper percolation 20 percent, and  
15 surface charge 10 percent. If I do LID with no  
16 under-drains and assume I can get it all into the aquifer,  
17 I may end up percolating 70 percent of the average annual  
18 precip.

19           So just as like we talk about impacts that could  
20 happen if I have an increased runoff, I may have impacts  
21 with increased groundwater recharge. And with  
22 under-drains even with some percolation, I might increase  
23 that as well and I'll have flow.

24           So the bottom line, I'm here to present to you  
25 that with using infiltration and just ET, we're going to

1 have to decide, do we want more runoff or do we want more  
2 infiltration than natural and get over it.

3 --o0o--

4 MR. STRECKER: So last, let's talk about capture  
5 and use. Again, I like to use "use" instead of "reuse."  
6 This is a project I did on the Newport coast where we put  
7 in over a million gallon cisterns and then used that  
8 water -- the captured water to water a 36-hole golf  
9 course. So I've done capture and use.

10 And in this case, we lucked out because we had a  
11 36-hole golf course next door, and they start watering the  
12 greens on golf courses within about 24 to 36 hours of the  
13 end of the rainfall. The cisterns were designed to  
14 capture almost one and a quarter inches from the  
15 development project, and so we were able actually to show  
16 that system working.

17 --o0o--

18 MR. STRECKER: But when you think about the key  
19 factors for success of capture and use, first you have to  
20 have a use for the water. So what are the uses that seem  
21 viable? Irrigation, as I just mentioned in the example I  
22 presented; toilet flushing might be another potential use.  
23 You have to think about with the both of those, codes and  
24 human health issues. If you get into putting that water  
25 back into a pressurized irrigation system, there are

1 issues there. And certainly there's issues with using  
2 that water for toilet flushing. I think they should be  
3 overcome, but those are some things that still need to be  
4 addressed.

5           So again, I mention you have to bring back your  
6 storage fast enough to get it available again for the next  
7 storm event.

8                           --o0o--

9           MR. STRECKER: So I visited EPA headquarters last  
10 week. They have a cistern in their new building they've  
11 been in a couple years now. They actually can capture  
12 about an inch of runoff from the roof. I was there on a  
13 day when it was 80 degrees, the cisterns were empty  
14 because they had not turned them on yet because they did  
15 not want stagnant water sitting in the tanks for a long  
16 period of time. And so they didn't -- couldn't use it at  
17 this time of the year for irrigation.

18                           --o0o--

19           MR. STRECKER: And when you looked at their  
20 little detail on this, again, I mentioned it captures  
21 about an inch of runoff. They mentioned it takes about  
22 nine to ten days to drain the tank. And my bet is that if  
23 one really took a careful look at this system, they would  
24 probably have a pretty high rate of bypass, both because  
25 of the winter issues they have there, but also during the



1 summer. That tank's going to be full when some of  
2 those -- a lot of those storm events come along. And so,  
3 you know, they could take a more careful look at that.

4 --oOo--

5 CHAIRPERSON LUTZ: Dr. Strecker, could you please  
6 sum up for us?

7 I know there was a request for more time. I also  
8 do have a speaker card for somebody requesting to speak  
9 after BIA. I -- since I moved the speakers in front of  
10 BIA, I was going to allow that speaker.

11 MS. COFFEE: I'll defer my time to Eric so that  
12 he has enough time.

13 CHAIRPERSON LUTZ: Okay. Then we will give three  
14 more minutes.

15 MR. STRECKER: Okay. So let's look at the effect  
16 of sequential storms. And this is a period in 1962, which  
17 was again an average year. Actually, in this scenario I  
18 designed the tank for 1.6 inches of capture from -- so  
19 essentially it doubled the DAMP standard in Orange County.

20 --oOo--

21 MR. STRECKER: And I want to focus in on this one  
22 time period here. The blue bar shows the precipitation  
23 events, and the red bar shows the amount of bypass that  
24 would occur if I had designed the tank to be twice as  
25 large. And when I looked at this system, I used it for

1 both irrigation and toilet flushing for a 100-acre  
2 residential development and did a -- we did a long-term  
3 simulation to look at the effects, but I thought it was  
4 useful to pull out some sequences. And these sequences  
5 are not unique.

6 --o0o--

7 MR. STRECKER: And this just shows again a little  
8 bigger picture of that in terms of how much would actually  
9 bypass when I put the capture and reuse system in.

10 --o0o--

11 MR. STRECKER: I've also, for that same example  
12 site, backed down to a tank that was just the DAMP size  
13 tank of .8 inches. And in that case, what I was able to  
14 show in terms of looking at pollutant loads, if I used the  
15 tank and used it for both irrigation and toilet flushing,  
16 versus using a bioretention system with under-drains. And  
17 for TSS I was able actually to show the reduction in  
18 loadings that I would expect to achieve would be higher  
19 with the bioretention system with under-drains versus  
20 capture and reuse. And I'm not saying this would be the  
21 case all the time. Again, it depends on how fast you can  
22 drain the tank.

23 --o0o--

24 MR. STRECKER: And then the other consideration  
25 to look at is for everything that bypasses, there's no

1 treatment. So bypass stuff typically would be, you know,  
2 much higher in concentration than what I'm getting with  
3 the bioretention system with under-drains.

4 --oOo--

5 MR. STRECKER: So with stormwater capture,  
6 harvest, and use, you've got to drain the tank relatively  
7 fast, similar to the ED-type drawdowns we have.  
8 Irrigation uses are limited. We have seasonal issues. We  
9 have a push to do zeroscaping, you know. So it's hard to  
10 say let's saturate landscape part of the year and then  
11 flood -- then let them dry out. We have competition with  
12 the use of reclaimed water. Right at the time they're  
13 trying to get water is when I'm trying to get rid of  
14 stormwater. I do think toilet flushing is a possibility.  
15 I actually think I've come up with a new name for a ratio  
16 called TUTIA. It stand for Toilet Users To Impervious  
17 Area ratio.

18 (Laughter.)

19 MR. STRECKER: So if the TUTIA is high enough in  
20 a multi-story building, we can probably do toilet flushing  
21 to actually use the water fast enough. I also think in  
22 looking at some lead things I've looked at, it looks very  
23 viable on, again, high-density situations when you combine  
24 it with greywater systems. We've got to think about the  
25 coding issues there as well.

1                                   --o0o--

2                   MR. STRECKER:  So if we ask people to do this,  
3 we're going to ask them to be putting in lots of  
4 additional infrastructure.  I won't go into it all, but  
5 multiple microsystems all over the place.  They're going  
6 to be a little tough to manage.  There's probably a little  
7 carbon footprint issues with all of this and those kind of  
8 things.

9                                   --o0o--

10                  MR. STRECKER:  I mentioned the coding issues.  I  
11 won't go into those.

12                  I did want to mention -- and Mark already brought  
13 up the definition, one definition that EPA has with  
14 "filter" in it.

15                                  --o0o--

16                  MR. STRECKER:  I thought this might be a useful  
17 table.  We actually went in and searched for all the  
18 definitions where if "filtration" or "detention" was  
19 mentioned or not.  And I think we're at three and a half  
20 to two and a half in terms of in the definition.  But  
21 actually, if you go look at the example guidance, and the  
22 one that has been cited earlier about cost up there, if  
23 you look in the example guidance, there's actually -- this  
24 is the case studies they evaluated.  Twelve of them were  
25 bioretention systems, 12 swales, which typically have

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1 surface discharges, 6 of them were wetlands, and 1 was a  
2 green roof.

3 So even though EPA had the one definition in  
4 there with retain on site, the case studies they  
5 highlighted had quite a few of them that for sure had  
6 surface discharges and probably more than -- you know,  
7 because the information wasn't really provided.

8 --o0o--

9 MR. STRECKER: The last thing I wanted to close  
10 with before I get to a summary is if you look at National  
11 Research Council in that report, which was mentioned  
12 earlier, they use a term ARCD for LID.

13 --o0o--

14 MR. STRECKER: They actually mention swales in  
15 there as one of the techniques that they agree with.

16 --o0o--

17 MR. STRECKER: In this paragraph, they just talk  
18 about other kinds of systems being used when LID doesn't  
19 work.

20 --o0o--

21 MR. STRECKER: So, last point --

22 CHAIRPERSON LUTZ: Dr. Strecker, I --

23 MR. STRECKER: -- is that every watershed has  
24 unique soils, and we've got to think through all the  
25 issues. And I guess I'll leave you with that.

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1 CHAIRPERSON LUTZ: If you can --

2 MS. SCHROEDER: One minute.

3 CHAIRPERSON LUTZ: One minute.

4 MS. SCHROEDER: I just want to close by saying I  
5 hope you can see two main things from listening to these  
6 smart guys. One is they're smart guys, and we really have  
7 dedicated a lot of our energy and resources trying to  
8 figure out how to make this work. I want to make that  
9 very clear.

10 And second I think is just how much of this is  
11 very technical and very contextual. And so a  
12 one-size-fits-all or a high-level political agreement is  
13 not necessarily going to cut it for what we're going to  
14 have to be dealing with.

15 It's unfortunate this got so contentious. We  
16 actually did have a very different experience with the  
17 L.A. County Low Impact Development Ordinance. We ended up  
18 supporting that ordinance as did Heal the Bay, who in  
19 their press release called it far reaching and said it  
20 would result in a significant reduction. And that was at  
21 Delta volumes. We're talking about a less -- smaller  
22 amount of water was being addressed in that ordinance.

23 And we reached agreement on that. And I think  
24 Supervisor Yaroslavsky called it a biblical moment that  
25 Heal the Bay and BIA agreed on something.

1           So we are trying to figure out how to make this  
2 work and be a practical -- something that we can live  
3 with. There's no Low Impact Development if there's not  
4 actually some development that moves forward.

5           So we encourage you to consider those as you move  
6 forward, and with the changes that Dr. Grey described,  
7 adopt the fourth draft.

8           Thank you.

9           CHAIRPERSON LUTZ: Thank you very much.

10          Now I need to know if the parties will need to  
11 use their 10-minute rebuttals, rebuttal time.

12          So the county is saying yes?

13          MS. DUNHAM: Yes.

14          CHAIRPERSON LUTZ: And yes.

15          All right. First time -- the first people up are  
16 the permittees.

17          MS. DUNHAM: Usually I think NRDC, isn't it  
18 reverse order?

19          CHAIRPERSON LUTZ: Does it make a difference?

20          SENIOR STAFF COUNSEL LEVY: Whatever you prefer.

21          CHAIRPERSON LUTZ: If you would like the NRDC to  
22 go first, if they would like, that will be fine.

23          They are 10 minutes each.

24          MR. BECKMAN: Always looking for some advantage,  
25 I'm telling you.

1 How do you turn this off?

2 Don't start my time yet, please.

3 DR. GOLD: Don't call me NRDC.

4 CHAIRPERSON LUTZ: I called you Dr. Gold.

5 MR. BECKMAN: Okay. I do want to -- if you could  
6 just seriously give me 30 seconds to pull this up, I just  
7 want to show you one -- actually, I won't, I'll just give  
8 you a summary.

9 So if I were you all, I'd figure what do we make  
10 of this? What do we make of this? So I'm not going to  
11 try in the five minutes I have, because I want Mark to  
12 have, you know, five, to respond to all of this, but  
13 rather to put it into a framework, how would I think about  
14 it, how do I suggest you think about it.

15 I would think about technical, clarity,  
16 comparable ability, performance, and cost. And I think  
17 that our proposal gets the checkmarks in each of those  
18 areas.

19 Technical. You heard a lot. It's difficult.  
20 Think about everything. Of course we have to think about  
21 everything. But the takeaway is U.S. EPA supports the  
22 joint proposal, and by extension they support the proposal  
23 that NRDC and Heal the Bay have made apart from that. If  
24 it's enough for U.S. EPA on the technical side, it should  
25 be good enough for the Board.



1           By contrast, EPA has criticized certain elements  
2 of the proposal that staff have made. Clarity. There's  
3 no question that retaining on site as a standard exception  
4 is far clearer than what is in staff's proposal, which a  
5 number of folks have identified it is just not at the  
6 level of clarity you get that lends itself to regulatory  
7 approach.

8           I will say something that is another biblical  
9 moment. I would prefer the principles that Mark Grey  
10 enunciated to those that staff have proposed. I think  
11 those are better principles, i.e., LID, even as he defines  
12 it as he wants it to be, or BIA does, with off-site  
13 mitigation when you can't do it. That is clear and better  
14 for the environment than what staff would propose. So at  
15 a minimum, I think you need to make some changes.

16           Comparability. There are a number of places  
17 across the country that we've identified that have these  
18 retention standards in place or are considering it. I  
19 would respectfully disagree that we and BIA are just  
20 picking everything -- you know, picking pieces that we  
21 like. All of the examples that we have provided -- or all  
22 of the examples we have cited are provided to you in the  
23 record, you can read them. We haven't cherry-picked  
24 anything.

25           Comparability. What we're proposing is being

1 done across the country. What staff are proposing falls  
2 short of that.

3 So again, technical, clarity, comparability, I  
4 think the checkmarks go to our proposal.

5 Performance. No pollution leaving the site is  
6 better than some pollution leaving the site. Checkmark  
7 for the NGOs and the county.

8 And finally, cost. The U.S. EPA report, that a  
9 number of folks have mentioned, said that in the vast  
10 majority of circumstances, the development costs  
11 associated with this LID are less than conventional  
12 approaches. It's a legitimate concern about affordable  
13 housing. It's a false choice in this circumstance.

14 Five categories. I respectfully suggest that the  
15 checkmarks go to the proposal that we've made. And I  
16 would suggest also that at an absolute minimum, that  
17 you're hearing more agreement from the stakeholders on  
18 issues that are not in the permit. And that, therefore,  
19 just adopting the permit, even if that's the way you  
20 wanted to go, we hope it's not, wouldn't be the right  
21 course, because you would be leaving out things which the  
22 BIA, NRDC, the whole group here agrees on, and that  
23 wouldn't be an appropriate approach.

24 Mark.

25 DR. GOLD: Thank you. Obviously negotiations

1 with 11 cities in the county were very complex. And they  
2 took dozens and dozens of hours and involved numerous  
3 experts. Contrary to what you just heard, I was a former  
4 member of the Federal Advisory Committee for Urban Wet  
5 Weather in the 90s, in the Clinton administration. And  
6 I'm pretty sure people like Mack Walker and Jeff Pratt  
7 have a little bit of stormwater experience in their  
8 probably combined 50 years in the field. So to somehow  
9 imply that we were just dealing with this at the highest  
10 of policy levels is, frankly, beyond insulting.

11 They were initiated at a time when the judges'  
12 court ruling precluded the Regional Board from even  
13 participating in these discussions. I need to remind you  
14 of when this all started and how long this has been going  
15 on.

16 Another issue that's been brought up is the  
17 selenium plume. I guess to paraphrase Saturday Night  
18 Live, really, selenium plume? Are we in Kesterson? I  
19 mean, am I missing something? Are we seeing Grebes with  
20 hooked bills somewhere that are somehow trying to fly in  
21 the L.A. region? I mean, come on. That's just  
22 ridiculous. And if we're really serious about that, how  
23 about some water conservation in zeroscape if we're really  
24 worried about putting too much water on land. So that's  
25 again obviously used for the wrong purpose here.

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1           A design storm makes the LID provisions work.  
2 BIA spoke about this somehow as this was a negative. We  
3 keep hearing about L.A. County and the fact that Heal the  
4 Bay supported the effort by L.A. County. That was a  
5 voluntary effort by L.A. County, that was not part of an  
6 MS4 permit. I mean, I think any time a local government  
7 does something on their own and is not under regulatory  
8 pressure to continue, the environmental community's there  
9 for them.

10           And so we encouraged them and supported them and  
11 worked with them on that effort. Did that mean that we  
12 thought it was perfect? No, of course not, but we  
13 realized that the fact that L.A. County moved in this  
14 direction was positive, so we're not embarrassed by the  
15 fact we supported them, even though we believe there were  
16 major flaws in their approach. We felt that it was a big  
17 move in the right direction compared to where they had  
18 been in the previous decades, and I think that's important  
19 as well.

20           Zero discharge we keep hearing about. It's not  
21 zero discharge by any stretch of the imagination. Five  
22 percent EIA is not zero percent EIA. Plus, the last I  
23 checked, there are rain storms larger than three-quarters  
24 of an inch, and I'm pretty sure flow's going to come off  
25 in those situations. So to say that somehow 100 percent

1 of the water is going to be retained on site is  
2 disingenuous at best. And so I think that's a big issue  
3 as well.

4           On the pre-post development approach that BIA has  
5 brought up, they're claiming that what was brought to you  
6 by the permittees and environmental community was a major  
7 change. Well, what they brought up was an even greater  
8 change than what's in the existing permits. So it's a  
9 little inconsistent there as well from that standpoint.  
10 Staff has pursued an EIA approach in all four versions of  
11 this permit in the last two years. And so I need to  
12 remind you of that fact that that's consistent. And all  
13 we tried to do in negotiations was provide a clear path  
14 and a clear way to get to a place that's actually going to  
15 work.

16           And finally, on zero runoff, I want to say study  
17 after study has demonstrated that increased impervious  
18 area increases total flows and peak flows. And I think  
19 that's important. And so -- not to mention increasing  
20 sedimentation, erosion, and stream health problems. Also,  
21 there's a lot of storms, like I said, greater than the  
22 85th percentile storm. And so that's disingenuous again  
23 by the BIA.

24           But I think the big thing is that this provision  
25 only applies to new and redevelopment. It's not like

1 you're going to pass this today and the EIA provision of  
2 five percent is going to apply to every single development  
3 that's existed for decades. This is to finally move us in  
4 the right direction after many, many years of water  
5 quality degradation. And moving us in the right direction  
6 is something that obviously the recommendation that's been  
7 provided to you today by the environmental community, by  
8 the county, and by the city, we strongly believe that that  
9 will be the case. And it's only going to be incremental,  
10 and it's going to only be on new and redevelopment. So I  
11 needed to remind you of that fact, not that it's going to  
12 apply to everything overnight, which just is completely  
13 false.

14 Thank you for the opportunity to comment.

15 CHAIRPERSON LUTZ: Thank you very much.

16 The county permittees. And you have ten minutes  
17 as well.

18 MS. DUNHAM: Thank you. Tess Dunham, Somach,  
19 Simmons & Dunn here on behalf of the permittees.

20 And obviously the Low Impact Development portion  
21 of the permit has garnered a fair amount of attention  
22 today, but I think that we want to make sure that we don't  
23 lose sight of the forest by looking at that one tree.  
24 This permit is about so many other things besides just the  
25 LID and planning and the new development section. It is a

1 150-plus page permit. It is far reaching. It is  
2 comprehensive. It includes a number of best management  
3 practices, new, improved, and it, on a whole, will  
4 significantly improve water quality. And I think that  
5 that is the number one thing that we need to keep in mind  
6 today, is what does this permit do on the whole.

7           It is not just one element. It is a full permit  
8 that has many different elements and provisions in it. It  
9 has a very comprehensive monitoring program that far  
10 exceeds other monitoring programs in the stormwater arena  
11 and probably other arenas as well. And that's an  
12 important element we want to make sure you keep in mind.

13           A couple of points we do want to rebut, just a  
14 couple of points that have been raised by others here  
15 today. A comment was made in one of the presentations  
16 that beach water quality monitoring is no longer  
17 occurring. That is not correct. In fact, the City of  
18 Oxnard continues to monitor nine locations, including  
19 Kiddie Beach under its wastewater treatment permit. And  
20 the district, the Watershed Protection District also does  
21 beach water quality monitoring at Kiddie Beach and Hobie  
22 Beach.

23           There was a comment made that the TMDL monitoring  
24 information has not been provided. That information --  
25 first of all, a significant amount of information has been

1 provided, but more importantly, monitoring information is  
2 available on the program's website. The Regional Board  
3 has every workplan, monitoring plan, piece of data that's  
4 ever been submitted to them in their files.

5           You know, perhaps that it's not incumbent upon  
6 the Regional Board to go and put it all out and provide  
7 it, but we all know how to go in and look for things in  
8 the files as is allowed under the Public Records Act.

9           You know, there's been requests that the  
10 monitoring isn't enough. Well, as you can see, the  
11 monitoring is significant. It comes at a significant  
12 cost, and it hasn't necessarily, at least in our mind,  
13 been given any good reasons as to why the monitoring  
14 should be increased as to what's being proposed in the  
15 revised tentative order.

16           There were some comments with regards to the  
17 Municipal Action Levels' request that it should be  
18 expanded to include 16 different pollutants of concern.  
19 And I think the important thing is that it's been pared  
20 down to five, because those are truly the pollutants of  
21 concern for this county and for this program. And that is  
22 why those are the ones that are being focused on. It  
23 allows us to focus our resources on those pollutants that  
24 are of issue, instead of spending resources unwisely on  
25 pollutants that are not of issue or not as high priority



1 of an issue.

2 If is also inappropriate to compare MALs to the  
3 California Toxics Rule criteria. The MALs are there to  
4 look at performance. California Toxics Rule criteria are  
5 water-quality based criteria. The two don't match each  
6 other. It is not a fair comparison to have.

7 And lastly, on that issue the MALs are based on  
8 sound statistical data and should remain as is.

9 On a couple other points, the TMDLs have been  
10 incorporated into the permit in a manner that's consistent  
11 with the adopted TMDLs, and they should remain as is. It  
12 is inappropriate to imply that the waste load allocations  
13 should be incorporated as an enforceable numeric standard.  
14 As long as the waste load allocations are incorporated and  
15 are consistent with the adopted TMDL, it is consistent  
16 with federal law.

17 And another comment, and then I'm going turn it  
18 over to Mr. Sedell here to finish up so I don't run out of  
19 time, that there was also a comment made that the  
20 receiving limitations language should be more stringent  
21 than what it is. I want to note that the receiving water  
22 language, the iterative process that is included in the  
23 revised tentative order, is absolutely consistent with  
24 State Water Board Order 99-05, verbatim, word for word,  
25 and, therefore, is consistent with State law, State.

1 precedential order.

2           And another note, that it's been implied that the  
3 tentative order doesn't include significant performance  
4 measures for LID. That is not correct. The tentative  
5 order is not as vague as implied. It does include  
6 performance measures.

7           So with that, I'm going to turn it over to these  
8 folks.

9           MR. SEDELL: Hi again, Chair Lutz. Mike Sedell.  
10 I'm the City Manager of Simi Valley; and Rick Cole, City  
11 Manager of Ventura.

12           Chair Lutz, Members of the Board, in summation,  
13 we'd like to state that we appreciate all that the Board  
14 has done here in Ventura County in seeking common ground.  
15 On behalf of the Ventura County permittees, we greatly  
16 appreciate your Board's time and extensive efforts to  
17 develop a permit that takes into serious consideration the  
18 varying perspectives of so many differing interests.

19           And at the same time, we feel an acute need to  
20 commend your staff for the significant effort that they  
21 put forth to hearing all sides in this debate, yet  
22 continually focus on drafting a tentative order with the  
23 public's environmental health and welfare foremost in  
24 their mind.

25           While we may not agree with all that staff has

1 proposed, and we noted those differences in our earlier  
2 comments, we do ultimately believe the staff has listened  
3 to all of the various stakeholders and given every comment  
4 serious consideration.

5           It was interesting to observe that while your  
6 staff recommendation was able to garner support for most  
7 of their proposals, or most of the parts of their  
8 proposal, what the permittees and the NGOs developed is  
9 what we perceive to be a true compromise, was universally  
10 opposed, except, of course, by the two sides at the table.  
11 It seemed that everyone liked their piece of the  
12 agreement, but each of those testifying said that only a  
13 certain part of the proposal was to their liking. In  
14 essence, that was the uniqueness of the proposal. It  
15 attempted to take some of what each side desired to be in  
16 or out a permit, and it could only work as the whole sum  
17 of its pieces. Yet because of all of that, all of those  
18 commenting only chose to take what they desired of it.

19           As public officials, we are charged with  
20 protecting the environment for our citizens, managing  
21 scarce public resources, and ensuring the safety and  
22 welfare of our residents. The draft tentative order you  
23 are considering seeks no less. It is incumbent upon us to  
24 ask, and your board to take into serious consideration,  
25 the most cost-effective and environmentally-sensitive MS4

1 permit that can be developed.

2           We believe that there are two viable offerings  
3 before you for your consideration. Admittedly, your staff  
4 recommendation has had a greater opportunity to be fully  
5 vetted and developed than the alternative proposal. Both  
6 provide for many of the same things; LID, monitoring,  
7 TMDLs, albeit in different methodologies. Both need  
8 further development in the implementation plan. The  
9 agreement was an attempt to bring forth something that  
10 would assist your Board in finding common ground amongst  
11 the constituencies.

12           We trust that your Board will consider all that  
13 you've heard today and make the right decision for our  
14 mutual constituencies, taking into account the cost and  
15 benefits of this permit and its ultimate preservation of  
16 our environment.

17           We thank you very much. We appreciate your  
18 consideration.

19           CHAIRPERSON LUTZ: Thank you. With time to  
20 spare, we appreciate that. Thank you.

21           We've come to the part for Board member  
22 questions, and I think all the parties have -- nobody's  
23 left, so why don't we just start.

24           Do you want to start with Mr. Richardson?

25           Okay. We'll start with Mr. Richardson.

1 BOARD MEMBER RICHARDSON: Oh, I've got several  
2 questions for individuals themselves, but, Sam, for you  
3 Vaikko Allen mentioned three items that he thought maybe  
4 should be changed in the draft. Those items were concerns  
5 about the BMP in part 4; and instead "biofilter" -- using  
6 "filters" instead of "biofilters." Is that practical?  
7 It's just terminology.

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: It's  
9 terminology. What we could do if needed to be, we had  
10 language in the previous draft, the revised tentative,  
11 that talked about filtration through a media that would  
12 provide the requisite pollution reduction. Maybe I would  
13 suggest going to that.

14 BOARD MEMBER RICHARDSON: Okay. The second  
15 comment was about the sizing of the system on the water  
16 quality flow rate.

17 REGIONAL PROGRAMS SECTION CHIEF UNGER: I  
18 think -- Ivar, do you want to help me with that one?

19 I think to some degree we have that, don't we?

20 BOARD MEMBER RICHARDSON: It was a technical  
21 change.

22 MR. RIDGEWAY: Chair Lutz, Board Members, we  
23 had -- the reason it was based on captive volume was  
24 because most of the --

25 CHAIRPERSON LUTZ: Say your name.

1 MR. RIDGEWAY: Oh, I'm sorry. I'm Ivar Ridgeway  
2 with the Stormwater Permitting Program.

3 The reason it was set for volume capture is at  
4 first it was, you know, we were utilizing LID practices  
5 based on volume instead of flow. So most of the LID  
6 practices were for capture or reuse. If you look in the  
7 water quality mitigation in that new land planning and  
8 development for excess flow coming off that LID BMPs,  
9 there is a flow criteria for it. It's the same as in the  
10 SUSMP. There was a .2 inch -- you know, there's a flow  
11 requirement for, you know, listed in there on  
12 post-construction BMP. It would be hard to use -- you  
13 couldn't utilize the flow if, you know, their intent was  
14 truly to capture though or reuse stormwater.

15 BOARD MEMBER RICHARDSON: Okay. And his third  
16 question was change "trash excluders" to "full capture  
17 devices."

18 REGIONAL PROGRAMS SECTION CHIEF UNGER: I'm going  
19 to let Mr. Levy weigh in on that.

20 SENIOR STAFF COUNSEL LEVY: Thank you, Board  
21 Member Richardson and Members of the Board. The term  
22 "full capture device" is a TMDL-defined terminology. We  
23 don't specify for dischargers what types of devices  
24 they're required to use to comply with TMDLs. But in TMDL  
25 parlance, we've adopted the concept of a full capture

1 device, which is defined and it guarantees a safe harbor  
2 as long as they implement full capture devices.

3 So it's inappropriate to import the term "full  
4 capture device" into this part of the permit in that  
5 manner.

6 BOARD MEMBER RICHARDSON: Okay. Thank you.  
7 That's all I have for you, Sam.

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: Thank  
9 you.

10 BOARD MEMBER RICHARDSON: Do you have questions  
11 for Sam while he's here?

12 Thank you.

13 I'd like to have a representative from NRDC or  
14 Heal the Bay. Actually, NRDC.

15 A statement was made by NRDC that specific LIDs  
16 will cost less than the fourth draft as submitted by  
17 staff. And I've heard two sides, that they'll cost less,  
18 and they'll cost more. Can you give me an example of how  
19 they're going to cost less?

20 MR. BECKMAN: Well, I think what -- maybe I  
21 should just answer that by saying that maybe I misspoke or  
22 I was misinterpreted. All of the comments we've made  
23 about cost have to do with LID generally. I mean, LID, if  
24 you take that -- if you use that word "filter," you've  
25 then completely made a dramatic change to the permit by

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1 the way, by allowing something other than LID:

2           But the point we've been making on cost is that  
3 all of the cost assessments that have been done by third  
4 parties like EPA, particularly by EPA, say that in the  
5 majority of cases, LID approaches either are equivalent or  
6 less costly, and all of those studies are in the record  
7 and summarized in our comments.

8           So as between a permit that requires some type of  
9 LID approaches and other LID approaches, I'm not aware  
10 that anybody has made any comments directly about that.

11           I think the major point is that in solving these  
12 problems, this is a very cost-effective way to remove a  
13 lot of pollution.

14           DR. GOLD: Compared to treatment.

15           MR. BECKMAN: Yeah, right, compared to  
16 conventional approaches, and compared to, you know,  
17 package plants that might otherwise be required to deal  
18 with TMDLs.

19           BOARD MEMBER RICHARDSON: Okay. I had another  
20 question that maybe -- don't know whether I should ask it  
21 or not, but I was just curious. This has been a very long  
22 process with all participants involved, and I was just  
23 curious as to why maybe you didn't make a little more  
24 effort to bring all parties involved into your  
25 discussions, so that instead of having two differing



1 solutions here, we would have had one.

2 MR. BECKMAN: Well, I think that the  
3 conversations we've been having have been -- have involved  
4 directly and indirectly virtually everybody in the room. I  
5 would just respectfully disagree that there's some kind of  
6 Star Chamber that went on. And I find it quite  
7 frustrating that that would be the impression given the  
8 history of contentious stakeholder dynamics.

9 I think what you've got before you, Board Member  
10 Richardson, is a remarkable degree of consensus. If  
11 you're looking for everybody in the room to say, yep, we  
12 agree, that's exactly right, we will be here for a long  
13 time before that happens. But to get the two traditional  
14 litigants, the two traditional adversaries, the city  
15 municipal groups and the NGOs with some agreement on the  
16 key issues I think is a pretty significant accomplishment.  
17 Whether or not you like the outcome, the fact that it even  
18 occurred is worth noting.

19 Throughout these conversations, there has been  
20 lots of conversations with your staff. There have been  
21 lots of conversations with the BIA. In fact, we briefed  
22 the BIA on this, and we, you know, were told that there  
23 had been ongoing dialogue, let's just say out of the room,  
24 because the folks that were negotiating were reporting  
25 back, and those folks were reporting back.

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1 DR. GOLD: So I mean, I would just add that the  
2 cities and the county were meeting with your staff on  
3 nearly a weekly basis.

4 BOARD MEMBER RICHARDSON: Right, I understand  
5 that.

6 DR. GOLD: And so that was going on at the same  
7 time.

8 And the other thing sort of to echo what David  
9 was saying is you saw this occur on the Ventura -- City of  
10 Ventura POTW. And it was a similar situation. I mean, if  
11 you involved everybody, you know, it gets -- it already  
12 was very difficult. It took us a year to reach basically  
13 agreement because we're talking about 11 cities in the  
14 county and two environmental groups.

15 BOARD MEMBER RICHARDSON: Okay. Well, I had to  
16 ask it.

17 MR. BECKMAN: One quick point too. You know, one  
18 of the options for you, far be it from me who complains  
19 about delay, but one of the options is that you, you know,  
20 consider this in 30 days. That might be useful given what  
21 EPA has said. And, you know, we're in consultation with  
22 your executive officer repeatedly throughout this process.  
23 And we missed the deadline that they set and would not  
24 further extend, which is their right. And therefore, you  
25 know, it didn't get into whatever process it might have.

1 But that's easily fixed if you think that the negotiations  
2 and that kind of consensus is worth pursuing, and perhaps  
3 getting others to feel more comfortable with it.

4 BOARD MEMBER RICHARDSON: Okay. And then the  
5 other one, just a real technical question.

6 Dr. Gold, you specified that the lot sizes should  
7 be reduced to 5,000 square feet versus the 10,000 that was  
8 specified in the report. Is there any magic number in  
9 that?

10 DR. GOLD: No. As a matter of fact, you know, we  
11 were supporting it because obviously it would cover a lot  
12 more development and it would have a greater impact. And  
13 we didn't pull the number out of a hat, we used it from  
14 your previous versions of the permit. So it's not like we  
15 just, oh, we're saying 5,000 feet because it's better than  
16 10,000. It was using the staff recommendations that had  
17 actually existed in permits for a very, very long period  
18 of time, I think nearly a year.

19 MS. WYLIE: SUSMP number 2000-11.

20 BOARD MEMBER RICHARDSON: Okay.

21 CHAIRPERSON LUTZ: Go ahead, Ms. Marin.

22 BOARD MEMBER MARIN: I actually do have some  
23 questions for this group. But before I launch into my  
24 questioning, I did want to make a couple of statements to  
25 kind of frame the line of questioning and the direction

1 that my thinking is going on this.

2           When I look at the tentative, you know, I feel  
3 very strongly that using MALs as an assessment tool is  
4 just another version of the ineffectual iterative process.  
5 And, you know, having seen this permit go from, you know,  
6 something that was very enforceable to just, you know, one  
7 more let's try these things and see if they work approach  
8 is disappointing to me.

9           When you look at the tentative as a whole, you  
10 have MALs that don't really have accountability. You have  
11 monitoring that, again, you know, generates more data, but  
12 doesn't get us to accountability. And then, you know, an  
13 EIA that, you know, while I think it's an important tool  
14 as we can all agree, again, doesn't create a permit that  
15 moves us forward towards our objective, which is to  
16 improve water quality.

17           And when I look at our charge of MEP and I weigh  
18 the agreement with the tentative, you know, I don't know,  
19 I can't remember all checkboxes that you enumerated, but  
20 for me there's just one, improving water quality and which  
21 one is stronger, I have to go with the agreement.

22           I mean, I also concur with, you know,  
23 Commissioner Richardson, that the process by which you  
24 arrived at the agreement is one that's concerning, because  
25 it is -- it does appear to be very closed and exclusive.

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1 And I think that there should have been more of an attempt  
2 to bring in some of our staff. And I think we might have  
3 avoided a lot of the issues that I see between what staff  
4 is proposing and what you're proposing. It could have  
5 been resolved through working a little harder to bring  
6 them in. Because I really think at the end of the day,  
7 that you're not that far off, that there really is, I  
8 think, a lot of similarity in the approaches with some  
9 fine tuning. I mean, I think that the agreement that was  
10 arrived at between the NGOs and the cities is tremendous  
11 to me. I really like that you've put back some  
12 accountability into the framework here.

13           The position I have today is that I think we're  
14 close enough that we can make a decision today. I'd  
15 rather make a decision today than have to do it 30 days  
16 from now. But, you know, I'm open to the discussion and  
17 the thoughts of my fellow board members. But my feeling  
18 is that we're close enough that we can hammer something  
19 out and get out of here today with a permit that  
20 is -- that takes us to that next level, because every  
21 permit that we've seen before us has done that. And I'd  
22 hate to see a permit get watered down after you go back  
23 and everybody -- the whole agreement falls apart because  
24 there's -- you know, everybody's going to dig their feet  
25 in.

1           So the question I have for you though, because I  
2 think we're so close, is the question of the capture and  
3 treatment option. It seems to me that the difference  
4 between what BIA is proposing and what you're proposing is  
5 just really the -- whether we -- you include or consider  
6 the capture and treatment as a -- some option in the menu  
7 of choices that folks have in terms of meeting those  
8 requirements. So it's, you know, at the very end of the  
9 bottom line, after you've gone through everything and  
10 nothing else works, is that -- could that be an option?

11           MR. BECKMAN: Let me -- I'll take a stab at it.

12           The reason that we want to focus on retention as  
13 the standard is because it's going to lead to better water  
14 quality performance, and because it will be ancillary, but  
15 real water resources benefits beyond water quality. That  
16 is to say the opportunity to recharge or you can do so and  
17 augment water supply.

18           So it is a holistic water resources solution  
19 that's responsive to the MEP standard, water quality  
20 standards, and the broader environment, the drought  
21 emergency. That's the basic reason.

22           Now, we are not saying, however, that if you  
23 can't do that, you can't sort of default off-site  
24 mitigation and do those sorts of approaches. And that is  
25 the -- what the draft West Virginia approach does,

1 Anacostia, Washington, some of the other examples. So we  
2 think that there's a precedent for it, and because it's a  
3 superior solution, it's the proper approach.

4 We don't actually disagree that you can find  
5 definitions of LID that talk about biofiltration, and  
6 that, relatively speaking, that may be better than some of  
7 these proprietary devices. But we have a lot of impaired  
8 watersheds, as you, I think, very appropriately point out.  
9 It is time to do something significant about it. And a  
10 retention approach, where it can be done, is going to lead  
11 to better results.

12 BOARD MEMBER MARIN: But could you not  
13 prioritize, so you say, you know, retention, and then the,  
14 you know, the off ramp choices, and then at the end, you  
15 know, a third option, filtered.

16 MR. BECKMAN: Right. Well, there's two points.  
17 First, the permit doesn't do that; and second, the problem  
18 with the prioritization is we get into the comments that  
19 EPA and others have made about subjectivity, the Hoover  
20 Commission.

21 The problem -- you know, in an ideal world, if  
22 you had everybody with their best faith effort and lots of  
23 time making these decisions, maybe you could do that. But  
24 in a regulatory environment, we need something that's  
25 simple, that folks across the counter understand and that

1 is not subject to being manipulated by those who don't  
2 want to do it. A regulatory document isn't for those that  
3 want to do it, because they'll do it anyway; it's for  
4 those who don't. That's unfortunately why we now have to  
5 have these rules. And if you have those kind of  
6 subjective situations, well, you know, how do we know if  
7 it was really infeasible. That's the problem with it

8 DR. GOLD: And I would just add, so -- I mean, we  
9 spent hours and hours and hours talking about this exact  
10 issue. And I think that's where the creativity came with  
11 being able to do basically the mitigation off site. And  
12 basically saying, look, you know, we understand there's a  
13 lot of conditions where you're not going to get five  
14 percent. And so if you get to 30 percent and you do  
15 something off site, well, that's still an overall benefit  
16 to that subwatershed and allows local governments to  
17 finally have some revenues to move forward and do  
18 long-awaited things like re-street retrofits, parking lot  
19 retrofits -- I had to get this in before the end of the  
20 day -- so we don't have this parking lot without a  
21 retrofit before another meeting. I mean, this is like the  
22 worst parking lot this side of Disneyland. So anyways,  
23 that sort of thing, obviously, you know, we built that  
24 flexibility into that for that exact reason.

25 BOARD MEMBER MARIN: Okay. Well, I appreciate



1 that. And again, I go back to the fact that, you know, we  
2 have two options, and I guess there's always the option of  
3 putting it off for 30 days. But in my mind, we really  
4 have two options, it's a tentative and the agreement. And  
5 I, for one, do put a lot of weight behind what EPA has to  
6 say. I think that EPA has been involved in weighing in on  
7 these types of regulations across the country. And if we  
8 can't take their views and give them greater weight, then,  
9 you know, I don't know who else we can use as an  
10 authority. So I do have a question for EPA, but I don't  
11 want to move to them until we're ready.

12 CHAIRPERSON LUTZ: Shall we continue on with  
13 other questions then?

14 BOARD MEMBER MARIN: Yeah.

15 CHAIRPERSON LUTZ: Are you finished?

16 BOARD MEMBER MARIN: Well, besides make -- I'm  
17 ready to make a motion, sure.

18 CHAIRPERSON LUTZ: Well, I think we should have a  
19 little more discussion before that.

20 Mr. Blois, do you have questions?

21 BOARD MEMBER BLOIS: I have several.

22 I've got about nine pages worth of notes, but in  
23 the interest of time I'm going to just highlight succinct  
24 ones.

25 Sam, I had a couple questions for you. As you're

1 approaching the dais, or whatever that thing is, you made  
2 three or four things that I didn't quite follow. You said  
3 that -- this is in regards to the testing or monitoring  
4 programming. You said that it was going to be quarterly,  
5 and that -- then you said that three would be in the dry  
6 season and one would be in the wet season.

7 REGIONAL PROGRAMS SECTION CHIEF UNGER: I said  
8 there would be four a year. There would be three wet  
9 season monitoring events and one dry season. So it  
10 doesn't have to be quarterly. Essentially, the first  
11 rainfall event, and then two subsequent ones within a  
12 given wet season, then once during the dry season.

13 BOARD MEMBER BLOIS: Okay. And how does that  
14 relate to the testing program that we have now?

15 REGIONAL PROGRAMS SECTION CHIEF UNGER: It's  
16 totally unique. Basically, there is no testing right now  
17 for end-of-pipe monitoring whatsoever. We have no idea  
18 what the pollutant loading is coming from the MS4 systems  
19 without this new testing program.

20 BOARD MEMBER BLOIS: If we required two tests a  
21 year, it obviously would theoretically cut the costs in  
22 half, how would that degrade the quality of the data that  
23 we would gather?

24 REGIONAL PROGRAMS SECTION CHIEF UNGER:

25 Basically, the thing that everyone is talking

1 about is when we are going to see improvements to water  
2 quality. It will slow that down. We will not have as  
3 robust a data set to make appropriate decisions, you know,  
4 with the MALs, to implement the BMPs. And so it's -- I  
5 think it's a question of time in terms of when are we  
6 going to start seeing improvements to water quality. I  
7 think it goes to something that Dr. Gold said earlier  
8 about LID, that we're not going to see improvements to  
9 water quality in the very near future with LID. It has to  
10 do with new -- it starts a process down the right road; I  
11 agree with that. However, the MALs is really to take care  
12 of the pollution that we have now and the stormwater  
13 pollutant loading that is going on at this time.

14 Is it the best tool? No. But I want to point  
15 out to you that there is language in the MAL section that  
16 allows the executive officer to revise the MAL numbers  
17 when the new data come in, so we are always assured that  
18 basically it's going to find the outliers. It's going to  
19 find the high pollutant-loading areas, so that's why staff  
20 is supportive of the end-of-pipe monitoring which you  
21 asked about in conjunction with the MALs.

22 BOARD MEMBER BLOIS: Thanks.

23 Let me ask -- switch gears a little bit. There  
24 was some mention earlier about the ag waiver. What effect  
25 does that have on the testing or monitoring program?

1 REGIONAL PROGRAMS SECTION CHIEF UNGER: In many  
2 respects, it's complementary to the monitoring program.  
3 Essentially, what we have is we have -- we're monitoring  
4 primarily ag drainages, which are not part of the MS4  
5 system, so it gives us greater coverage throughout the  
6 county. And then right now what we're stuck with  
7 basically is when the two different types of discharges  
8 merge together in a mass emissions station or something  
9 like that, we can't tease them apart.

10 We've just started down the road, if you heard  
11 Mr. Krist earlier, a lot earlier this morning, say that we  
12 have the first two rounds of monitoring done from the ag  
13 waiver program, and we've started to implement changes  
14 there. So it's going to allow us to tease out the effects  
15 of urban runoff versus agricultural runoff.

16 BOARD MEMBER BLOIS: In your opinion or in  
17 staff's opinion, will that help to improve water quality  
18 in the Ventura county area?

19 REGIONAL PROGRAMS SECTION CHIEF UNGER: I was  
20 going to say one thing.

21 I understand all the issues, Ms. Marin, that you  
22 mentioned about MALs, but I think from staff perspective,  
23 those of us working in the stormwater program, we see the  
24 MALs as probably the most important tool that you can give  
25 us to help monitor -- help regulate the stormwater

1 program.

2 BOARD MEMBER BLOIS: Is that because of the  
3 historical record and the data that we would be gathering?

4 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.  
5 We'll be building it up and we'll be identifying  
6 specifically pollutant loads. We'll be able to identify  
7 the mass that is coming off from various areas within --  
8 from different cities in the county, from different  
9 subwatersheds in the county, things like that. So, you  
10 know, from our perspective, you asked, Mr. Blois -- I  
11 mean, from a staff perspective, I think we really think --  
12 we need the MALs.

13 BOARD MEMBER BLOIS: Great. Thanks, Sam.

14 I had a question or two for Mr. Levy. There --  
15 you're hiding down there.

16 In your presentation, you talked about a  
17 402(p)(3)(B)(2) -- and I had to write it down in  
18 quotations, and the section, which was from the EPA Clean  
19 Water Act was that they encourage -- well, no, they  
20 prohibit non-stormwater discharges into the storm sewers.

21 You know, I've spent a career installing storm  
22 sewers. That, on the face of it, at least my thinking, is  
23 impossible. What do they mean by that? What am I  
24 missing?

25 SENIOR STAFF COUNSEL LEVY: What it says is to

1 effectively prohibit non-stormwater discharges into the  
2 system. And the categories in draft permit, which are  
3 directed to that, those types of activities, the illicit  
4 discharge elimination programs, the other discharge  
5 prohibitions are designed to effectively prohibit the  
6 non-stormwater discharges.

7 We understand that some of the stakeholders like  
8 NRDC has a quarrel with some of the practical exceptions  
9 that are allowed there, like, for instance, emergency fire  
10 fighting activities and the like, but those are necessary.  
11 We have to be somewhat practical, and we have to view the  
12 word "effective" in the vein in which it's intended.

13 BOARD MEMBER BLOIS: So "effective" is the key  
14 word in that sentence?

15 SENIOR STAFF COUNSEL LEVY: Yes. And just to  
16 clarify, when it is discovered that any activities are  
17 determined to be a source of pollutants, there is a  
18 feedback loop to address that in the permit.

19 BOARD MEMBER BLOIS: There was a lot of mention  
20 about 13241 issues, the economic analysis. And I read the  
21 report very carefully in our Board material about the  
22 economic analysis and the study that was done. And note  
23 that the costs that they predict or forecast for this  
24 permit were about half of what the county thinks they are.  
25 But I want to focus in on one other thing. And the report

1 said that it excluded anything other than governmental  
2 costs, didn't consider any about the private costs, about  
3 any of the other costs other than the costs to the  
4 governments. Is that what 13241 says?

5 SENIOR STAFF COUNSEL LEVY: 13241 does not give  
6 specific guidance on what economic considerations we're  
7 supposed to look at. Just as economic considerations,  
8 there's broad discretion to the Board about what to  
9 consider and what not to consider. And our economists  
10 gave it their best shot.

11 BOARD MEMBER BLOIS: No, I'm not disparaging the  
12 report at all. I'm just pointing out that, in my opinion  
13 anyway, I think that they're missing a large segment of  
14 the costs of what our action will be.

15 SENIOR STAFF COUNSEL LEVY: I think what was also  
16 not included was natural resources damage costs and things  
17 like that, which are sometimes viewed by some as  
18 speculative and vague. I don't think that was considered  
19 in the report either.

20 BOARD MEMBER BLOIS: I agree.

21 I had a question for I guess BIA, and I guess  
22 probably doesn't require just but a yes or no answer.

23 Were you excluded from the agreement process?

24 MR. GREY: Yes.

25 BOARD MEMBER BLOIS: Does he need to come up?

1 CHAIRPERSON LUTZ: Yes, we do we need to.

2 BOARD MEMBER BLOIS: I'm sorry.

3 CHAIRPERSON LUTZ: The reporter needs for the  
4 record to know who's speaking, so we need to see you.

5 DR. GREY: Mark Grey, Construction Industry  
6 Coalition on Water Quality.

7 To my knowledge, I was excluded. As was  
8 mentioned, we were briefed. Perhaps -- and "we," that  
9 included our general counsel Andy Henderson and myself,  
10 perhaps a month ago.

11 MS. SCHROEDER: Holly Schroeder with the BIA L.A.  
12 Ventura Chapter. In fact, when we learned that the  
13 negotiations were going on, we asked if we could be  
14 included. We were told we could not because there were  
15 some confidentiality agreements pursuant to those  
16 negotiations. And when we were briefed, it was after  
17 agreement had been achieved.

18 BOARD MEMBER BLOIS: Thank you.

19 And finally, I'm intrigued by a comment that I  
20 guess David Beckman made. This just blows me away, as you  
21 I think said too.

22 We have a situation in our statement, and please  
23 correct me if I misunderstood you, but you -- I think I  
24 heard you say that you actually agree that BIA's proposed  
25 changes are better than what is in the proposed tentative



1 order.

2 MR. BECKMAN: Yeah, well conceptually. I mean, I  
3 don't know if they have sent something to you that I  
4 haven't seen, but, yes. I mean, what -- let me just  
5 explain. What BIA -- I interpret from my many  
6 conversations with Mark, and being at scenarios like this  
7 in other counties, is they're saying, yes, you have to  
8 meet the design storm treatment requirement through IID,  
9 period. And they wanted to include some of the filtration  
10 on things that we don't. And they are also saying, I  
11 believe, Mark will correct me, but I think this is  
12 correct, that if you can't do that on site, that because  
13 you would then default to conventional approaches, which  
14 are not as effective, that you would make up the  
15 difference, the volume that you're not treating with IID  
16 somewhere else. And I think that is clear and will -- and  
17 it's clear both in terms of execution and better in terms  
18 of performance than what I think is a halfly not quite put  
19 together proposal that staff had presented.

20 We've actually had very good conversations I  
21 think with BIA, with both Andy and with Mark. And I think  
22 -- I hope you don't get the impression because there's  
23 some concern about the consensus that was reached by the  
24 cities and the NGOs, which have been the traditional  
25 parties that have been litigating each other, that there

1 isn't an enormous amount of discussion, and I think some  
2 real progress, including over, you know, Italian lunches  
3 in Culver City.

4           So it's not, I think, quite the way it's being  
5 presented. And I must say also, if you'll permit me, that  
6 the impression that some are leaving, including some  
7 staff, that they weren't involved or asked to be involved  
8 and weren't and that there was some other kind of process  
9 that everyone was invited to, I don't think is true.

10           And I think that the record shows that there were  
11 a whole series of meetings that were held without the  
12 NGOs, and that there were wholesale revisions, some block  
13 and cut, thousands of words, thousands, maybe slightly  
14 more, but I don't have the exact number, it's in our  
15 papers, that included the typos that were presented by  
16 some parties.

17           So what's my point? My point is I think that the  
18 process that has been followed here may be imperfect, and  
19 I take -- I was going to say Maribel because we used to  
20 work together -- but Board Member Marin's comments to  
21 heart, but I don't think it's a fair assessment of what  
22 went on. And I think that if you want to throw stones at  
23 this, you know, we all live in glass houses, and I'm very  
24 confident that I can show you many meetings that occurred  
25 to which Heal the Bay and NRDC were not invited.

1 BOARD MEMBER BLOIS: Thank you. I'm going to cut  
2 it short and let the next one go. Thanks.

3 CHAIRPERSON LUTZ: Okay.

4 BOARD MEMBER MARIN: Actually, can I just react  
5 to one question that you posed to Sam, because I just want  
6 to make sure that I'm clear on what's being said here.

7 You know, you asked Sam about MALs, and I  
8 think -- I just want to make sure that it's clear also  
9 what I was saying, that I don't like MALs as an assessment  
10 tool. I don't -- I'm not saying that MALs wouldn't be  
11 great in a perfect world. It would have been wonderful if  
12 the agreement would have come forward with the MALs as the  
13 assessment tool and the stronger LID, but I think that the  
14 compromise here was in order to get -- I think the  
15 tentative is proposing weak MALs and a weaker LID, and the  
16 compromise was no LID -- I mean, no MALs and a stronger  
17 LID plus year-round beach monitoring. And I think that  
18 that is the choice that we have.

19 It's not that MALs wouldn't be a good thing, even  
20 in their weak form, but I think that the deal that was  
21 made -- and that's why the cities are saying it's -- you  
22 know, if you're going to start cherry picking out of the  
23 agreement, we're not going to -- we're not buying it is  
24 because there was, in their mind, a give and a take.

25 And so I think that while you -- and I would

1 agree with you that having MALs is a good tool for you,  
2 better than not having them. There's -- I think also  
3 beach monitoring on a year-round basis is a tool that can  
4 be used.

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: I agree  
6 with that, and I thought I was clear this morning when I  
7 said that that would be essentially for your decision.

8 You know, essentially, we were under the  
9 impression that the other beach monitoring program would  
10 be in place. It's not in place. However, there is beach  
11 monitoring going on due to TMDLs, as someone else has said  
12 here, that this Board's adopted.

13 I think we can -- you know, we can essentially  
14 amend or put in year-round, it's not too difficult to do,  
15 into our proposal.

16 Again, it's -- I think you've characterized the  
17 decision very well actually, Ms. Marin. But I think from  
18 our perspective, the MALs have been characterized as  
19 having been weakened. I don't think that they are as  
20 weakened as they've been portrayed. They sent 16  
21 constituents down to 5; we're looking at classes of  
22 constituents. We're don't think that you need to monitor  
23 every single metal to know, you know, that there's metal  
24 discharges. We did that.

25 We think that there was an error in the analysis

1 when they compare MALs to CTR. They're not as above CTR  
2 as we think. We have no other tool at this time nor will  
3 we have a tool if we don't adopt a permit with MALs in  
4 them, or at least with monitoring of end-of-pipe  
5 monitoring. We will not know how to -- essentially, where  
6 the pollutant load is coming from, and we'll be casting  
7 around, as you said, you know, with iterative programs and  
8 things like that. This will get us out of that, this will  
9 get us to prioritization of areas that are causing  
10 problems and causing high pollutant loads.

11 BOARD MEMBER MARIN: So let be me just be clear.  
12 If you take out the MALs, but what you have left is the  
13 year-round beach monitoring for the 10 sites, plus the 11  
14 specified outfalls, that wouldn't give you an alternative  
15 tool for the assessment that you need to make?

16 REGIONAL PROGRAMS SECTION CHIEF UNGER: I don't  
17 think that we would have -- we've been talking about  
18 clarity, clear metrics and things like that; that would be  
19 the piece that is missing.

20 We wouldn't have something that we've decided,  
21 essentially, beforehand that is a problem, that deserves  
22 attention. It's flexible. The EO, Ms. Egoscue, you can  
23 revise the actual MAL numbers during the life of the  
24 permit as more data become available.

25 BOARD MEMBER MARIN: So is that no?

1 REGIONAL PROGRAMS SECTION CHIEF UNGER: Without  
2 that, it's not going to -- and the MALs right now, they  
3 cause certain things to happen when they're exceeded. We  
4 can alter those numbers. They're statistically derived.

5 BOARD MEMBER MARIN: Right. So you're saying  
6 that the beach monitoring and the 11 out -- and the  
7 monitoring of the 11 outfalls would not provide you with  
8 sufficient data to assess whether progress is being made.

9 REGIONAL PROGRAMS SECTION CHIEF UNGER: I'm  
10 speaking from a staff perspective. From a staff  
11 perspective, we think we need that tool.

12 BOARD MEMBER MARIN: I'm sorry?

13 REGIONAL PROGRAMS SECTION CHIEF UNGER: I said  
14 from a Regional Board staff perspective trying to regulate  
15 the stormwater program, trying to figure out essentially  
16 where the pollutant loads are coming from, which areas are  
17 in need of, you know, additional --

18 BOARD MEMBER MARIN: That wasn't what the  
19 question was.

20 REGIONAL PROGRAMS SECTION CHIEF UNGER: Okay.  
21 I'm sorry.

22 BOARD MEMBER MARIN: In terms of improving water  
23 quality.

24 REGIONAL PROGRAMS SECTION CHIEF UNGER: No, I  
25 don't think it will, because there will be no -- there

1 will be no path to taking BMP actions to reduce pollutant  
2 loadings. Is that clear? I'm sorry. /

3 BOARD MEMBER MARIN: Yeah, but that's a  
4 different -- it's an answer to a different question.

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: Oh, I'm  
6 sorry.

7 BOARD MEMBER MARIN: No, no, it's okay. In my  
8 mind, if the water -- if the monitoring samples along the  
9 beach are improving, then --

10 REGIONAL PROGRAMS SECTION CHIEF UNGER: Well,  
11 let's be clear. Some of these beaches that we're  
12 monitoring are not in areas where the MS4 is discharging.  
13 They are for human health, only for other important  
14 reasons. It's not going to help us fix the pollutant  
15 loading from the MS4.

16 And when you're far away from the beach, some of  
17 these cities are --

18 BOARD MEMBER MARIN: But you still have the 11  
19 outfalls.

20 REGIONAL PROGRAMS SECTION CHIEF UNGER: We still  
21 have 11 outfalls. And then how do we take action? How --  
22 without the MALs? That's what we're up against basically.

23 BOARD MEMBER MARIN: Okay.

24 REGIONAL PROGRAMS SECTION CHIEF UNGER: Did I  
25 answer that?

1 CHAIRPERSON LUTZ: Ms. Diamond.

2 BOARD MEMBER MARIN: I get it. I get your  
3 perspective.

4 BOARD MEMBER DIAMOND: Well, I guess one of the  
5 things that I think we've experienced with our former or  
6 past or current, actually, permit is a lack of clarity and  
7 an inability to really enforce it and a tremendous amount  
8 of litigation in L.A. County. And I think we've suffered  
9 from that lack of accountability that I think we sorely  
10 need.

11 And I'm -- I actually -- and I also want to say I  
12 think the fact that we should acknowledge that the fact  
13 that we have the county and the cities and the  
14 environmental organizations coming together is really an  
15 extraordinary accomplishment. I have to say I'm  
16 surprised. I never expected to see that. And the fact  
17 that you all are working together I think is quite  
18 impressive.

19 And I really don't want to get into who was in  
20 the meeting and who wasn't in the meeting, because what I  
21 really care about, and I think what we all really care  
22 about, is improving water quality. And are we moving this  
23 forward? Is what we adopt today moving in the right  
24 direction? Because if anything, we know we're required to  
25 do, it's to move the permit, ratchet it up at -- every new



1 permit. And I think that that's what we're attempting to  
2 do today.

3 I think that -- I agree that there was a lack of  
4 clarity in our -- in the staff permit, the tentative  
5 permit. I found it, myself, very difficult to work my way  
6 through it. I think the questions that are coming up  
7 today and the statements that we've heard are evident of  
8 that.

9 While I really think that MALs are an important  
10 tool, they would be a very important compliance tool, and  
11 so I'm -- as an assessment tool, they are something that  
12 are important. But I can understand if we move forward  
13 with very strong LID, which I think we see in the  
14 agreement, that that's -- and much stronger monitoring. I  
15 think that we are going to be moving our stormwater permit  
16 in the right direction and looking at improved water  
17 quality.

18 I'm also very concerned about the fact that EPA  
19 is here today saying that there is a lack of clarity in  
20 the permit and that there are loopholes in the permit. I  
21 would say for the last nine or ten years that I've been on  
22 the Board, there's been nothing but litigation as a result  
23 of prior permits and other permits as well. And so if we  
24 can get to a place where it's clear, we understand and the  
25 permittees understand what is expected of them, and it's

1 measurable, then that is going in the right direction.

2           So I guess -- and the other thing that's really  
3 important to me that we accomplish here today is the --  
4 making that strong connection that has been mentioned here  
5 again and again between water quality and water supply,  
6 which is through the retention and the infiltration and  
7 the recharge of groundwater. That is something that we  
8 are required to do, whether it's from the Governor or by  
9 climate change, we are required to do that. We need to do  
10 that. We need more water. I think the way that we get  
11 there is recognizing that improved water quality gives us  
12 no pollution, less pollution, and better water resources,  
13 which we not only want to have, but we need to have. I  
14 mean, we have too much realistic -- and I think that is an  
15 extremely important aspect of the agreement.

16           So what I would like to ask of staff, Sam, is --  
17 and also I want to thank the staff, Sam and all of the  
18 stormwater people and Tracy and Deb, for the extraordinary  
19 amount of work that you've put into this. It is something  
20 that is obvious, and it's been a very long, multiple  
21 workshop process, and it's never easy to get through these  
22 things.

23           And so I wanted to ask you, Sam, how you think we  
24 can move forward with improved increased monitoring,  
25 particularly at the storm drains, just as we do in L.A.

1 County, and what else we can do to make sure that what's  
2 coming out is something that we can measure and enforce,  
3 because I think those are the words that are important.  
4 The accountability and the enforcement.

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: Let me  
6 try to -- one thing, Ms. Diamond. We don't really have  
7 end-of-pipe monitoring in Los Angeles County. That is  
8 mostly receiving water monitoring that we have there. And  
9 we're suffering -- the difficulties that we have in  
10 enforcing are due to the lack of end-of-pipe data.

11 You know, I don't know if it's possible, you'd  
12 have to ask the cities -- I believe as I read their  
13 proposal, that we could retain the end-of-pipe monitoring.  
14 We wouldn't have a metric to compare it against, and we  
15 might be able to retain that monitoring program. I  
16 don't -- the agreement to me, as we talk about clarity,  
17 it's a little unclear as to what's being taken out and  
18 what's being put in in terms of how they work.

19 So I mean, we could have end-of-pipe monitoring.  
20 What we do with those data though without some sort of  
21 metric of some sort, it's difficult to tell. We will look  
22 at the data. We will talk to the permittees about certain  
23 areas that may need, you know, improvements for pollutant  
24 load reductions and things like that, but how are we going  
25 to enforce, at this point, I'm -- I don't really know,

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1 Ms. Diamond.

2 BOARD MEMBER DIAMOND: But with increased  
3 year-round monitoring at the storm drains, we'll get  
4 better information.

5 REGIONAL PROGRAMS SECTION CHIEF UNGER: We will  
6 get better information, yes, but there are no effluent  
7 limits at this point. So it will help. There's no doubt  
8 that that will help. It will be an improvement. I'm just  
9 a little unclear as to whether the agreement contemplates  
10 inclusion of the end-of-pipe monitoring or not.

11 BOARD MEMBER DIAMOND: Well, you know, the other  
12 thing is that we can, as a Board, look at the agreement  
13 and also discuss what we want to do in terms of  
14 monitoring.

15 REGIONAL PROGRAMS SECTION CHIEF UNGER:

16 Absolutely. I believe so.

17 BOARD MEMBER DIAMOND: So I think that's what I  
18 would like to do, is say I like the agreement, but I want  
19 to make sure that there's enough monitoring in it, whether  
20 the agreement says that or not.

21 REGIONAL PROGRAMS SECTION CHIEF UNGER: You may  
22 want to ask some of the parties to the agreement.

23 BOARD MEMBER DIAMOND: And, Dr. Gold, would you  
24 come up also, and both of you talk about the monitoring.

25 MR. HUBNER: The agreement pertains strictly to

1 the beach water quality monitoring year-round. You still  
2 have the core monitoring, which includes the urban outfall  
3 monitoring, the bioassessment, all of that as part of your  
4 tentative -- or your revised tentative order.

5 DR. GOLD: And the critical part that we're in  
6 concurrence on, the importance of this, and this is with  
7 the Regional Board and what the permittees and the  
8 environmental community, is the 11 outfall sites, the --  
9 basically the end-of-pipe sites. And to hear that there's  
10 no metric for comparison, somehow it doesn't make sense to  
11 me. I need to remind everybody that one of the first  
12 provisions within this permit is the water quality  
13 standards provision, which has basically been blown off by  
14 this Board for -- except in court where you guys  
15 prevailed, of course, from the standpoint of utilization.  
16 And the point being is you have end-of-pipe monitoring.  
17 You have receiving water monitoring. Now, you have a much  
18 better shot at piecing together are the subdrainages  
19 coming from the end of pipe actually causing or  
20 contributing to water quality exceedances in the receiving  
21 waters.

22 And so this fills that gap. And that's why we're  
23 all in agreement, this needs to be done in such a big way.  
24 So I've been very, very surprised to hear staff saying  
25 that there's nothing other than MALs to deal with that,

1 when the reality is the monitoring program that's been  
2 negotiated, largely by Ventura with the Regional Board,  
3 was designed to fill that gap that's existing in the L.A.  
4 County permit for quite some time.

5 MR. HUBNER: And one other thing that occurred to  
6 me as I'm standing here, even with the urban outfall  
7 monitoring, we could conduct additional monitoring again  
8 through the MAL approach, a number of things, including  
9 public outreach, more BMPs treatment, the monitoring could  
10 be part of that. And we'll also have our illicit  
11 discharge dry weather monitoring program on top of that.  
12 So it's starting at the receiving water, going to the  
13 urban outfall, and then even further to do more source ID.

14 BOARD MEMBER MARIN: And I just have to weigh in  
15 here about the enforcement, because I think there's  
16 different ways of looking at enforcement and whether we  
17 have enforcement authority in this permit. And I would  
18 argue that the tentative draft doesn't give us  
19 enforceability because MALs don't get you to the type of  
20 enforcement that you're proposing it would get us to,  
21 because they're not numeric limits.

22 And the whole problem with the previous permits  
23 was that the main strategies that we had for improving  
24 water quality, which was the implementation of BMPs, were  
25 not enforceable because they were iterative.

1 BOARD MEMBER DIAMOND: Well, that's the whole  
2 thing.

3 BOARD MEMBER MARIN: Right. And so the  
4 difference between what's being proposed in the NGO  
5 agreement is that there's enforceability in the  
6 requirements for LID and -- which is -- which is where we  
7 get to that next level.

8 We haven't had a permit that provides us that  
9 level of enforceability.

10 BOARD MEMBER DIAMOND: Well, I would agree that  
11 the problem that we've had is that we have expected in the  
12 other permits that the permittees would look at the BMP  
13 and say, if it's not working, we're going to ask to go up  
14 to the next level of BMP. And as far as I know, at least  
15 in the L.A. County permit, and I'm not sure -- I will  
16 speak to that, because I know about that, that never  
17 happened. There was never a self-reporting, not working,  
18 let's go to the next one. So I think we have to learn  
19 from what works and what doesn't work.

20 BOARD MEMBER MARIN: Right. And in fact, that  
21 led us, I think, down the wrong path. I mean not the  
22 worst path, but certainly not the path that we want to be  
23 on where we agreed that if you implement certain BMPs,  
24 then you're in compliance, when, in fact, that is not the  
25 case.

1 I mean, we're not improving water quality just  
2 because you put, you know, what -- those trash collectors  
3 or whatever they're called at certain catch basins. I  
4 mean, that allows people a pass, but that doesn't, in  
5 fact, improve water quality.

6 So I think that we're getting closer and the  
7 measure that we're using in this permit through retention  
8 is much more secure in terms of improving water quality.  
9 I think there's -- the connection is much clearer and the  
10 enforceability is much clearer. So I think we're --  
11 that's the direction that we need to go in.

12 BOARD MEMBER DIAMOND: I think the enforceability  
13 is really important.

14 CHAIRPERSON LUTZ: Do you have any other  
15 questions, Mr. Diamond?

16 BOARD MEMBER DIAMOND: No, not now.

17 VICE CHAIRPERSON GLICKFELD: Thank you.

18 Could I have the big four up to -- Cole and Mark  
19 and Gold and Beckman -- Mr. Sedell.

20 BOARD MEMBER MARIN: Okay, it's 5.

21 VICE CHAIRPERSON GLICKFELD: Oh, I'm sorry, I  
22 didn't mean to leave you out.

23 This is a -- and I think you heard from all of my  
24 colleagues that this is a -- we all -- I think many of my  
25 colleagues see this as a great opportunity but one we're



1 quite queasy about. We have our staff and the EPA telling  
2 us we should not let go of these MALs, and yet a lot of  
3 us, including me, see that the benefits that we get on the  
4 other end are great.

5 I want to know from the county and city  
6 permittees if you can go for -- if you can accept the MALs  
7 as they are right now in this staff report, but you can't  
8 accept them in the agreement, why?

9 MR. COLE: To answer fully is to unpack the  
10 entire discussion. We believe if you take a step back  
11 from water quality, that the most significant improvement  
12 in water quality are infill development projects because  
13 that's where the urban and suburban runoff is taking  
14 place. We're a slow-growing county. Low impact  
15 development is a great opportunity for the future. But we  
16 grow about one percent a year as a county and probably  
17 won't be growing one percent a year for the next five  
18 years given the economy. So to put all our eggs in the  
19 Low Impact Development basket is problematic.

20 So as we talked about these issues back and forth  
21 and back and forth, we were very insistent on trying to  
22 have as much opportunity for the very difficult infill  
23 projects. That's where you get -- you go from a Kmart or  
24 this good forsaken parking lot the size of Rhode Island  
25 that all dumps into the storm drain, that all flows right

1 to the ocean. That you have the opportunity to retrofit  
2 that. That's where we think the biggest bang for the buck  
3 comes for the water quality. So that's where we put our  
4 focus.

5 The environmental groups have tremendous focus on  
6 Low Impact Development because they're, of course, setting  
7 precedent for much faster growing areas. And so we tried  
8 to find a balance.

9 So that's why we have said, and we appreciate  
10 Commissioner Marin's comments, don't take this agreement  
11 apart. Please, if there's one thing that the five of us  
12 agree on is take it or leave it. We will live with the  
13 permit from the permittee side that your staff has done.  
14 It is not perfect, neither is our agreement. But don't  
15 mix and match. That totally undercuts the spirit of trust  
16 that we've operated under here. And more directly related  
17 to MALs, our worry is it's the camel's nose under the  
18 door, under the --

19 VICE CHAIRPERSON GLICKFELD: That's the part of  
20 the question that I wanted answered, is what is your  
21 long-term worry about the MALs that you would --

22 MR. BECKMAN: This is obviously a difficult thing  
23 for us. If we thought the MALs were going to be  
24 effective, we wouldn't say take them out.

25 VICE CHAIRPERSON GLICKFELD: I can't hear you.

1 Would you speak up.

2 MR. BECKMAN: If we thought the MALs were going  
3 to be effective, we wouldn't say take them out. But Mark  
4 Gold made exactly the right point. The notion that this  
5 is the only tool I think ignores the 800-pound gorilla  
6 that we have all been fighting about for ten years, which  
7 is water quality standards. And we've now finally settled  
8 that, water quality standards apply. Those are the legal  
9 and most relevant metrics for you to compare both for  
10 assessment and for enforcement and compliance. And by  
11 setting these MALs at levels that essentially say even  
12 very bad performance is okay is something that we think is  
13 counter-productive.

14 And so, you know, we sometimes are accused of,  
15 you know, adding new regulation, we're in favor of it.  
16 So, you know, I can see that it's destabilizing when we're  
17 not, but we think that from 16 to 5 and the leniency, it  
18 actually would be counter-productive.

19 VICE CHAIRPERSON GLICKFELD: Okay. And --

20 MR. SEDELL: Can I add one more piece to that?

21 VICE CHAIRPERSON GLICKFELD: Yes, of course.

22 MR. SEDELL: You know, I'd like to put into  
23 context, and this was, again, carefully crafted. I agree  
24 with everything they've said, as you can't take one piece  
25 without it really falling apart. But it was crafted in a

1 time when we were operating on what we consider, clearly  
2 not them, a draconian permit that was out there from the  
3 last time. Draconian in the sense that the cost to the  
4 cities that we saw to the public cost that was in the  
5 neighborhood of -- I believe it was \$600 per household per  
6 year, which was draconian and not getting as much out of  
7 it as we felt that should be for that kind of money, and  
8 we couldn't afford it. So we had that hanging over our  
9 negotiations during that time.

10 Now, that's much different than what's out there  
11 now, but that was part of that negotiation. And we, in  
12 that process, had a very real give and take, and  
13 everything was on the table. And we had some real yelling  
14 matches getting to where we got. And we agreed that once  
15 we got there, that no piece of it could be pulled apart  
16 because it was so fragile. And that's why we're all  
17 staying with it so strongly.

18 VICE CHAIRPERSON GLICKFELD: Okay. I want to  
19 shift to another topic.

20 I want to go to the language that you have in  
21 a -- all of you stay where you are. Don't go anywhere.

22 (Laughter.)

23 VICE CHAIRPERSON GLICKFELD: I want to go to the  
24 language here.

25 You know, I tell you, Mr. Levy, if anyone ever

1 asks you in court or complains about us not doing  
2 alternatives analysis again, remind them about this  
3 meeting.

4 (Laughter.)

5 VICE CHAIRPERSON GLICKFELD: Unfortunately, this  
6 should have been an alternative in hindsight. You know, I  
7 can't criticize the staff at all, but it would have been  
8 great to have seen this as a formal alternative brought  
9 before us without you liking both of them at the same  
10 time, it would have been easier that way too.

11 But what I been concerned about --

12 MR. COLE: We think it makes it easier for you.

13 VICE CHAIRPERSON GLICKFELD: Oh, God. Anyway,  
14 what I'm concerned about is I've heard over and over and  
15 over from people in the audience commenting that they  
16 believe and our staff believes that this is a water  
17 retention strategy only. And I've heard you say over and  
18 over again it doesn't.

19 But the -- if every -- if what we want here is  
20 clarity, we want to walk out of here with some certainty  
21 that everybody sees the language in the same way. I can  
22 tell you that the way I'm reading page -- the Sections 1A  
23 1B and 1C is it's not completely clear to me that we're  
24 not talking about only a fully retain system.

25 So 1A says to control pollution through

1 infiltration, storage for reuse, evapotranspiration,  
2 biorétention and biofiltration. It seems to imply a whole  
3 host of things. And then the next section, and maybe I'm  
4 not reading this well, says, only fully retain on site.  
5 It focuses on that one issue. And the third section goes  
6 back, again, and says, infiltrate, store for reuse, or  
7 evapotranspirate without any runoff.

8           So I think that while it may be clear to you,  
9 it's not clear to everyone else. What you have said to us  
10 in hearing is not reflected in that language. How would  
11 you suggest as a group who have come to an agreement that  
12 we fix this? Because I don't want to pick this  
13 alternative, because it brings more certainty and more  
14 clarity and better implementation and then have a big  
15 fight about what it really means.

16           MR. BECKMAN: Well, I can start. I think that  
17 maybe there are a few issues where people are missing each  
18 other. One of them is zero discharge. Are you talking  
19 about no matter how much water falls on the site, can any  
20 water come off? And the answer to that is, yes, water can  
21 come off the site.

22           Where the retention requirement comes in, and  
23 there is a retention requirement, is for the design storm,  
24 which is a size storm that has been defined the same way  
25 since 2000 or 2001 when the original SUSMP was adopted,

1 which is referred to by many people as a three-quarter  
2 inch storm or an 85th percentile storm. So it's a  
3 relatively small storm, a smaller design storm than many  
4 of the examples that we gave you across the country.

5 VICE CHAIRPERSON GLICKFELD: You know, I actually  
6 am asking you a very specific question, which is I  
7 understand and you're saying the same thing in testimony  
8 that you were saying before. Your testimony is very  
9 consistent.

10 I am not convinced that the way it's written in  
11 this attachment reflects your testimony. And so I'm  
12 asking you as a group, would you consider at least  
13 stepping out of the room and working with our staff to see  
14 if we can get language in there so that we can get  
15 language in there so that we can -- this is my chance to  
16 ask these questions.

17 BOARD MEMBER MARIN: Right.

18 VICE CHAIRPERSON GLICKFELD: And I'm not asking  
19 for --

20 BOARD MEMBER MARIN: But you're giving  
21 direction --

22 VICE CHAIRPERSON GLICKFELD: I'm asking them if  
23 they would be willing to do it. I'm asking if they would  
24 be willing to do it, because I think that there is a lack  
25 of clarity on the issue of how much retention and how much

1 filtration, biofiltration, and if there is any treatment  
2 at all of waters that are released from the site.

3 MR. BECKMAN: I'll just answer, and then others  
4 can answer.

5 I don't know that we can do that, but I would --  
6 before getting to that point, C1 is the operative  
7 language. And maybe if you read it together, it answers  
8 your question. I don't know, but if you look --

9 VICE CHAIRPERSON GLICKFELD: Go through it with  
10 me.

11 MR. BECKMAN: Okay.

12 VICE CHAIRPERSON GLICKFELD: To my colleagues, it  
13 would be on page 878.

14 MR. BECKMAN: Yeah, I don't know your numbering  
15 but this is Attachment A of our --

16 VICE CHAIRPERSON GLICKFELD: It's Attachment A,  
17 page 1 of 4.

18 MR. BECKMAN: Right. So it says that, "The  
19 permittee shall require the features constructed to render  
20 an impervious surface ineffective, as described in B, have  
21 to be properly sized to infiltrate store for reuse or  
22 evapotranspiration without any runoff..." -- that's the  
23 key -- "...at least the volume of water that results  
24 from." And then it says the 85th percentile storm in 1  
25 and 2 and 3. And these are already in your permit.



1           So it doesn't say -- and I apologize if it's  
2 subject to that interpretation. But when you look at it  
3 together, it doesn't say you shall retain everything that  
4 falls on the site. It says a specific design storm.

5           This has been something that we have looked at,  
6 and they have looked at, and their consultants have looked  
7 at, and their lawyers have looked at. I can assure you  
8 that the county and the cities would have agreed to  
9 something that could be interpreted as a zero discharge  
10 standard for any amount of rain that falls on this site.  
11 And should you adopt this, you have our on-the-record  
12 statements to that effect, if there's any possible  
13 confusion.

14           VICE CHAIRPERSON GLICKFELD: So would anyone from  
15 the permittees like to comment on that? Was that  
16 description consistent with your understanding of the  
17 language?

18           MR. COLE: We agree with, again, just to point  
19 out, there are a number of sites where that is infeasible.  
20 And so we have a 70-percent standard there and the  
21 opportunity for off-site mitigation.

22           VICE CHAIRPERSON GLICKFELD: Where's the  
23 70-percent standard in that language?

24           DR. GOLD: It's 30 percent EIA.

25           EXECUTIVE OFFICER EGOSCUE: Board Member

1 Glickfeld and the Board, what they're discussing at this  
2 point starts at 879. It's C at the bottom. It's the  
3 alternative compliance measures. Wraps around to the next  
4 page, number 1 at the top of page 880.

5 MR. COLE: So the pervious becomes 30, which  
6 means the impervious is 70.

7 VICE CHAIRPERSON GLICKFELD: So it says -- does  
8 this mean that in any case, any property has to treat --  
9 let's see -- do an EIA of 30 percent, no more than 30  
10 percent? I don't really understand what this says.

11 DR. GOLD: The point -- let me interject.

12 The point is that the area that you're covering  
13 with the EIA, so all of that flow needs to be retained on  
14 site. The area that's not covered by the EIA, so that's  
15 that whole 5 to 30 percent range, can have flow off site.  
16 So that's the basic, simple way to look at it.

17 VICE CHAIRPERSON GLICKFELD: Then what about the  
18 flow that's off site, does it get any kind of BMP at all?

19 DR. GOLD: It should comply with SUSMP, of  
20 course.

21 MR. SEDELL: The one other point I would mention  
22 here, I mentioned it in the summary earlier, is that  
23 whichever alternative that your Board chooses, there's  
24 still a lot of meat to put on the bones, probably more on  
25 one than on the other. The implementation plan still

1 needs to be -- the manual that needs to be developed is  
2 going to take probably significant time with hopefully the  
3 various parties at the table as part of that, as well as  
4 your executive officer who will be mainly driving that and  
5 making sure all these things are answered adequately along  
6 the way. And we can probably answer many more of those as  
7 we go.

8 EXECUTIVE OFFICER EGOSCUE: May I ask a question,  
9 please?

10 CHAIRPERSON LUTZ: Sure.

11 EXECUTIVE OFFICER EGOSCUE: On page 880, which is  
12 page 3 of your Attachment A, you indicate that you did not  
13 reach consensus on the amount of years.

14 MR. COLE: We did.

15 EXECUTIVE OFFICER EGOSCUE: You did?

16 MR. COLE: It's the longer. It's the 4.

17 EXECUTIVE OFFICER EGOSCUE: All right. Does the  
18 Board see where I'm --

19 BOARD MEMBER MARIN: Yes.

20 CHAIRPERSON LUTZ: Clarify that a little better  
21 for us.

22 You reached consensus on four years rather than  
23 three years, correct?

24 MR. COLE: Correct.

25 VICE CHAIRPERSON GLICKFELD: I still have one

1 more question. And this is for Mr. Cole.

2 I don't know that all of you understand exactly  
3 how famous Mr. Cole is as a compact urban redevelopment  
4 guru. And I want you to talk a little bit more about how  
5 you expect to meet this standard in urban areas. I don't  
6 see a green streets requirement in the agreement. There's  
7 not a requirement that when you do a public works project  
8 on a street that it incorporate green street elements.

9 I see that -- I heard you say before that money  
10 that was used for mitigation off site could go to these  
11 kinds of projects, or for urban infill projects that would  
12 be an ideal kind of use. But I don't really know how we  
13 fix the urban infill environment without treating what  
14 is -- it turns out to be about 50 percent of the land use  
15 in urban areas, and which is the streets and the parking  
16 lots and the sidewalks.

17 So tell me a little bit more about how this  
18 agreement will approach that.

19 MR. COLE: Remember there are 11 cities. Ojai,  
20 population 8,000, not enough money to rub two sticks  
21 together in their municipal budget, and in many cases a  
22 largely rural environment.

23 Santa Paula. You know, a city of 35,000 largely  
24 built out.

25 Oxnard, continued growth.

1           Very distinct and different situations. So a  
2 one-size-fits-all solution is very difficult in this  
3 environment.

4           Second, under the economic challenges, we are  
5 spending a half a million dollars on two blocks to do a  
6 green street demonstration project. There's no way we can  
7 accept in our city, who are stepping up to the plate  
8 without anyone telling us to spend half a million dollars,  
9 that we could accept a requirement that cities do this.

10           What this does is give us an opportunity to take  
11 mitigation money, and those sites where you cannot achieve  
12 those goals, which would be primarily intensive urban  
13 sites, and begin to allocate that to green parking lots  
14 and green streets. So that's the funding mechanism.

15           Will it convert every 40-foot wide suburban  
16 subdivision street in Simi Valley to a green street in the  
17 next five years, the answer is absolutely not; nothing we  
18 could do short of having Mr. Geithner adopt us would  
19 achieve that goal.

20           VICE CHAIRPERSON GLICKFELD: I understand better  
21 then that you're really thinking of -- in urban infill  
22 areas, you're really thinking of this program as being as  
23 much a transfer from the private site into the public  
24 area.

25           MR. COLE: And we think it's cheaper. Because we

1 think there's a lot of low-hanging fruit that is much less  
2 expensive to achieve off site than it would be in the  
3 challenging urban site.

4 VICE CHAIRPERSON GLICKFELD: And more economical.

5 MR. COLE: And I want to make this very clear.  
6 We had to grit our teeth on this, this is not -- we're not  
7 wild about each and every piece of this, because we've  
8 tried to make the argument to our colleagues in the  
9 environmental community, and it's an argument that we  
10 agree with the BIA on, that the more development that  
11 happens in urban areas, the better it is because you  
12 reduce an EIA that might be 50 or 60 percent today under  
13 these rules is going to come down to 30 or even less. So  
14 there's a very significant improvement.

15 Every time a project happens like the Simi Valley  
16 example that's been cited by both sides here, every time  
17 one of those happens on a greyfield or a brownfield site,  
18 the water quality improvement is dramatic. Every project  
19 that falls apart because it can't afford to happen, is a  
20 missed opportunity.

21 So we agree also with the national EPA's embrace  
22 of smart growth. It's not only good for the air, it's not  
23 only good for greenhouse gas emissions, it's good for  
24 water quality to take these green -- brownfield and  
25 greyfield sites and redevelop them with LID standards.

1 That's why the LID standards cannot be too onerous, and  
2 that's why we've worked really hard to have these off  
3 ramps for urban infill sites.

4 VICE CHAIRPERSON GLICKFELD: Thank you very much.  
5 That concludes my questions. I look forward to a  
6 discussion of the motion. Thank you very much.

7 CHAIRPERSON LUTZ: I don't have any questions  
8 because this great Board has asked all of my questions and  
9 clarified all of my confusion. And I do admit to being  
10 confused at certain times during this hearing today,  
11 because we'd have the counties come up and talk about how  
12 they -- how the staff's tentative is fine, perfect, they  
13 like it. And then the next time they come up, they're  
14 telling us that they want the agreement. So it is  
15 confusing. And I'm sure that all of my colleagues as well  
16 have struggled with trying to keep track of who's saying  
17 what about what.

18 So I really appreciate the fact that my  
19 colleagues have asked some very clarifying questions and I  
20 have been able to at least figure out where I am.

21 I think we do need to have little bit of  
22 discussion. I know that Ms. Marin has some -- would  
23 probably prefer to open up the discussion. And we'll see  
24 where we can go from there.

25 BOARD MEMBER MARIN: Okay. Well, it's less of a

1 discussion and more of a motion.

2 Just one final statement. You know, this is not  
3 a perfect solution, but I think it's better than what we  
4 have now and better than the proposed tentative. So I'm  
5 going to move the NGO agreement with the modifications to  
6 the tentative as follows: We would strike Section E(3) on  
7 pages 878 to 883 and replace with the NGO agreement  
8 Attachment A with the identification on page 880 Section 4  
9 that would allow for four years for compliance.

10 Two, to strike part 2, numbers 1 through 7, pages  
11 8-56 to 8-57, and strike Attachment C, tables 1 and 2 on  
12 page 8-157.

13 Amend Section M on page 8-184 as follows: And  
14 that's that section -- I'll have to go back to 8-184.

15 The Section M where it says, "If funding from  
16 State, federal sources is not available for beach water  
17 quality...", "...within 30 days of notice shall conduct  
18 weekly, year-round beach water quality sampling and  
19 analysis..."

20 CHAIRPERSON LUTZ: Can I just ask clarification.  
21 And this was -- actually, I guess I'm still not clear on  
22 this, the weekly monitoring for the beaches, the tentative  
23 talked about the monitoring being the outfalls. And I  
24 just want to clarify, are we talking about the beach  
25 monitoring being outfalls, or where are we talking about?

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1 BOARD MEMBER MARIN: I'm just talking about  
2 incorporating the NGO agreement, which retains the outfall  
3 monitoring. But what they added, what they're changing is  
4 that Section M where you list -- where it lists out the  
5 ten beaches, to add weekly, year-round in that section.

6 CHAIRPERSON LUTZ: So we're saying the same  
7 outfall -- the same 11 outfalls, just --

8 BOARD MEMBER MARIN: That remains unchanged.

9 CHAIRPERSON LUTZ: That remains unchanged. Just  
10 instead of just the four per year, weekly --

11 BOARD MEMBER MARIN: No. No. No. No. No.  
12 There's no change -- there's no change to the outfall  
13 monitoring section. The only change is to the beach water  
14 quality monitoring Section M, where we're adding weekly,  
15 year-round.

16 CHAIRPERSON LUTZ: I think I have it now.

17 BOARD MEMBER DIAMOND: What page is that?

18 BOARD MEMBER MARIN: That's page 8-184.

19 So I was suggesting to add "weekly, year-round"  
20 right between "shall conduct" and "beach water."

21 Okay. And then the last change was to link  
22 table 3 of the Attachment C on page 8-158 to SUSMP design  
23 storm.

24 EXECUTIVE OFFICER EGOSCUE: Can you repeat that  
25 last one, Board Member Marin.

1 BOARD MEMBER MARIN: Link table 3 of  
2 Attachment C, which is the only table that remains in  
3 Attachment C, to SUSMP design storm. And that would  
4 incorporate all of the points in the NGO agreement to the  
5 tentative.

6 CHAIRPERSON LUTZ: That was a motion.

7 SENIOR STAFF COUNSEL LEVY: Pardon me, Chair Lutz  
8 and Board Member Marin, I think you misspoke when you said  
9 E(3) on pages 8-78, I think you mean E(3)(1).

10 BOARD MEMBER MARIN: E(3)(1).

11 VICE CHAIRPERSON GLICKFELD: I'll second.

12 CHAIRPERSON LUTZ: Okay.

13 EXECUTIVE OFFICER EGOSCUE: Now, Chair Lutz, now  
14 that there's a second on the floor, I would ask that you  
15 give me ten minutes to printout the changes for the motion  
16 and get copies by leave of Ventura's that going to print  
17 them out for me for the Board to read and vote and discuss  
18 this seconded motion, if that's all right with you. It  
19 will take me ten minutes.

20 CHAIRPERSON LUTZ: Actually, I was going to give  
21 the Board two options. One is that. The other is that we  
22 allow staff to have this evening and tomorrow morning,  
23 while we work with Boeing, to do that, and then we can do  
24 the final after that.

25 EXECUTIVE OFFICER EGOSCUE: I'm ready in 10

1 minutes.

2 VICE CHAIRPERSON GLICKFELD: I think we should  
3 move.

4 CHAIRPERSON LUTZ: Okay. Ten minutes. We'll be  
5 back in ten minutes. We will take a break.

6 (Thereupon a recess was taken.)

7 CHAIRPERSON LUTZ: We have some of the documents  
8 back in front of us for us to read. We're waiting for the  
9 rest of them to come. It was the longest ten minutes I  
10 think I've ever been through.

11 EXECUTIVE OFFICER EGOSCUE: And for the record, I  
12 apologize. There were printing issues and paper issues  
13 and the lights went off on us. So --

14 (Laughter.)

15 CHAIRPERSON LUTZ: It was a hint that we're not  
16 supposed to be here.

17 So just bear with us a few more minutes, and we  
18 will get these and we'll be able to continue.

19 (Thereupon a recess was taken.)

20 CHAIRPERSON LUTZ: Let's go on the record now.

21 Thank you.

22 What we're going to do is the documents we've  
23 received are out of order, but I think Ms. Marin has  
24 figured out the order it should be.

25 Do you want to give us the order and then we can

1 proceed?

2 BOARD MEMBER MARIN: Yes. Okay. So the -- I did  
3 have some -- a little cheat sheet, but I don't know what  
4 happened to it.

5 SENIOR STAFF COUNSEL LEVY: Why don't you let me  
6 do it if it's easier.

7 BOARD MEMBER MARIN: Okay, you do it.

8 SENIOR STAFF COUNSEL LEVY: So starting with the  
9 stapled packet, that's the one that's out of order, the  
10 Roman 3, "New development-redevelopment performance  
11 criteria" appears -- or in draft permit appears on the  
12 bottom of page 55, which for the Board members is 8-78.  
13 And that's where the insertions are.

14 And what it should be is following the numbering,  
15 (3)(1)(A)(B)(C)(1)(2) is the first page. (3)(D),  
16 (2)(A)(B) on the second page, (B)(1)(2)(3)(4)(5)(6) on the  
17 third page. (C). And then on the following page starts  
18 with a sub 1, 2, 3, 4. And the following page should be  
19 (5)(D), and then you have the strike-outs.

20 Did everyone get that?

21 So two pages were transposed. They were just in  
22 the wrong order.

23 And there's one correction other than what  
24 appears in this packet, which is on the fourth page of the  
25 packet, which is (C)(4), where it says, "within three,

1 four years," it should be "within four years of the  
2 certificate of occupancy." That's in the timing and  
3 report requirements. That's on the page that starts at  
4 the top with sub 1 "minimum on-site requirement," go down  
5 to sub 4, about halfway down there's bracketed 3, 4, and  
6 it should be 4, not 3, 4 years, "the latest, within 4  
7 years of the certificate of occupancy."

8 Board Members all have that?

9 CHAIRPERSON LUTZ: Everybody all set?

10 SENIOR STAFF COUNSEL LEVY: The second one is --  
11 has on it -- it's page 36 of the draft permit, it's part 4  
12 (A) (3). And for the Board Members the changes are on page  
13 8-59 of the Board packet. And what we're doing there is  
14 only changing Attachment C, table 3, to Attachment C,  
15 table 1 in paragraph 3. Paragraph 3, fifth line down.  
16 And I'll tell you why in a minute.

17 VICE CHAIRPERSON GLICKFELD: Repeat it, please.

18 BOARD MEMBER DIAMOND: Repeat, please.

19 SENIOR STAFF COUNSEL LEVY: Yes, on paragraph 3,  
20 which starts out, "Each permittee shall require that  
21 treatment control BMPs..." go down to the fifth line  
22 identified in Attachment C, table 3, should be table 1.  
23 All right?

24 Then if you go to page, of the agenda packet,  
25 8-157, which is -- bear with me -- page G -- F 21 -- I'm

1 sorry, no. 8-157 is page C, 1 of 2, Attachment C of the  
2 order, the tentative order, we're striking the whole page.  
3 So tables 1 and 2 disappear, which is why we just changed  
4 it to table C3.

5 EXECUTIVE OFFICER EGOSCUE: So let's back up.  
6 You don't have those tables in front of you because they  
7 are -- all right? So he's explaining why it's table 1,  
8 and it's because we struck the two tables that were table  
9 1 and 2, because they referenced the MALs.

10 SENIOR STAFF COUNSEL LEVY: That's on page 8-157,  
11 or C, 1 of 2.

12 And then on page C, 2 of 2, table 3 should refer  
13 to table 1 instead, because there's only one table. That  
14 corresponds to the change on page 8-59 or page 36 of the  
15 permit referencing table 1 rather than table 3.

16 Then the last change is on page F, 21 of 21,  
17 Board packet 8-184, and the changes are Section M, line 2.  
18 We're striking the words "during the winter season," open  
19 paren, "October 15-April 15," close paren, and adding the  
20 words in line 3, after the words "notice shall conduct,"  
21 or after the words "within 30 days of notice shall  
22 conduct," add the words "weekly, year-round, each water  
23 quality sampling." So the words "weekly, year-round" are  
24 added.

25 BOARD MEMBER MARIN: Yes, that's correct.

1 SENIOR STAFF COUNSEL LEVY: And then just to  
2 remind the Board, we had a change sheet that Sam proposed  
3 earlier on.

4 VICE CHAIRPERSON GLICKFELD: Yes. Is that still  
5 relevant?

6 BOARD MEMBER MARIN: Yes.

7 SENIOR STAFF COUNSEL LEVY: Everybody in the  
8 public have all that?

9 (Laughter.)

10 DR. GREENE: Thanks for the consideration.

11 CHAIRPERSON LUTZ: Does anybody on the Board have  
12 any questions about the changes that we just received?

13 What I'd like to do is -- we are still in the  
14 discussion phase before the motion is called for a vote.

15 So do any of the Board members wish to continue  
16 discussion?

17 SENIOR STAFF COUNSEL LEVY: Pardon me, Chair  
18 Lutz.

19 CHAIRPERSON LUTZ: Yes.

20 SENIOR STAFF COUNSEL LEVY: There's a confusion  
21 about the change sheet.

22 Sam, that's a one-page change sheet?

23 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

24 CHAIRPERSON LUTZ: The first change sheet we  
25 received?

1 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes. I  
2 think only one change sheet.

3 SENIOR STAFF COUNSEL LEVY: May 6th, 2009.

4 BOARD MEMBER MARIN: Where you added "and  
5 co-permittee," and then the reference that was left out.

6 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

7 CHAIRPERSON LUTZ: That we got this morning.

8 REGIONAL PROGRAMS SECTION CHIEF UNGER: Yes.

9 SENIOR STAFF COUNSEL LEVY: Okay. Thank you.

10 EXECUTIVE OFFICER EGOSCUE: Can you come over  
11 here and tell me what it is?

12 SENIOR STAFF COUNSEL LEVY: All right. That's on  
13 the stapled packet, the second to the last page, paragraph  
14 5, right before "D," it reads, "The project applicant must  
15 demonstrate that the EM," and it should say "EIA achieved  
16 on site is as close to five percent EIA." So "EM" should  
17 be replaced with "EIA."

18 CHAIRPERSON LUTZ: Does everybody have that  
19 change?

20 Okay. Now, that we have the changes requested in  
21 the motion, does any Board Member wish to continue  
22 discussion?

23 I'll start down here with Mr. Blois.

24 BOARD MEMBER BLOIS: Yes, I would. I really,  
25 really appreciate the collaborative effort that's been



1 shown here today. I am absolutely convinced that the  
2 stakeholders have tried really, really hard, as has our  
3 staff to reach some sort of consensus. Unfortunately, I  
4 don't think we got there. But I want to continue with  
5 encouraging this sort of collaborative process going  
6 forward, because that's what we need. In my opinion,  
7 that's what's been lacking in past histories, and I'd like  
8 to see it continue.

9           Unfortunately, it didn't work in this process, at  
10 least in my mind. I think that the Board under staff's  
11 direction with the stakeholders, in what was the tentative  
12 order reached a, while not a perfect agreement, reached  
13 something that at least all stakeholders were included, or  
14 at least not excluded. And I think that the agreement  
15 parties did not do that, and I think that's a fatal flaw  
16 for me. The fatal flaw is that two major stakeholders  
17 were summarily excluded. I can understand part way why  
18 our staff was, because we were under a writ and they  
19 couldn't be for some period of time, but I absolutely  
20 think that they should have been included when that writ  
21 was lifted.

22           And the other thing I just -- I can't accept is  
23 the fact that, you know, practitioners, the industry that  
24 has to put these things into effect were excluded from the  
25 process. And as a result of that, I'll give you two

1 examples, again, my earlier comments about how Dr. Grey  
2 and Dr. Beckman actually reached agreement on something  
3 that was above and beyond what a tentative order proposed,  
4 that could have been in the tentative order, but wasn't  
5 because of the process.

6           And then second thing, you know, this 30 percent  
7 EIA limit. It's just not going to work, and that goes  
8 against my principle, which is not to promulgate a rule  
9 that is impractical. And so, you know, on principle, I  
10 can't support it. And those are my reasons.

11           CHAIRPERSON LUTZ: Ms. Diamond, do you have any  
12 comments?

13           BOARD MEMBER DIAMOND: Well, I support the  
14 motion. And I believe that for me the reason is that I  
15 think this furthers water quality, furthers the mission of  
16 the Board, and furthers the important issue that we need  
17 to all confront, which is stop polluting our waters so  
18 that we can increase the amount of our potable water and  
19 our resources in southern California and not depend on the  
20 water that we aren't going to be getting anyway from  
21 northern California. So I'm in support of the motion.

22           VICE CHAIRPERSON GLICKFELD: I'm going to support  
23 the motion, too. The process was not right. We -- and a  
24 lot of reasons that were out of the control of every -- of  
25 all the stakeholders had a lot to do with this, the

1 Arcadia writ, had an awful lot to do with this.

2 But I'm hoping that moving on -- I think it's  
3 most important that this Board focus on what we think is  
4 the best solution going through the best processes that we  
5 can have here. And in the end, and comparing the  
6 tentative permit proposed by the staff and in the  
7 agreement, I felt that the agreement was better.

8 Do I ever want to have a group -- two  
9 stakeholders come to us with an alternative where there's  
10 not a word that can be changed and we sort of have to find  
11 out what that means? I don't think so. I don't think --  
12 this is a very extraordinary situation. And I hope that  
13 as we start stepping into implementation, which has to  
14 start right away -- and that's another reason to support  
15 this. We have to start. Since 2006 we've been working on  
16 this? We have to start right away. And I think this  
17 permit is ready to start, but under the staff. I hope it  
18 will be under our executive officer's leadership with  
19 everybody at the table on the implementation part.

20 CHAIRPERSON LUTZ: Ms. Marin.

21 BOARD MEMBER MARIN: Well, you know, I don't know  
22 that there's a right and a wrong way that's that clear. I  
23 would not say that it wasn't right, but I would say it  
24 wasn't pretty. I think this is a sausage, and at the end  
25 of the day we got a good meal out of it. And, you know,

1 it's sometimes getting to where we need to go is going to  
2 leave a little bit of, you know, people with their  
3 feelings hurt perhaps. But I think that it moves us  
4 forward, and we need to move forward. And I don't think  
5 the cities nor the environmental organizations would agree  
6 to something that wasn't in some great way practicable.  
7 So I think we got a good deal out of it.

8 BOARD MEMBER RICHARDSON: I would say it's been a  
9 long process, and I think we've come an awful long way in  
10 the last three, almost four years since I've been sitting  
11 on the Board. When I first came on the Board, what was  
12 missing is what we've had almost today, and almost at the  
13 end of the process by the two groups, and that's trust.  
14 And trust and communication. And we've come an awful long  
15 way. So I think in the end, I think what we've come up  
16 with today is a good result, it's a good conclusion. It  
17 wasn't pretty, I'll agree with Maribel, but we did get  
18 there.

19 But I would like to see the fact that I think  
20 that you can come to the staff, come to the Board, come to  
21 your other constituents with a little more trust and be  
22 maybe a little more open in your communication. But I do  
23 support the motion.

24 CHAIRPERSON LUTZ: On my part, I do support the  
25 motion. I think it does and it will achieve the goals of

1 the Board as well as the municipalities and the NGOs. I  
2 think that there are probably some holes left in there  
3 that we will have to see how it pans out. As somebody  
4 said, this was a whole new thing, and we're going to give  
5 it a shot, and it doesn't happen everywhere. But it will  
6 be a learning experience, as I hope the process that we  
7 went through today and the process of the collaboration  
8 will be a learning experience.

9 I am so impressed any time any collaboration  
10 takes place. It creates win-win opportunities. It  
11 creates people who have a permit before them that they've  
12 had buy-in and they've got an opportunity to speak to and  
13 that they feel comfortable with.

14 I, however, am not comfortable with some of the  
15 people who are going to be under this permit, did not have  
16 an opportunity to be part of the collaboration process. I  
17 do feel that collaboration works when everybody's  
18 collaborating.

19 So I know we have a huge permit coming forward  
20 with the Los Angeles County, and I hope that we continue  
21 in the mode of collaboration and we continue with the  
22 premise that this works. And as Mr. Richardson said, the  
23 trust is here now. Let's keep it. But let's not close  
24 the door on any parties in any way, shape or form.

25 Just as if the Water Board had done a

1 collaboration separately with BIA, for example, and the  
2 NGOs and the county and the cities were not involved, they  
3 would not appreciate it either. It's something where the  
4 trust needs to go all the way around. And I hope that we  
5 can learn from that. I think we would have had maybe  
6 if -- we would have had conclusion maybe about three or  
7 four hours ago, had this happened.

8 I'm extremely happy with the outcome that we will  
9 receive from this permit and from this MS4. It will be  
10 groundbreaking, and that's exciting. And we will watch  
11 and see how it goes. But I do support it, and I  
12 absolutely support collaboration when it is truly  
13 full-ground collaboration.

14 With that I will ask for a vote.

15 All in favor?

16 (Ayes.)

17 CHAIRPERSON LUTZ: Opposed?

18 (No.)

19 CHAIRPERSON LUTZ: The motion carries.

20 And with that, we will recess at 8:40 p.m. to  
21 reconvene at 9:00 a.m. tomorrow morning.

22 Thank you all very much.

23 (Thereupon the Los Angeles Regional Water Quality  
24 Control Board meeting adjourned at 8:40 p.m.)

25

## 1 CERTIFICATE OF REPORTER

2 I, JAMES F. PETERS, a Certified Shorthand  
3 Reporter of the State of California, and Registered  
4 Professional Reporter, do hereby certify:

5 That I am a disinterested person herein; that the  
6 foregoing Los Angeles Regional Water Quality Control Board  
7 meeting was reported in shorthand by me, James F. Peters,  
8 a Certified Shorthand Reporter of the State of California,  
9 and thereafter transcribed into typewriting.

10 I further certify that I am not of counsel or  
11 attorney for any of the parties to said meeting nor in any  
12 way interested in the outcome of said meeting.

13 IN WITNESS WHEREOF, I have hereunto set my hand  
14 this 26th day of May, 2009.

15

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17

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**E001833**



# California Regional Water Quality Control Board

## Los Angeles Region



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Arnold Schwarzenegger  
Governor

June 2, 2009

Mr. Jeff Pratt, Director  
Ventura Countywide Stormwater Quality Management Program  
Ventura Watershed Protection District  
800 South Victoria Avenue, L#1600  
Ventura, CA 93009

Ventura County Municipal Stormwater Permittees

### **RETRANSMITTAL OF THE VENTURA COUNTY MUNICIPAL STORM WATER NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (BOARD ORDER No. R4-2009-0057; NPDES PERMIT No. CAS004002)**

Dear Mr. Pratt, et al:

Please find enclosed a retransmittal of the final National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Order (attached), which was adopted by the Regional Board at its meeting on May 7, 2009, pursuant to Division 7 of the California Water Code. This Permit replaces the version containing typographical errors which was mailed to you on May 29, 2009. Board Order R4-2009-0057, becomes effective 30 days after May 7, 2009 and serves as your NPDES permit, waste discharge requirements for stormwater (wet weather) and non-stormwater (dry weather) discharges from the MS4 within the Ventura County Watershed Protection District, County of Ventura, and the incorporated cities therein, and will expire on May 7, 2014.

The Ventura County MS4 Order No. R4-2009-0057 requires the Ventura County Watershed Protection District, herein referred to as the Principal Permittee, and other Co-Permittees to implement the NPDES Permit No. CAS004002, including the Reporting Program (Monitoring Report and Program Report). The Principal Permittee shall submit the first Annual Storm Water Report and Assessment under this Order for the period October 1, 2009 through September 30, 2010, by December 15, 2010.

**California Environmental Protection Agency**



*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*

**E001834**




Mr. Jeff Pratt, Director  
Ventura Countywide Stormwater Quality Management Program  
Ventura Watershed Protection District  
Page 2 of 3

June 2, 2009

We thank you, your staff, and the other Co-Permittees for their participation and assistance during the development and adoption of the MS4 permit for Ventura County. Should you have any comments or questions, please do not hesitate to call me at (213) 576-6605, or Samuel Unger at (213) 576-6622.

Sincerely,



Chief Deputy E.O.  
for

Tracy J. Egoscue  
Executive Officer

Enclosure

cc: (sent via email)  
Eugene Bromley, U.S. EPA Region 9 / Water Division  
Michael Levy, Office of the Chief Counsel, State Water Resources Control Board  
Bruce Fujimoto, Storm Water Section, State Water Resources Control Board  
Gerhardt Hubner, Ventura County Watershed Protection District, Principal Permittee  
Lucia McGovern, City of Camarillo, Co-Permittee  
Bert Rapp, City of Fillmore, Co-Permittee  
Shaun Croes, City of Moorpark, Co-Permittee  
City of Ojai, Co-Permittee  
Mark Pumford, City of Oxnard, Co-Permittee  
David J. Norman, City of Port Hueneme, Co-Permittee  
Vicki Musgrove, City of San Buenaventura, Co-Permittee  
City of Santa Paula, Co-Permittee  
Paul Miller, City of Simi Valley, Co-Permittee  
Thomas P. Glancy, City of Thousand Oaks, Co-Permittee  
U.S. Army Corps of Engineers  
NOAA, National Marine Fisheries Service  
Department of Interior, U.S. Fish and Wildlife Service  
California Coastal Commission, South Coast District  
Department of Health Services, Public Water Supply Branch  
Water Replenishment District of Southern California  
Ventura County Air Pollution Control District

*California Environmental Protection Agency*



Mr. Jeff Pratt, Director  
Ventura Countywide Stormwater Quality Management Program  
Ventura Watershed Protection District  
Page 3 of 3

June 2, 2009

Ventura County Public Works

**Mailing List (continued)**

Ventura County Environmental Health Division  
Linda Parks, Ventura County Board of Supervisors  
Damon Wing, c/o Linda Parks, Ventura County Board of Supervisors  
Nicole Doner, Ventura County Planning Division  
Rick Verguitz, Water & Environmental Resources Section, Ventura County Watershed  
Protection District  
Mark Gold, Heal the Bay  
David Beckman, NRDC  
Tom Ford, Santa Monica Baykeeper  
Daniel Cooper, Lawyers for Clean Water  
Mati Waiya, Wishtoyo Foundation

***California Environmental Protection Agency***



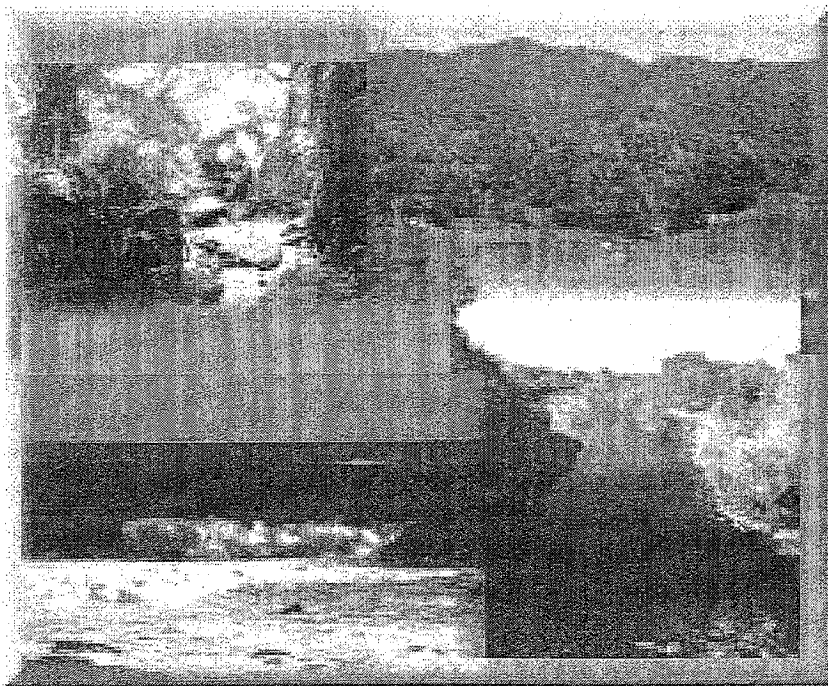
*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*

**E001836**

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

ORDER 09-0057  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS  
FOR  
STORM WATER (WET WEATHER) AND NON-STORM WATER (DRY WEATHER)  
DISCHARGES FROM  
THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS WITHIN THE VENTURA  
COUNTY WATERSHED PROTECTION DISTRICT, COUNTY OF VENTURA AND  
THE INCORPORATED CITIES THEREIN.

May 7, 2009



May 7, 2009  
Final

E001837

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Ventura County Municipal Separate Storm Sewer System Permit

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ATTACHMENT I

Storm Water Monitoring Program's Major Outfall Stations----- I-1

**STATE OF CALIFORNIA**  
**CALIFORNIA REGIONAL WATER QUALITY CONTROL**  
**BOARD**  
**LOS ANGELES REGION**

**ORDER 09-0057**  
**NPDES PERMIT NO. CAS004002**  
**WASTE DISCHARGE REQUIREMENTS**  
**FOR**  
**STORM WATER DISCHARGES FROM THE MUNICIPAL**  
**SEPARATE STORM SEWER SYSTEM WITHIN THE VENTURA**  
**COUNTY WATERSHED PROTECTION DISTRICT, COUNTY**  
**OF VENTURA AND THE INCORPORATED CITIES THEREIN**

**FINDINGS**

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter called Regional Water Board), finds that:

**A. Permit Parties and History**

1. Ventura County Watershed Protection District (Principal Permittee and Copermittee), County of Ventura, cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura (Ventura), Santa Paula, Simi Valley and Thousand Oaks (hereinafter referred to separately as Permittees) have joined together to form the Ventura Countywide Storm Water Quality Management Program to discharge wastes. The Permittees discharge or contribute to discharges of storm water and non-storm water from municipal separate storm sewer systems (MS4s), also called storm drain systems, into the Watershed Management Areas of Ventura River, Santa Clara River, Calleguas Creek, Malibu Creek and Miscellaneous Ventura Coastal all within Ventura County and Los Angeles County (see Attachment "A").
2. Prior to the issuance of this permit, storm water discharges from the Ventura County MS4 were covered under the countywide waste discharge requirements contained in Order No. 00-108, adopted by the Regional Water Board on July 27, 2000, which replaced Order No. 94-082, adopted by the Regional Water Board on August 22, 1994. Order No. 00-108 also served as a National Pollutant Discharge Elimination System (NPDES) permit for the discharge of municipal storm water.

3. The Ventura County Board of Supervisors approved the concept of a countywide NPDES permit program and the use of the Flood Management District (presently the Watershed Protection District) benefit assessment authority to finance it on April 14, 1992. On June 30, 1992, the Ventura County Board of Supervisors adopted a benefit assessment levy for storm water and flood management in the unincorporated areas of Ventura County and the cities within the County, to be used in part to finance the implementation of a countywide NPDES municipal storm water permit program. The Ventura County MS4 Permittees have entered into an agreement with the Watershed Protection District to finance the activities related to the Ventura County MS4 Permit for shared and district wide expenses. The Permittees are also given the option to use the Benefit Assessment Program to finance their respective activities related to reducing the discharge of storm water pollutants under the MS4 Permit.
4. The Regional Water Board may require a separate NPDES permit for any entity that discharges storm water into the watersheds of Ventura County. Such an entity can be any State or Federal facility, special district or other public or private party.

**B. Nature of Discharge**

1. Storm water discharges consist of surface water runoff generated from various land uses in all the hydrologic drainage basins, which discharge into Waters of the State. The quality of these discharges varies and is affected by geology, land use, season, hydrology, and sequence and duration of hydrologic events. Based on the Ventura Countywide Storm Water Monitoring Program's Water Quality Monitoring Reports which were required under Order No. 00-108, the dry weather and wet weather Pollutants of Concern (POC) in urban stormwater include an anion, bacteria, conventional pollutants, metals, a nutrient, organic compounds, and pesticides. The POC are identified in Attachment "B" of this Order. Many of the POC listed are causing impairments identified on the federal Clean Water Act (CWA) § 303(d) list of impaired waterbodies.

The State Water Board submits a report (a list of water quality limited segments (§ 303[d] list)) on the State's water quality to the U.S. EPA pursuant to § 305(b) of the 1972 CWA, and Title 40, CFR 130.7, every 2 years. The Report provides water

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quality information to the general public and serves as the basis for the U.S. EPA's National Water Quality Inventory Report to Congress. Section 303(d) requires that all waters that are not attaining standards after the implementation of those controls required by 1977, shall be included on the list. Title 40 CFR 130.7(b)(3) defines "water quality standard applicable to such waters" as "those water quality standards established under § 303 of the Clean Water Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements."

2. Common pollutants in urban storm water and their respective sources are: bacteria from animal droppings and illegal discharges; Polycyclic Aromatic Hydrocarbons (PAHs) from the products of internal combustion engine operation and parking lot sealants wash off; nitrates from fertilizer application; pesticides from pest mitigating applications and from plant mitigating applications; bis (2-ethylhexyl) phthalate from the break down of plastic products; mercury from atmospheric fallout and improper disposal of mercury switches; lead from fuels, paints and automotive parts; copper from brake pad wear and roofing materials, zinc from tire wear and galvanized sheeting and fencing; sediment from land disturbance and erosion; trash and dioxins as products of combustion.
3. In general, the pollutants that are found in municipal storm water runoff can harm human health and aquatic ecosystems. In addition, the high volumes and high velocities of storm water discharged from MS4s into receiving waters can adversely impact aquatic ecosystems and stream habitat and cause stream bank erosion and physical modifications. These changes are collectively termed hydromodification. Municipal point source discharges of runoff from urbanized areas remain a leading cause of impairment of surface waters in California.
4. Ammonia as Nitrogen, and Nitrate plus Nitrite as Nitrogen are biostimulatory substances that can cause or contribute to eutrophic effects such as low dissolved oxygen and algae growth impairing warm freshwater and wildlife habitats. Ammonia is highly toxic to fish and other aquatic life. Excessive ammonia can cause aquatic life toxicity.
5. Elevated bacterial indicator densities impair the water contact recreation (REC-1) beneficial use at beaches, creeks, estuaries, lagoons, and marinas. Swimming in waters with

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elevated bacterial indicator densities has been associated with adverse health effects. Specifically, local and national epidemiological studies indicate that there is a causal relationship between adverse health effects and recreational water quality, as measured by bacterial indicator densities (Pruss, 1998, Review of epidemiological studies on health effects from exposure to recreational waters, International Journal of Epidemiology; Haile et al., 1996, An epidemiological study of possible adverse health effects of swimming in Santa Monica Bay, Santa Monica Bay Restoration Project; and Haile et al., 1999, The health effects of swimming in ocean water contaminated by storm drain runoff, Epidemiology”). Sources of elevated bacteria to marine and fresh waters may also include illegal discharges from improperly maintained standard septic systems, onsite wastewater treatment systems (OWTS) and illicit discharges from private drains.

6. Pesticides are substances used to prevent, destroy, repel or mitigate pests such as insects, weeds, and microorganisms. Their effects can be direct (e.g. fish die from exposure to a pesticide entering waterways, or birds do not reproduce after ingesting contaminated fish), or indirect (a hawk becomes sick from eating a mouse dying from pesticide poisoning). Pesticide categories include: Organochlorine, Organophosphorus, Organophosphate, and Pyrethroid.
7. Polychlorinated Biphenyls (PCBs) are a subset of the synthetic organic chemicals known as chlorinated hydrocarbons. Concern over PCBs toxicity, persistence (chemical stability) in the environment and bioconcentration in aquatic organisms has led to prohibitions on PCBs.
8. Rising groundwater and swimming pool water have been found to be sources of pollutants such as salts (chloride). Salts increase the salinity of otherwise freshwater systems and disrupt physiological processes. The Regional Water Board has waterbodies listed on the CWA § 303(d) list for impairment due to salts and has adopted Basin Plan amendments to include Total Maximum Daily Loads (TMDLs) for salts. This Order includes provisions to control the discharges from these activities in order to directly or indirectly reduce or eliminate the discharge of salts to fresh water systems where salts may impair water quality and beneficial uses.

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9. Trash and debris are pervasive pollutants which accumulate in streams, rivers, bays, and ocean beaches throughout Southern California. They pose a serious threat to our oceans and coasts, navigation, biological resources, recreation, human health and safety, aesthetics, and economies.
10. Municipal storm water (wet weather) and non-storm water (dry weather) discharges may contain pollutants that cause or threaten to cause an exceedance of the water quality standards, as outlined in the Los Angeles Region's Basin Plan. Wet weather and dry weather discharges from the MS4 are subject to conditions and requirements established in the Basin Plan for point source discharges. Discharges from the MS4 may not cause or contribute to exceedances of water quality standards.
11. Biological communities act to integrate the effects of water quality conditions in a stream by responding with changes in their population abundances and species composition over time. These populations are sensitive to multiple aspects of water and habitat quality, and provide expressions of ecological health easier to understand than the results of chemical and toxicity tests. Biological assessments and criteria address the cumulative impacts of all stressors, especially habitat degradation, and chemical contamination, which result in a loss of biological diversity. Biological information can help provide an ecologically based assessment of the status of a waterbody. Bioassessment is a cost-effective tool and protocol for assessing the biological and physical habitat conditions of streams and rivers for evaluation of the overall health of a watershed. The Principal Permittee consents to participate in the Southern California Storm Water Monitoring Coalition (SMC) Southern California Regional Bioassessment Monitoring Program.
12. The increased volume, increased velocity, and discharge duration of storm water runoff from developed areas has the potential to accelerate downstream erosion and impair stream habitat in natural drainages. Studies have demonstrated a direct correlation between the degree of imperviousness of an area and the degradation of its receiving waters (*Managing Runoff to Protect Natural Streams: The Latest Development on Investigation and Management of Hydromodification in California*; Stein, E. et al, December 2005; *Effect of Increase in Peak Flows and Imperviousness on the Morphology of Southern California Streams*; Coleman, D., April 2005). Significant declines in the biological integrity and physical

habitat of streams and other receiving waters have been found to occur with as little as 3-10 percent conversion from natural to impervious surfaces in a subwatershed. Percentage impervious cover is a one indicator and predictor of potential water quality degradation expected from new development.

13. Studies indicate that facilities with paved surfaces subject to frequent motor vehicular traffic (such as: strip malls, parking lots, commercial business parks, and fast food restaurants), or facilities that perform vehicle repair, maintenance, or fueling (automotive service facilities) are potential sources of POC in storm water (*California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Municipal, January 2003*).
14. Retail Gasoline Outlets (RGOs) are points of convergence for vehicular traffic and are similar to parking lots and urban roads. Studies indicate that storm water discharges from RGOs have high concentrations of hydrocarbons and heavy metals (*California Stormwater Quality Association, Stormwater Best Management Practice Handbook, Municipal, January 2003*).
15. The industries and businesses listed in this Order that are to be inspected by Permittees have the potential to discharge contaminated storm water into the MS4. This storm water is an environmental threat because it can adversely impact public health and safety, and the quality of receiving waters. For example, pretreatment program compliance inspections and audits performed in the Los Angeles and Ventura Counties indicate that automotive service and food service facilities sometimes discharge polluted storm water to the MS4s. The POC in such wash waters include oil and grease, toxic chemicals, and food waste. Spills from clogged sanitary sewer lines have a high likelihood to reach the receiving waters via MS4s. Overall, the most common POC identified in storm water discharge to the MS4s are: (i) heavy metals, (ii) oil and grease/ PAHs, (iii) sediments, (iv) oxygen demanding substances, (v) litter/ trash/ debris, (vi) nutrients, (vii) other toxic materials, such as pesticides. Municipal storm water monitoring data and industrial storm water monitoring data indicate that industrial and commercial sites continue to contribute significant quantities of pollutants in storm water runoff.
16. Development and urbanization increase pollutant loads, volume, and discharge velocity. First, natural vegetated



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pervious ground cover is converted to impervious surfaces (paved) such as highways, streets, rooftops and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing an effective natural purification process. In contrast, impervious surfaces (such as pavement and concrete) can neither absorb water nor remove pollutants, and thus the natural purification characteristics are lost. Second, urban development creates new pollution sources as the increased density of human population brings proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage waste, pesticides, household hazardous wastes, pet wastes, trash, and other anthropogenic pollutants. Development and urbanization especially threaten environmentally sensitive areas. Such areas have a much lower capacity to withstand pollutant shocks than might be acceptable in the general circumstance. In essence, development that is ordinarily insignificant in its impact on the environment may become significant in a particularly sensitive environment. These environmentally sensitive areas (ESAs) designated by the State in the Ventura County watershed are defined in Part 7 (Definitions).

17. The implementation of Low Impact Development (LID) techniques across the United States and Canada has demonstrated that the proper implementation of LID techniques not only results in water quality protection benefits and in a reduction of the cost of land development and construction but also bears other positive attributes that go beyond economic benefits such as enhanced property values, improved habitat, aesthetic amenities, and improved quality of life. Reducing Stormwater Costs through Low Impact Development (LID) Strategies and Practices, USEPA Doc No. EPA 841-F-07-006, December 2007. Further, properly implemented LID techniques reduce the volume of runoff leaving a newly developed or re-developed area thereby lowering the peak rate of runoff, and thus minimizing the adverse affects of hydromodification on stream habitat. A Review of Low Impact Development Policies: Removing Institutional Barriers to Adoption, Low Impact Development Center and State of California, State Water Resources Control Board, December 2007. The requirements of this Order facilitate the implementation of LID strategies to protect water quality, reduce runoff volume, and to benefit from these additional enhancements.
18. The Regional Water Board adopted a Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated

Lands (Order No. R4-2005-0080) on November 3, 2005. The objective of the program is to monitor runoff from irrigated agriculture facilities in the coastal watersheds of Ventura and Los Angeles Counties. The Basin Plan, which designates beneficial uses and establishes water quality objectives for the Region, recognizes that agricultural activities can generate pollutants such as sediment, pesticides, and nutrients that upon discharge to receiving water can degrade water quality and impair beneficial uses. A category identified by the Conditional Waiver as a source of pollutants is nursery operations. This Order includes requirements for the municipal operator to confirm that nursery operators implement pollutant reduction and control measures with the objective of reducing pollutants in storm water runoff discharges.

19. Staff finds there is a growing acceptance by stormwater professionals to integrate LID principles into stormwater management programs and MS4 permits. However, there remains significant controversy regarding the appropriate requirements and metrics for LID. At the heart of this controversy is a dispute regarding the feasibility and effectiveness of requiring a fixed volume of stormwater to be captured and retained onsite for infiltration, reuse, and evapotranspiration, as opposed to permitting a portion of the stormwater to be released off site after it is treated, when it is infeasible to retain the required stormwater on site due to site specific conditions.

Staff has reviewed extensive technical literature regarding this issue (e.g. R. Horner, *Investigation of the Feasibility and Benefits of Low-Impact Site Design Practices ("LID") for Ventura County* (February 2007); E. Strecker, A. Poresky, D. Christsen, *Memorandum: Rainwater Harvesting and Reuse Scenarios and Cost Consideration*, (April, 2009). Staff finds that there is consensus in the technical community that site conditions and the type of development can limit the feasibility of retaining, infiltrating, and reusing stormwater at sites due to a variety of site specific conditions. Factors that affect the feasibility of a fixed volume capture standard include, but are not limited to: soils infiltration capacity, subsurface pollution, and locations in urban core centers.

Regarding the effects of capturing a fixed stormwater volume on site, Staff finds the fixed volume approach may be ignoring basic hydrological principles that relate the feasible infiltration volume to the infiltration capacity of local soils.

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Requirements to capture a fixed volume on site could disturb the natural water balance and lead to unintended engineering and hydrologic consequences. For example, a typical hydrological condition in Ventura County is one of successive storms during the winter which may exceed the stormwater capacity that can be retained on site. This may result in ponded water on site with attendant health and safety risks, saturation of the near surface soils, and reduction of water resources in Regional waterbodies. These effects could damage site structures, increase groundwater pollution by forcing enhanced pollution spreading, or destroy aquatic habitat. Staff finds these reasonably potential effects are not well evaluated scientifically. Finally, staff cannot find that a fixed retention volume versus a standard that attempts to release surface flows at a predevelopment level would result in a greater reduction of stormwater pollution.

20. Research conducted on the contribution of aerial deposition of trace heavy metals in Los Angeles County watersheds indicates that dry indirect deposition may account for a significant load of pollutants into surface waters. Similar patterns of aerial deposition likely occur in Ventura County. Of the atmospherically deposited pollutants on the watersheds, ten to twenty percent may account for the total load for copper, zinc, nickel, lead, and chromium to the waterbodies. Land reservoirs and sequestration may account for the remaining eighty to ninety percent of the atmospherically deposited pollutants on the watersheds. Emissions of semi-volatile organics such as polycyclic aromatic hydrocarbons (PAHs) and pesticides and their subsequent deposition may contribute to the contamination of receiving waters but appear to be less significant. The remaining percentage is stored in land reservoirs and eventually shows up in receiving waters.

### C. Permit Background

1. The essential components of the Storm Water Management Program, as required by the Code of Federal Regulations (CFR) [40 CFR122.26(d)] are:
  - (a) Adequate Legal Authority.
  - (b) Fiscal Resources.
  - (c) Storm Water Quality Management Program (SMP)
    - (1) Public Information and Participation Program
    - (2) Industrial/ Commercial Facilities Program
    - (3) Planning and Land Development Program
    - (4) Development Construction Program

- (5) Public Agency Activities Program
  - (6) Illicit Connection and Illicit Discharges Elimination Program
  - (d) Reporting Program (Monitoring Report and Program Report)
2. The Ventura County SMP, dated November 2001 (revision 2) identifies seven program areas, which are listed below and were previously approved under Board Order No. 00-108. For purposes of consistency, they are titled as follows:
- (a) Ventura County SMP.
    - (1) Program Management
    - (2) Programs for Residents
    - (3) Programs for Industrial/ Commercial Businesses
    - (4) Programs for Planning and Land Development
    - (5) Programs for Construction Sites
    - (6) Programs for Public Agency Activities
    - (7) Programs for Illicit Connections/ Illegal Discharges
  - (b) For purposes of region-wide consistency, the program titles are revised and consolidated into the six areas listed in the preceding C.1(c). All Permittee storm water documents submitted to the Regional Water Board are to follow the organization enumerated in C.1(c).
3. The Permittees filed a Report of Waste Discharge (ROWD), dated January 26, 2005. The Permittees applied for renewal of their waste discharge requirements for a 5-year period, which serves as an NPDES permit to discharge wastes to surface waters.
4. The Regional Water Board reviewed the ROWD and determined it to be partially complete under the reapplication policy for MS4s issued by the United States Environmental Protection Agency (U.S. EPA) (61 Fed. Reg. 41697). The Regional Water Board has prepared this Order so that implementation of provisions contained in this Order by Permittees will meet the requirements of the federal NPDES regulations at 40 CFR122.26.
5. The Permittees ROWD contained a proposed Storm Water Management Program and a Monitoring Program to be considered by the Regional Water Board for incorporation into an MS4 NPDES Permit as permit conditions and to demonstrate compliance with federal law.
6. To-date, the monitoring program has consisted of mass emission, receiving water (tributaries), and land-use

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monitoring stations, toxicity testing, special studies for bioassessment of the Ventura River and hydrology, identification of ESAs, implementation of the Storm Water Quality Urban Impact Mitigation Plan (SQUIMP), and has provided support for volunteer monitoring programs. This Order requires a monitoring program consisting of mass emission, toxicity, TMDL storm water (wet weather) MS4 water quality-based effluent limits, TMDL non-storm water (dry weather) MS4 water quality-based effluent limits, Pyrethroid assessment study, continuation of the hydromodification study, low impact development study, and participation in the Southern California Regional Bioassessment Program and Southern California Bight Project (SCBP).

7. The Principal Permittee is a member of the Southern California Coastal Water Research Project (SCCWRP) Commission. The Principal Permittee also participates in the Regional Monitoring Programs and research partnerships, such as the Southern California Storm Water Monitoring Coalition (SMC) and the Bioassessment Working Group.

**D. Permit Coverage**

1. The area covered by this Order includes all areas within Ventura County boundaries and all areas within each co-permittee's boundaries (see Figure 1) that drain into the MS4.
2. The Permittees covered under this Order were designated on a system-wide basis under Phase I of the CWA § 402(p)(3)(B)(i). The action of covering all Ventura County municipalities under a single MS4 permit on a system-wide basis was consistent with the provisions of 40 CFR122.26(a)(3)(iv), which states that one permit application may be submitted for all or a portion of all municipal separate storm sewers within adjacent or interconnected large or medium municipal separate storm sewer systems; and the Regional Water Board may issue one system-wide permit covering all, or a portion of all municipal separate storm sewers in adjacent or interconnected large or medium municipal separate storm sewer systems.
3. Federal, State, Regional, or local entities within the Permittees' boundaries or in jurisdictions outside the Ventura County Watershed Protection District, and not currently named in this Order, may operate storm drain facilities and/ or discharge storm water to storm drains and receiving waters

## Ventura County Municipal Separate Storm Sewer System Permit

covered by this Order. The Permittees may lack legal jurisdiction over these entities under State and Federal constitutions. The Regional Water Board will coordinate with these entities to implement programs that are consistent with the requirements of this Order. The Regional Board may consider such facilities for coverage under its NPDES permitting scheme pursuant to USEPA Phase II storm water regulations.

Permittees have expressed their intention to work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system. Permittees shall make good faith efforts to control the contribution of pollutants to the MS4 from non-permittee dischargers such as Caltrans, the U.S. Department of Defense, and other state and federal facilities.

4. TMDLs are numerical calculations of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (Waste Load Allocation (WLA) and non-point sources (Load Allocation (LA))). Discharges from the MS4s are considered point sources discharges, because the MS4 is a point source.
5. This Order incorporates applicable WLAs that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA. The TMDL WLAs in the Order are expressed as water quality-based effluent limits in a manner consistent with the assumptions and requirements of the TMDL from which they are derived.
6. The CWA and the California Water Code contain specific provisions on how wastewater discharges from point sources are to be permitted. Stormwater discharges (both dry weather and wet weather) are considered point source discharges.
7. Permittees should work cooperatively to control the contribution of pollutants from one portion of the MS4 to another portion of the system through inter-agency agreements or other formal arrangements.

**E. Federal, State and Regional Regulations**

1. The Water Quality Act of 1987 added § 402(p) to the CWA (33U.S.C. § 1251-1387). This section requires the U.S. EPA

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to establish regulations setting forth NPDES requirements for storm water discharges in 2 phases.

- (a) U.S. EPA Phase I storm water regulations were directed at MS4s serving a population of 100,000 or more, including interconnected systems and storm water discharges associated with industrial activities, including construction activities. The Phase 1 Final Rule was published on November 16, 1990 (55 Fed. Reg. 47990).
  - (b) U.S. EPA Phase II storm water regulations are directed at storm water discharges not covered in Phase I, including small MS4s (population of less than 100,000), small construction projects (less than 5 acres), municipal facilities with delayed coverage under the Intermodal Surface Transportation Efficiency Act of 1991, and other discharges for which the U.S. EPA Administrator or the State determines that the storm water discharge contributes to a violation of a water quality standard, or is a significant contributor of pollutants to waters of the U.S. The Phase II Final Rule was published on December 8, 1999 (64 Fed. Reg. 68722).
2. The U.S. EPA published an 'Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits on August 9, 1996 (61 Fed. Reg. 41697). This policy requires that MS4 reapplication for reissuance for a subsequent five-year permit term contain certain basic information and information for proposed changes and improvements to the storm water management program and monitoring program.
  3. The U.S. EPA has entered into a Memorandum of Agreement (MOA) with the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service for enhancing coordination regarding the protection of endangered and threatened species under section 7 of the Endangered Species Act, and the CWA's water quality standards and NPDES programs. Among other actions, the MOA establishes a framework for coordination of actions by the U.S. EPA, the Services, and CWA delegated States on CWA permit issuance under § 402 of the CWA [66 Fed. Reg. 11202-11217].
  4. The CWA allows the U.S. EPA to authorize states with an approved environmental regulatory program to administer the NPDES program in lieu of the U.S. EPA. The State of California is a delegated State. The Porter-Cologne Water Quality Control Act (California Water Code) authorizes the State Water Resources Control Board (State Water Board),

through the Regional Water Boards, to regulate and control the discharge of wastes that could affect the quality of waters of the State, including waters of the United States, and tributaries thereto.

5. Under CWA § 303(d) of the CWA, States are required to identify a list of impaired water-bodies and develop and implement TMDLs for these waterbodies (33 USC § 1313(d)(1)). The most recent 303(d) list's U.S. EPA approval date was June 28, 2007. The U.S. EPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monica Baykeeper on March 22, 1999, under which the Regional Water Board must adopt all TMDLs for the Los Angeles Region within 13 years from that date. This Order incorporates provisions incorporating approved WLAs for municipal storm water discharges and requires amending the SMP after subsequent pollutant loads have been allocated and approved.
6. Collectively, the restrictions contained in the TMDL Provisions for Storm Water (Wet Weather) Discharges and Non-Storm Water (Dry Weather) Discharges of this Order on individual pollutants are no more stringent than required to implement the provisions of the TMDL, which have been adopted and approved in a manner that is consistent with the CWA. Where a TMDL has been approved, NPDES permits must contain effluent limits and conditions consistent with the assumptions and requirements of the available WLAs in TMDLs (40 CFR 122.44(d)(1)(vii)(B)).
7. This Order does not constitute an unfunded local government mandate subject to subvention under Article XIII B, Section (6) of the California Constitution for several reasons, including, but not limited to, the following. This Order implements federally mandated requirements under CWA § 402, subdivision (p)(3)(B) (33 U.S.C. § 1342(p)(3)(B)). This includes federal requirements to effectively prohibit non-storm water discharges, to reduce the discharge of pollutants to the maximum extent practicable, and to include such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. Federal cases have held these provisions require the development of permits and permit provisions on a case-by-case basis to satisfy federal requirements. (Natural Resources Defense Council, Inc. v. U.S. E.P.A. (9th Cir. 1992) 966 F.2d 1292, 1308, fn. 17.) The authority exercised under this Order is not reserved state authority under the Clean Water Act's savings clause (cf.



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Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613, 627-628 [relying on 33 U.S.C. § 1370, which allows a state to develop requirements which are not “less stringent” than federal requirements]), but instead, is part of a federal mandate to develop pollutant reduction requirements for municipal separate storm sewer systems. To this extent, it is entirely federal authority that forms the legal basis to establish the permit provisions. (See, City of Rancho Cucamonga v. Regional Water Quality Control Bd.-Santa Ana Region (2006) 135 Cal.App.4th 1377, 1389; Building Industry Ass’n of San Diego County v. State Water Resources Control Bd. (2004) 124 Cal.App.4th 866, 882-883.)

Likewise, the provisions of this Order to implement TMDLs are federal mandates. The CWA requires TMDLs to be developed for waterbodies that do not meet federal water quality standards (33 U.S.C. § 1313(d)). Once the U.S. EPA or a state develops a TMDL, federal law requires that permits must contain effluent limitations consistent with the assumptions of any applicable wasteload allocation. (40 CFR122.44(d)(1)(vii)(B)).

Second, the local agency Permittees’ obligations under this Order are similar to, and in many respects less stringent than, the obligations of non-governmental dischargers who are issued NPDES permits for storm water discharges. With a few inapplicable exceptions, the Clean Water Act regulates the discharge of pollutants from point sources (33 U.S.C. § 1342) and the Porter-Cologne regulates the discharge of waste (Wat. Code, § 13263), both without regard to the source of the pollutant or waste. As a result, the “costs incurred by local agencies” to protect water quality reflect an overarching regulatory scheme that places similar requirements on governmental and nongovernmental dischargers. (See *County of Los Angeles v. State of California* (1987) 43 Cal.3d 46, 57-58 [finding comprehensive workers compensation scheme did not create a cost for local agencies that was subject to state subvention].)

The Clean Water Act and the Porter-Cologne Water Quality Control Act largely regulate storm water with an even hand, but to the extent there is any relaxation of this even-handed regulation, it is in favor of the local agencies. Except for municipal separate storm sewer systems, the Clean Water Act requires point source dischargers, including discharges of storm water associated with industrial or construction activity, to comply strictly with water quality standards. (33 U.S.C.

§ 1311(b)(1)(C), *Defenders of Wildlife v. Browner* (1999) 191 F.3d 1159, 1164-1165 [noting that industrial storm water discharges must strictly comply with water quality standards].) As discussed in prior State Water Resources Control Board decisions, in many respects this Order does not require strict compliance with water quality standards. (SWRCB Order No. WQ 2001-15, p. 7.) The Order, therefore, regulates the discharge of waste in municipal storm water more leniently than the discharge of waste from non-governmental sources.

Third, the local agency Permittees have the authority to levy service charges, fees, or assessments sufficient to pay for compliance with this Order subject to certain voting requirements contained in the California Constitution. (See California Constitution XIII D, section 6, subdivision (c); see also *Howard Jarvis Taxpayers Association v. City of Salinas* (2002) 98 Cal. App. 4<sup>th</sup> 1351, 1358-1359.) The fact sheet demonstrates that numerous activities contribute to the pollutant loading in the municipal separate storm sewer system. Local agencies can levy service charges, fees, or assessments on these activities, independent of real property ownership. (See, e.g., *Apartment Ass'n of Los Angeles County, Inc. v. City of Los Angeles* (2001) 24 Cal.4th 830, 842 [upholding inspection fees associated with renting property].) The ability of a local agency to defray the cost of a program without raising taxes indicates that a program does not entail a cost subject to subvention. (*County of Fresno v. State of California* (1991) 53 Cal.3d 482, 487-488.)

Fourth, the Permittees have requested permit coverage in lieu of compliance with the complete prohibition against the discharge of pollutants contained in federal Clean Water Act section 301, subdivision (a) (33 U.S.C. § 1311(a)) and in lieu of numeric restrictions on their discharges. (See finding 5., supra.) To the extent that the local agencies have voluntarily availed themselves of the permit, the program is not a state mandate. (Accord *County of San Diego v. State of California* (1997) 15 Cal.4th 68, 107-108.) Likewise, where MS4 Permittees are regulated under a Best Management Practices (BMP) based storm water management program rather than end-of-pipe numeric limits, there exists no compulsion of a specific regulatory scheme that would violate the 10<sup>th</sup> Amendment to the United States Constitution. (See *City of Abilene v. U.S. E.P.A.* (5th Cir. 2003) 325 F.3d 657, 662-663 [noting that municipalities can choose between a management permit or a permit with numeric limits].) The local agencies'

voluntary decision to file a report of waste discharge proposing a program-based permit is a voluntary decision not subject to subvention. (See *Environmental Defense Center v. USEPA* (9th Cir. 2003) 344 F.3d 832, 845-848.)

Fifth, the local agencies' responsibility for preventing discharges of waste that can create conditions of pollution or nuisance from conveyances that are within their ownership or control under state law predates the enactment of Article XIII B, Section (6) of the California Constitution.

8. Under § 6217(g) of the Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), Coastal States with approved coastal zone management programs are required to address non-point pollution impacting or threatening coastal water quality. CZARA addresses five sources of non-point pollution: 1) agriculture; 2) silviculture; 3) urban; 4) marinas; and 5) hydromodification. This Waste Discharge Requirement addresses the management measures required for the urban category and the hydromodification category, with the exception of septic systems.
9. The Regional Water Board addresses septic systems through the administration of non-Chapter 15 regulatory programs and the implementation of Regional Water Board Order No.R4-2004-0146. Septic systems are also addressed under State Assembly Bill (AB) 885 (2000). The Regional Water Board will implement and enforce regulations issued by the State Board pursuant to AB 885. Taken together, these State and Local agency requirements when imposed on septic system operators are expected to reduce the bacterial contamination of storm water from improperly maintained septic systems.
10. The State Water Board has issued waste discharge requirements for discharges from utility vaults (CAG990002). The Regional Water Board has issued waste discharge requirements for discharges from well heads and hydrostatic pipe testing (CAG674001). These discharges to the MS4 shall be conducted under coverage of a separate NPDES permit specific to that activity.
11. On May 18, 2000, the U.S. EPA established numeric criteria for priority toxic pollutants for the State of California (California Toxics Rule (CTR) 65 Fed. Reg. 31682 (40 CFR131.38) for the protection of human health and aquatic life. These apply as ambient water quality criteria for inland surface waters, enclosed bays and estuaries.

12. The State Water Board adopted a revised Water Quality Control Plan for Ocean Waters of California (Ocean Plan) in 2005. The California Ocean Plan establishes water quality objectives for California's ocean waters and provides the basis for regulation of wastes discharged into the State's coastal waters. It applies to point and nonpoint source discharges. The Ocean Plan identifies the applicable beneficial uses of marine waters that include preservation and enhancement of designated Areas of Special Biological Significance (ASBS) (now called "State Water Quality Protection Areas") and establishes a set of narrative and numerical water quality objectives designed to protect beneficial uses. The SWRCB adopted the California Ocean Plan, and both the SWRCB and the six coastal Regional Water Quality Control Boards (RWQCBs) implement and interpret the California Ocean Plan.
  
13. This Regional Water Board adopted a revised Water Quality Control Plan (Basin Plan) for the Los Angeles Region on June 13, 1994. The Basin Plan specifies the beneficial uses of Ventura County waterbodies and their tributary streams, and contains both narrative and numerical water quality objectives for these receiving waters. The following beneficial uses identified in the Basin Plan apply to all or portions of each watershed covered by this Order:
  - (a) Municipal and domestic supply
  - (b) Agricultural supply
  - (c) Industrial service supply
  - (d) Industrial process supply
  - (e) Ground water recharge
  - (f) Freshwater replenishment
  - (g) Navigation
  - (h) Hydropower generation
  - (i) Water contact recreation
  - (j) Non-contact water recreation
  - (k) Ocean commercial and sport fishing
  - (l) Warm freshwater habitat
  - (m) Cold freshwater habitat
  - (n) Preservation of Areas of Special Biological Significance
  - (o) Saline water habitat
  - (p) Wildlife habitat
  - (q) Preservation of rare and endangered species
  - (r) Marine habitat
  - (s) Fish migration
  - (t) Fish spawning
  - (u) Shellfish harvesting

14. On March 22, 1999 the Consent Decree in Heal the Bay, Inc.; Santa Monica Baykeeper, Inc. v. Browner, Case No. 98-4825 SBA was approved. Under Establishment of TMDLs- The parties understand that California has the initial opportunity pursuant to § 303(d) of the CWA to adopt and submit to U.S. EPA for approval TMDLs to be established under this Consent Decree. TMDLs developed by Regional Water Boards are generally adopted through Basin Plan amendments. Basin plan amendments adopted by the State Board pursuant to Water Code section 13246, and the regulatory portions must be approved by the Office of Administrative Law pursuant to Government Code section 11353(b). TMDLs established pursuant to CWA section 303(d)(1) must be submitted to U.S. EPA for approval pursuant to section 303(d)(2), and incorporated into the state's water quality management plan
  
15. The Regional Water Board has adopted amendments to the Basin Plan, to incorporate TMDLs for the following:
  - (a) The following TMDLs have been or will be incorporated into the Basin Plan within the term of the Order.
    - (1) Santa Clara River - Nitrogen Compounds
      - (A) Regional Water Board Resolution No. 2003-011
      - (B) State Water Board Resolution No. 2003-0073
      - (C) OAL file No. 04-0123-35
      - (D) U.S. EPA approval date March 18, 2004
      - (E) Final fee exemption date March 23, 2004 (effective date).
      - (F) Compliance is 1 year after effective date (March 23, 2005)
  
    - (2) Malibu Creek and Lagoon - Bacteria.
      - (A) Regional Water Board Resolution No. 2004-019
      - (B) State Water Board Resolution No. 2005-0072
      - (C) OAL file No. 05-1018-03 S
      - (D) U.S. EPA approval date January 10, 2006
      - (E) Final fee exemption date January 24, 2006 (effective date)
      - (F) Compliance for Summer Dry is 3 years after effective date (January 24, 2009)
      - (G) Compliance for Winter Dry is 6 years after effective date (January 24, 2012)

- (H) Compliance for Wet Weather is 10 years after effective date (January 24, 2016), which is beyond the term of this Order
  
- (3) Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, Its Tributaries and Mugu Lagoon.
  - (A) Regional Water Board Resolution No. 2005-009
  - (B) State Water Board Resolution No. 2005-0067
  - (C) OAL file No. 05-1110-02 S
  - (D) U.S. EPA approval date March 14, 2006
  - (E) Final fee exemption date March 24, 2006 (effective date)
  - (F) Compliance for Toxicity and Interim WLA is effective date (March 24, 2006)
  - (G) Compliance for Final WLA is 2 years after effective date (March 24, 2008)
  
- (4) Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs), and Siltation in Calleguas Creek, Its Tributaries and Mugu Lagoon.
  - (A) Regional Water Board Resolution No. 2005-010
  - (B) State Water Board Resolution No. 2005-0068
  - (C) OAL file No. 05-1206-03 S
  - (D) U.S. EPA approval date March 14, 2006
  - (E) Final fee exemption date March 24, 2006 (effective date)
  - (F) Compliance for Interim WLA is effective date (March 24, 2006)
  - (G) Compliance for Final WLA is 20 years after effective date (March 24, 2026), which is beyond the term of this Order
  
- (5) Calleguas Creek Watershed Metals
  - (A) Regional Water Board Resolution No. 2006-012
  - (B) State Water Board Resolution No. 2006-0078
  - (C) OAL file No. 06-1222-015 S
  - (D) U.S. EPA approval date March 26, 2007
  - (E) Final fee exemption date March 27, 2007 (effective date)
  - (F) Compliance for Interim WLA is effective date (March 27, 2007)
  - (G) Compliance for Final WLA is Within 15 years after the effective date (March 27, 2022), which is beyond the term of this Order

- (6) Revolon Slough & Beardsley Wash Trash TMDL
  - (A) Regional Water Board Resolution No. 2007-007
  - (B) State Water Board Resolution No 2007-0076
  - (C) OAL file No 2007-1227-05 S
  - (D) U.S. EPA approval date February 27, 2008
  - (E) Final fee exemption date March 6, 2008 (effective date)
  - (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
  - (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)
  
- (7) Ventura River Estuary Trash TMDL
  - (A) Regional Water Board Resolution No. 2007-008
  - (B) State Water Board Resolution No 2007-0072
  - (C) OAL file No 2007-1227-01 S
  - (D) U.S. EPA approval date February 27, 2008
  - (E) Final fee exemption date March 6, 2008 (effective date)
  - (F) Compliance for Trash Monitoring & Reporting Plan Submittal is 6 months from effective date (September 6, 2008)
  - (G) Compliance for Final WLA is 8 years from effective date (March 6, 2016)
  
- (8) Harbor Beaches of Ventura County Bacteria TMDL
  - (A) Regional Water Board Resolution No. 2007-017
  - (B) State Water Board Resolution No 2008-0072
  - (C) OAL file No 2007-1023-01 S
  - (D) U.S. EPA approval date December 18, 2008
  - (E) Final fee exemption date January 17, 2009 (effective date)

16. The Regional Water Board adopted and approved requirements for new development and significant redevelopment projects in Ventura County to control the discharge of storm water pollutants in post-construction storm water, on January 26, 2000, in Board Resolution No. R-00-02. The Regional Water Board Executive Officer issued the approved Standard Urban Storm Water Mitigation Plans

(SUSMPs) on March 8, 2000 for Los Angeles County and the Cities in Los Angeles County. Since 2000, new development and redevelopment water quality criteria have been implemented by the Permittees to be consistent with SUSMP. The State Board affirmed the Regional Water Board action and SUSMPs in State Board Order No. WQ 2000-11, issued on October 5, 2000.

- (a) A statewide policy memorandum (dated December 26, 2000), which interprets the Order to provide broad discretion to Regional Water Boards and identifies potential future areas for inclusion in SUSMPs and the types of evidence and findings necessary. Such areas include ministerial projects, projects in environmentally sensitive areas, and water quality design criteria for Retail Gasoline Outlets (RGOs, see part 7 for definition). The Regional Water Board properly justified the extensions of SUSMPs and water quality criteria to ministerial projects, projects in environmentally sensitive areas, and RGOs, during the adoption of Regional Water Board Order 01-182. The Regional Water Board's action was upheld by the County of Los Angeles Superior Court (*In Re: County of Los Angeles v. State Water Resources Control Board* (2006) 143 Cal.App.4<sup>th</sup> 985).
- (b) The State Water Board's Chief Counsel interpreted the Order to encourage regional solutions and endorsed a mitigation fund or "bank" as alternatives for new development and significant redevelopment. The Regional Water Board has included provisions for regional solutions and the establishment of a mitigation bank in this Order.

- 17. The Regional Water Board supports Watershed Management planning to address water quality protection in the region. The objective of the Watershed Management planning is to provide a comprehensive and integrated strategy towards water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. It emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with available resources.
- 18. To facilitate compliance with federal regulations, the State Water Board has issued the following 4 Statewide General NPDES Permits associated with storm water:



- (a) Industrial General Permit (IASGP- Industrial Activities Storm Water General Permit), NPDES No. CAS000001, issued on November 19, 1991, reissued on September 17, 1992 and April 17, 1997, currently under review for reissuance.
  - (b) Construction General Permit (CASGP- Construction Activities Storm Water General Permit), NPDES No. CAS000002, issued on August 20, 1992, reissued August 19, 1999, currently under review for reissuance.
  - (c) Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), NPDES No. CAS000005, issued on June 18, 2003.
  - (d) Small MS4 Permit WQ Order No. 2003-0005-DWQ, NPDES No. CAS000004, adopted on April 30, 2003.
19. Facilities discharging storm water associated with industrial activities, construction projects that disturb one or more acres of soil, or construction projects that disturb less than one acre but are part of a larger common plan of development or sale that in total disturbs 1 or more acres, and construction activities associated with small linear underground/ overhead projects that result in land disturbances greater than one acre, but less than five acres (small LUPs), are all required to obtain individual NPDES permits for storm water discharges, or be covered by the statewide General Permits by completing and filing a Notice of Intent (NOI) with the State Board. The U.S. EPA guidance anticipates coordination of the state-administered programs for industrial and construction activities with the local agency program to reduce pollutants in storm water discharges to the MS4.
20. State Water Board Resolution No. 68-16 contains the state Antidegradation Policy, titled "Statement of Policy with Respect to Maintaining High Quality Waters in California" (Resolution 68-16), which applies to all waters of the state, including ground waters of the state, whose quality meets or exceeds (is better than) water quality objectives. Resolution No. 68-16 is considered to incorporate the federal Antidegradation Policy (40 CFR131.12) where the federal policy applies, (State Water Board Order WQO 86-17). Administrative policies that implement both, federal and state antidegradation policies acknowledge that an activity that results in a minor water quality lowering, even if incrementally small, can result in violation of Antidegradation Policies through cumulative effects, for example, when the waste is a cumulative, persistent, or bioaccumulative pollutant.

- (a) Federal Antidegradation Policy (40 CFR131.12) states that the State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:
- (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.
  - (2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
  - (3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
  - (4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.
- (b) State Water Board Resolution No. 68-16 establishes essentially a 2-step process for compliance with the policy.
- (1) Step 1- if a discharge will degrade high quality water, the discharge may be allowed if any change in water quality:
    - (A) Will be consistent with maximum benefit to the people of the State.
    - (B) Will not unreasonably affect present and anticipated beneficial use of such water.
    - (C) Will not result in water quality less than that prescribed in state policies (e.g., water quality objectives in Water Quality Control Plans).

- (2) Step 2- any activities that result in discharges to high quality waters are required to:
    - (A) Meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to avoid a pollution or nuisance.
    - (B) Maintain the highest water quality consistent with the maximum benefit to the people of the State.
  
21. The State Water Board on June 17, 1999, adopted Order No. WQ 99-05, which specifies standard receiving water limitation language to be included in all municipal storm water permits issued by the State and Regional Water Boards.
  
22. Cal. Water Code § 13263(a) requires that waste discharge requirements issued by Water Boards shall implement any relevant water quality control plans that have been adopted; shall take into consideration the beneficial uses to be protected and the water quality objectives reasonably required for that purpose; other waste discharges; and the need to prevent nuisance.
  
23. Clean Water Act section 402(p)(3)(B)(iii) requires municipal separate storm sewer system (MS4) operators to control pollution in storm water to the "maximum extent practicable" (MEP). The MEP requirement is analogous to a technology-based requirement in that it focuses upon the feasibility of pollutant reduction measures rather than achievement of water quality standards in the receiving waters to achieve improvements in the quality of the storm water that is discharged. Compliance with the MEP requirement can range from implementation of structural and nonstructural best management practices to installation of end-of-pipe treatment systems. MEP generally provides the MS4 operators the flexibility to determine what controls should be implemented through the development of a storm water management plan, subject to the Regional Board's approval. Nevertheless, MEP does not define the limits of pollution control measures that may be required of MS4 operators, and the requirement to implement controls that reduce pollutants to the MEP is not limited by the goal of attaining water quality standards. In some circumstances, compliance with MEP may result in controls more stringent than applicable WQS, and in others, less stringent. The Regional Board may use its discretion to impose other provisions beyond MEP, as it determines appropriate for the control of pollutants, including ensuring

strict compliance with water quality standards. (Defenders of Wildlife v. Browner (1999) 191 F.3d 1159, 1168.)

24. The California Supreme Court has ruled that although Water Code section 13263 requires the Water Boards to consider the factors set forth in Water Code section 13241 when issuing an NPDES permit, the Water Boards may not consider the factors to justify imposing pollutant restrictions that are less stringent than the applicable federal regulations require (City of Burbank v. State Water Resources Control Bd. (2005) 35 Cal.4th 613). However, when the pollutant restrictions in an NPDES are more stringent than federal law requires, Water Code section 13263 requires that the Water Boards consider the factors described in section 13241 as they apply to those specific restrictions.
25. The City of Burbank case related to NPDES permits for publicly owned treatment works, not permits for municipal separate storm sewer systems (MS4s). Among other requirements, federal law requires MS4 permits to include requirements to effectively prohibit non-storm water discharges into the storm sewers, in addition to requiring controls to reduce the discharge of pollutants to the maximum extent practicable. Therefore, a 13241 analysis is not required for permit requirements that implement the effective prohibition on the discharge of non-storm water into the MS4, or for practicable controls to reduce the discharge of pollutants to the maximum extent, as those requirements are mandated by federal law.
26. The requirements in this Order may be more specific or detailed than those enumerated in federal regulations under 40 CFR122.26 or in U.S. EPA guidance. However, the requirements have been designed to be consistent with and within the federal statutory mandates described in CWA § 402(p)(3)(B)(ii) and (iii) and the related federal regulations. Consistent with federal law, all of the conditions in this permit could have been included in a permit adopted by U.S. EPA in the absence of the in lieu authority of California to issue NPDES permits.
27. The Board finds that all requirements in this order are practicable. Moreover, while commenters have alleged that the permit requirements are “beyond MEP,” no commenter has presented evidence that demonstrates that any particular permit requirement is not actually practicable.

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28. Notwithstanding findings 23 through 27, the Regional Board has developed an economic analysis of the permit's requirements, consistent with Water Code section 13241. That analysis is contained in the "Economic Considerations of the Proposed Storm Water (Wet Weather) and Non-Storm Water (Dry Weather) Discharges from the Municipal Separate Storm Sewer Systems within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein, June 2, 2008, which is contained in the administrative record for this Order. The Regional Board has considered all of the evidence that has been presented regarding the 13241 factors in adopting this permit, both as contained in the economic analysis and as reflected in the fact sheet and comments (and responses thereto) submitted to the many drafts of this permit. The Regional Board finds that the requirements in this Order are reasonably necessary to protect beneficial uses identified in the Basin Plan, and the economic information related to costs of compliance and other 13241 factors are not sufficient to justify failing to protect those beneficial uses. Where appropriate, additional time to implement certain measures and achieve water quality objectives can be provided through the iterative storm water management plan process.

**F. Implementation**

1. The California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code § 2100 et seq.) requires that public agencies consider the environmental impacts of the projects they approve for development. CEQA applies to projects that are considered discretionary (a governmental agency can use its judgment in deciding whether and how to carry out or approve a project, § 15357) and does not apply to ministerial projects (the law requires a governmental agency to act on a project in a set way without allowing the agency to use its own judgment, § 15369). A ministerial project may be made discretionary by adopting local ordinance provisions or imposing conditions to create decision-making discretion in approving the project. In the alternative, Permittees may establish standards and objective criteria administratively for storm water mitigation for ministerial projects. For water quality purposes regardless of whether a project is discretionary or ministerial, the Regional Water Board considers that all new development and significant redevelopment activity in specified categories, that receive approval or permits from a municipality, are subject to storm

water mitigation requirements in a manner that is consistent with and complies with the provisions of CEQA.

2. The objective of this Order is to ensure that discharges from the MS4 in Ventura County comply with water quality standards, including protecting the beneficial uses of receiving waters. To meet this objective, the Order requires that Best Management Practices (BMPs) will be implemented to reduce the discharge of pollutants in storm water to the maximum extent practicable (MEP), and achieve water quality objectives and standards. The U.S. EPA envisioned that municipal storm water programs would be implemented in an iterative manner and improved with each iteration by using information and experience gained during the previous permit term (*Interpretative Policy Memorandum on Reapplication Requirements for MS4 permits* - 61 Fed. Reg. 41697). Municipalities are required to evaluate what is effective and make improvements in order to protect beneficial uses of receiving waters. This Order requires implementation of an effective combination of pollution control and pollution prevention measures, education, public outreach, planning, and implementation of source control BMPs and Structural and Treatment Control BMPs. The better-tailored BMPs combined with the performance objectives outlined in this Order have the purpose of attaining water quality objectives and standards (*Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*- 61 Fed. Reg. 43761). Where WLAs have been adopted for storm water (wet weather) and non-storm water (dry weather) discharges from MS4s, this Order requires Permittees to implement controls to achieve the WLAs within the compliance schedule provided in the TMDLs.
3. The implementation of measures set forth in this Order are reasonably expected to reduce the discharge of pollutants conveyed in storm water discharges into receiving waters, and to meet the TMDL WLAs for discharges from MS4s that have been adopted by the Regional Water Board.
4. The U.S. EPA has recommended that all future TMDLs and TMDL amendments be expressed as daily increments consistent with a federal court ruling (*Friends of the Earth, Inc. v. EPA, et al.* No. 05-5015 (D.C. Cir. 2006)). However, this interpretation does not affect the discretionary authority of the Regional Water Board to express NPDES permit limits and conditions in non daily terms because there is no express or implied statutory limitation (CWA §502(11)) (*Establishing*

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*TMDL "Daily Loads" in Light of the Decision by the U.S. Court of Appeals for the D.C. Circuit in Friends of the Earth, Inc. v. EPA, et al. (April 2006) and Implications for NPDES Permits*, U.S. EPA Office of Water, memorandum, Nov 15, 2006). This Order translates MS4 TMDL WLAs adopted by the Regional Water Board into forms "consistent with the assumptions and requirements of the TMDL".

5. During the term of the Order, the Permittees shall implement all necessary control measures to reduce pollutant(s) which cause or continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, to eliminate the water quality impairment(s). Successful efforts to reverse the wet weather impairments during the permit term for such pollutants, may avoid the need for a WLA for wet weather or the need to develop a TMDL in the future.
6. This Order promotes land development and redevelopment strategies that consider water quality and water management benefits associated with smart growth techniques. Such measures may include hydromodification mitigation requirements, minimization of effective impervious area, integrated water resources planning, and low impact development guidelines. (Reference: *Protecting Water Resources with Smart Growth*, EPA 231-R-04-002, U.S. EPA 2004; *Using Smart Growth Techniques as Storm Water Best Management Practices*, EPA 231-B-05-002, U.S. EPA 2005; *Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions*, EPA 231-K-06-001, U.S. EPA 2006; *Protecting Water Resources with Higher-Density Development*, EPA 231-R-06-001, U.S. EPA 2006.)
7. The implementation of an effective Public Information and Participation Program is a critical component of a storm water management program. While commercial and industrial facilities are traditionally subject to multiple environmental regulations and receive environmental protection guidance from multiple sources, the general public, in comparison, receives significantly less education in environmental protection. An effective Public Information and Participation Program is required because:
  - (a) Activities conducted by the public such as vehicle maintenance, improper household waste materials disposal, improper pet waste disposal and the improper application of fertilizers and pesticides have the potential

- to generate a significant amount of pollutants that could be discharged in storm water.
- (b) An increase in public knowledge of storm water regulations, proper storage and disposal of household wastes, proper disposal of pet wastes and appropriate home vehicle maintenance practices can lead to a significant reduction of pollutants discharged in storm water.
8. This Order also provides flexibility for Permittees to seek authorization from the Regional Water Board Executive Officer to substitute a BMP under this Order with an alternative BMP, if they can provide information and documentation on the effectiveness of the alternative, equal to or greater than the prescribed BMP in meeting the objectives of this Order.
9. This Order contemplates that the Permittees are responsible for considering potential storm water impacts when making planning decisions in order to fulfill the Permittees' CWA requirement to reduce the discharge of pollutants in municipal storm water to the MEP and attain water quality objectives from new development and redevelopment activities. However, the Permittees retain authority to make the final land-use decisions and retain full statutory authority for deciding what land uses are appropriate at specific locations within each Permittee's jurisdiction. This Order and its requirements are not intended to restrict or control local land use decision-making authority.
10. The State Water Board amended the Policy for the Implementation of Toxics Standards In Inland Surface Waters, Enclosed Bays and Estuaries of California (State Implementation Policy – SIP) on February 24, 2005. The SIP does not apply directly to the stormwater discharges. However, this Order includes a Monitoring Program that incorporates Minimum Levels (MLs) established under the State Implementation Policy. The MLs represent the lowest quantifiable concentration for priority toxic pollutants that is measurable with the use of proper method-based analytical procedures and factoring out matrix interference. The SIP's MLs therefore represent the best available science for determining MLs and are appropriate for a storm water monitoring program. The use of MLs allows the detection of toxic priority pollutants at concentrations of concern using recent advances in chemical analytical methods.



11. The International Storm Water Best Management Practices (BMP) Database was established in 1996 as a cooperative initiative between the U.S. EPA and the American Society of Civil Engineers (ASCE) to provide scientifically sound information to improve the design, selection and performance of storm water BMPs. The BMP database includes standardized BMP monitoring and reporting protocols, a storm water BMP database, BMP performance evaluation protocols, and BMP monitoring guidance. The storm water BMP database is updated approximately semi-annually to add new BMP studies and performance data. The International Storm Water Database is now maintained by the Water Environment Research Foundation (WERF).
12. This Order is not intended to prohibit the inspection for or abatement of vectors by the State Department of Public Health or local vector agencies in accordance with CA Health and Safety Code, § 116110 et seq. Certain Treatment Control BMPs if not properly designed, operated or maintained may create habitats for vectors (e.g. mosquitoes and rodents). This Order contemplates that the Permittees will closely cooperate and collaborate with local vector control agencies and the State Department of Public Health for the implementation, operation, and maintenance of Treatment Control BMPs in order to minimize the risk to public health from vector borne diseases.
13. This Order contemplates that Permittees will ensure that implemented Treatment Control BMPs will not pose a safety or health hazard to the public. This Order contemplates that Permittees will ensure that the maintenance of implemented Treatment Control BMPs will comply with all applicable health and safety regulations, such as, but not limited to requirements for worker entry into confined spaces under OSHA Safety and Training education, § 1926.21(b)(6)(i).
14. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from construction sites to the MEP. The BMPs are identified in Table 6 (BMPs at Construction sites less than 1 acre), Table 7 (BMPs at Construction Sites 1 acre or greater but less than 5 acres), and Table 8 (BMPs at Construction sites 5 acres or greater). These BMPs include erosion control, sediment control, and construction site waste management practices. The BMPs listed in part 4.F of the Order were selected based on the Water Boards' experience of regulating such sites since 1992,

and are referenced in the *California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Construction (January 2003)* and from the *Stormwater Quality Handbooks, Project Planning and Design Guide, Stormwater Pollution Prevention Plan (SWPPP) and Water Pollution Control Plan (WPCP) Preparation Manual, Construction Site Best Management Practices (BMPs) Reference Manual, March 2007* (Caltrans Document Number CTSW-RT-06-171.11-1) which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable on a particular site, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 4.A.2.

15. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from commercial and industrial sites to the MEP. The BMPs are identified in Table 2 (BMPs at Restaurants), Table 3 (BMPs at Automotive Service Facilities), Table 4 (BMPs at Retail Gasoline Outlets), and Table 5 (BMPs at Nurseries). These BMPs include the implementation of good housekeeping practices designed to control pollutants at the source, promote the use of proper waste management practices, and implement control practices to keep pollutants away from any entrance to the storm drainage system. The BMPs listed in part 4.D of the Order were selected based on the Water Boards' experience of regulating such sites since 1992 and referenced in the California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook Commercial/Industrial Activity (January 2003) and from the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serve as an industry standard for California. The BMPs identified in the Tables are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 4.A.2.
16. This Order incorporates presumptive BMPs to reduce pollutants in storm water discharges from Public Agency Activities to the MEP. The BMPs are identified in Table 9 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards). These BMPs include the implementation of good housekeeping practices designed to control pollutants

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at the source, promote the use of proper waste management practices, implement control practices to keep pollutants away from any entrance to the storm drainage system and from being deposited or discharged directly into waters of the U.S. The BMPs listed in part 4.G of the Order were selected based on the Water Boards' experience of regulating such sites since 1990, and are referenced in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide May 2003 (Caltrans Document Number CTSW-RT-02-057), which serves as a statewide standard for the California Department of Transportation (Caltrans). The BMPs identified in the Table are technically feasible, practicable, and cost-effective, and are the standard of practice for Caltrans sites statewide. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

17. This Order incorporates BMPs to ensure that authorized Non-Storm Water Discharges are not a source of pollutants to the MS4, Table 1 (Required Conditions for Non-Storm Water Discharges). The BMPs included are for the purpose of dechlorination and/or for prevention of erosion and sediment loss, or to reduce other harmful pollutants during the discharge of authorized non-storm water discharges to the MS4. The BMPs listed in part 1.B of the Order were selected from the *American Water Works Association AWWA Guidelines For The Development Of Your Best Management Practices (BMP) Manual For Drinking Water System Releases Developed by the CA-NV AWWA Environmental Compliance Committee (2005)* which serves as an industry standard for California, from the results of studies directed by the Los Angeles Water Board, - *Evaluation of Non-Storm Water Discharges to California Storm Drains and Potential Policies for Effective Prohibition Methods, Final Report*, University of California, Los Angeles, Contract No. 5-104-140-0 (1997), and *Water Quality Concerns and Regulatory Controls for Non Storm Water Discharges to Storm Drains*, Duke L.D. and M. Kihara, Journal of the American Water Resources Association, Vol. 34: 661-676, (1998), and from the Water Boards' experience of controlling authorized non-storm discharges to the MS4 since 1990. The BMPs identified in the Table are technically feasible, practicable, and cost-effective. Where an identified BMP may be impracticable, this Order includes a provision to select and implement an alternative BMP, through the BMP substitution provisions in subpart 5.A.2.

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18. In accordance with Federal regulations at 40 CFR 124.8, a Fact Sheet has been prepared to explain the principal facts and the significant factual, legal, methodological, policy, and economic matters considered in preparing the Order. This Fact Sheet has been made a part of the Administrative Record.
19. The State Water Board adopted statewide General Waste Discharge Requirements for Sanitary Sewer Systems, (WQ Order No. 2006-0003) on May 2, 2006, to provide a consistent, statewide regulatory framework to address sanitary sewer overflows ("SSO Orders"). The SSO Order establishes requirements for public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and to report SSOs. SSOs that enter MS4s have the potential to impair the recreational use of receiving waters, and to harm public health. This Order establishes coordination, response, and notification requirements for MS4 Permittees when SSOs result in a discharge to the MS4 system.
20. This Order takes into consideration the housing needs in the area under the Permittees' jurisdiction by balancing the implementation of Smart Growth and Low Impact Development techniques with the protection of the water resources of the region. Although not required, the Regional Water Board considered the need for housing and the appropriate techniques to allow for reasonable development while protecting the receiving waters from degradation.
21. This Order may have an effect on costs required for compliance with the provisions contained herein. Although not required, the Regional Water Board has considered costs in preparing this Order. Though also not required, the Regional Water Board has also considered the factors set forth in Water Code section 13241.

**G. Public Notification**

1. The issuance of waste discharge requirements pursuant to California Water Code section 13370 et seq. is exempt from the California Environmental Quality Act in accordance with California Water Code section 13389. *County of Los Angeles et al., v. California Water Boards et al.*, (2006), 143 Cal.App.4<sup>th</sup> 985.
2. The Regional Water Board has notified the Permittees, and interested agencies and persons of its intent to issue waste

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discharge requirements for this discharge, and has provided them with an opportunity to make statements and submit their comments.

3. The Regional Water Board staff has conducted more than 35 meetings from February 9, 2007 through December 19, 2008, with Permittees, their representatives (Larry Walker and Associates, and Somach, Simmons & Dunn), and various stakeholders (Building Industry Association of Southern California/ Greater Los Angeles Ventura Chapter (BIAGLA/ VC), California State Dept. of Health Services, Calleguas Water District, California Stormwater Quality Association (CASQA), City of Downey, City of Los Angeles-EMD, Collation for Practical Regulation (CPR), Construction Industry Coalition on Water Quality (CICWQ), County of Orange, Geosyntec Consultants, Golden State, Heal The Bay; Local Government commission, Los Angeles City; Los Angeles County Department of Public Works, Los Angeles County-SD, Los Angeles Department of Water & Power, Metropolitan Water District, Natural Resources Defense Council (NRDC), Richard Watson Association, San Bernardino Flood Control District, Santa Monica Bay Restoration Commission, Southern California Coastal Water Research Project, University of California Sea Grant, Ventura CoastKeeper). On April 5, 2007 and September 20, 2007 the Regional Water Board conducted workshops to discuss drafts of the NPDES Order and received input from the Permittees and the public regarding proposed changes.
4. This Order shall serve as a NPDES permit, pursuant to CWA § 402, and shall take effect 90 days from Order adoption date provided the Regional Administrator of the U.S. EPA has no objections.
5. Pursuant to Cal. Water Code § 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board within 30 days of the date of adoption of the Order by the Regional Water Board. A petition must be sent to:  
  
State Water Resources Control Board  
Office of the Chief Counsel  
P.O. Box 100  
Sacramento, CA 95812-0100
6. This Order may be modified or alternatively revoked or reissued prior to its expiration date or any administrative

extension thereto, in accordance with 40 CFR122.41(f) and 122.62.

**IT IS HEREBY ORDERED** that the Permittees, in order to meet the provisions contained in Division 7 of the Cal. Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations adopted thereunder, shall comply with the following:

**PART 1 - DISCHARGE PROHIBITIONS**

**A. Prohibitions - Non-Storm Water Discharges**

1. The Permittees shall, within their respective jurisdictions, effectively prohibit non-storm discharges into the MS4 and receiving waters, except where such discharges:
  - (a) Originate from a State, Federal, or other source for which they are pre-empted from regulating by State or Federal law; or
  - (b) Are covered by a separate individual or general NPDES permit, or conditional waiver for irrigated lands; or
  - (c) Flows from fire fighting activities.
  - (d) Fall within one of the categories below, are not a source of pollutants that exceed water quality standards, and meet all conditions where specified by the Regional Water Board Executive Officer:
    - (1) Category A – Natural flows
      - (A) Stream diversions authorized by the State Water Board
      - (B) Natural springs and rising ground water
      - (C) Uncontaminated ground water infiltration [as defined by 40 CFR35.2005(20)]<sup>1</sup>
      - (D) Flows from riparian habitats or wetlands
    - (2) Category B – Flows incidental to urban activities, providing conditions listed in table below:
      - (A) Discharges from potable water sources<sup>2</sup>
      - (B) Gravity flow from foundation, footing and crawl space drains.

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<sup>1</sup> NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County.

<sup>2</sup> The term applies to low volume, incidental and infrequent releases that are innocuous from a water quality perspective. Those releases for dewatering or hydro-testing or flushing of water supply and distribution mains and incidental and infrequent releases from well heads shall be allowed with the implementation of appropriate BMPs until such time as a new General Permit is adopted that addresses those types of releases. Discharges from hydrostatic pipe testing shall be subject to separate NPDES general permit coverage (CAG674001) and discharges from utility vaults shall be conducted under coverage of a separate NPDES permit specific to that activity.

- (C) Air conditioning condensate
- (D) Reclaimed and potable landscape irrigation runoff
- (E) Dechlorinated/ debrominated swimming pool discharges [see def. part 7]
- (F) Non-commercial car washing by residents or non-profit organizations
- (G) Sidewalk rinsing
- (H) Pooled non-storm water from treatment BMPs<sup>3</sup>

Table 1 – Required Conditions for Non-Storm Water Discharges

Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
Stream diversions permitted by the State Board;	Authorization by the State Water Board	Permittees shall comply with all conditions in the authorization.
Natural springs and rising ground water	1. Ground water dewatering requires a separate NPDES permit. 2. Segregate flow to prevent introduction of pollutants.	Permittees shall comply with all conditions in the authorization.
Uncontaminated ground water infiltration [as defined by 40 CFR 35.2005(20)] (Utility vault dewatering requires a separate NPDES permit.)	NPDES permit for ground water dewatering is required within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Flows from riparian habitats or wetlands	Provided that all necessary permits or authorizations are received prior to diverting the stream flow.	Permittees shall comply with all conditions in the authorization.
Discharges from potable water sources <sup>4</sup>	See Footnote #1.  Provided discharges from water lines and potable water sources shall be dechlorinated, pH adjusted if necessary, reoxygenated, and volumetrically and velocity controlled to prevent resuspension of sediments.	See Footnote #2. To be discharged, this type of water shall be dechlorinated using aeration and/ or sodium thiosulfate and/ or other appropriate means and/or be allowed to infiltrate to the ground. BMPs such as sand bags or gravel bags, or other appropriate means shall be utilized to prevent sediment transport. All sediments shall be

<sup>2</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

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Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
		collected and disposed of in a legal and appropriate manner.
Drains for foundation, footing and crawl drains	Dewatering requires a separate NPDES permit.	Permittees shall comply with all conditions in the authorization.
Air conditioning condensate	Segregation of flow to prevent introduction of pollutants. Percolation whenever possible.	Permittees shall comply with all conditions in the authorization.
Water from crawl space pumps	Dewatering requires a separate NPDES permit within the Los Angeles Region including Ventura County	Permittees shall comply with all conditions in the authorization.
Reclaimed and potable landscape irrigation runoff	Segregation of flow to prevent introduction of pollutants.	Implement conservation programs to minimize this type of discharge by using less water.
Dechlorinated/debrominated swimming pool discharges [see definition Part 8]	<p>Where the discharge is not excepted by the sanitary sewer operator. Swimming pool discharges are to be dechlorinated, pH adjusted if necessary, aerated to remove chlorine if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments.</p> <p>Cleaning waste water and filter back wash shall not be discharged to municipal separate storm sewers.</p> <p>No discharges are allowed containing salts in excess of Water Quality Standards.</p> <p>Chlorine residual in discharge shall not exceed 0.1 mg/L.</p>	Pool water may be dechlorinated using time, aeration, and/ or sodium thiosulfate.
Non-commercial car washing by residents or non-profit organizations	Preferably at a commercial carwash or designated area where wash water can percolate. Pumps or vacuums may be used to direct water to pervious areas.	Permittees shall comply with all conditions in the authorization.
Sidewalk rinsing	This may be undertaken only if high pressure low volume is used as described in the glossary under "Sidewalk Rinsing".	
Pooled storm water from treatment BMPs <sup>5</sup>	All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer. All storm water BMPs shall be	

<sup>5</sup> All storm water BMPs shall at a minimum be maintained at a frequency as specified by the manufacturer, and designed to drain within 72 hours of the end of a rain. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is



Type of Discharges:	Conditions under which allowed:	Required conditions for discharge to occur:
	designed to drain within 72 hours of the end of the rain event to avoid the breeding of vectors. Storm water treatment BMPs may be drained to the MS4 under this Order if the discharge is not a source of pollutants. The discharge shall cease before the discharge has become a source of a pollutant(s), (bottom sediment included). Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.	

2. If the Regional Water Board Executive Officer determines that any of the preceding categories of non-storm water discharges are a source of pollutants that exceed water quality standards, the Permittee(s) shall either:
  - (a) Prohibit the discharge from entering the MS4; or
  - (b) Authorize the discharge category and require implementation of appropriate or additional BMPs to ensure that the discharge will not be a source of pollutants; or
  - (c) Require or obtain coverage under a separate RWQCB or SWRCB permit for discharge into the MS4.

**PART 2 – RECEIVING WATER LIMITATIONS**

1. Discharges from the MS4 that cause or contribute to a violation of water quality standards are prohibited.
2. Discharges from the MS4 of storm water, or non-storm water, for which a Permittee is responsible, shall not cause or contribute to a condition of nuisance.
3. The Permittee shall comply with Receiving Water Limitations 1 and 2 through timely implementation of control measures and other actions to reduce pollutants in the storm water discharges in accordance with the requirements of this Order including any modifications. The Permittees' Program shall be designed to achieve compliance with Receiving Water Limitations 1 and 2. If exceedance(s) of water quality

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not a source of pollutants. Sediments shall be disposed of properly, in compliance with all applicable local, state, and federal policies, acts, laws, regulations, ordinances, and statutes.

objectives or water quality standards (collectively WQS) persist, notwithstanding implementation of this permit, the Permittees shall ensure compliance with Receiving Water Limitations 1 and 2 by complying with the following procedure:

- (a) Upon determination by either the Permittees or the Regional Water Board that discharges are causing or contributing to an exceedance of an applicable WQS, the Permittee(s) upstream of the point of discharge shall promptly notify and thereafter submit a report to the Regional Water Board Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be included with the Annual Report, unless the Regional Water Board Executive Officer directs an earlier submittal. The Regional Water Board Executive Officer may require modifications to the report.
  - (b) Submit any modifications to the report required by the Regional Water Board Executive Officer within 30 days of notification.
  - (c) Within 30 days following approval of the Report described above by the Regional Water Board Executive Officer, the Permittees shall revise their Program and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.
  - (d) Implement the revised Program and monitoring program according to the approved schedule.
4. Permittees shall annually report the effectiveness of BMPs in reducing exceedances of receiving water limitations. The Regional Board Executive Officer may direct implementation of additional BMPs if there are continuing or recurring exceedances of the same receiving water limitation.

### **PART 3 - STORM WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION**

#### **A. General Requirements**

1. Each Permittee shall, at a minimum, adopt and implement applicable terms of this Order within its jurisdictional boundary. The Principal Permittee shall be responsible for

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program coordination as described in this Order as well as compliance with applicable portions of the permit within its jurisdiction. This Order shall be implemented no later than August 5, 2009, unless a later date has been specified for a particular provision in this Order and provided the Regional Administrator of the U.S. EPA has no objections.

2. Each Permittee shall comply with the requirements of 40 CFR122.26(d)(2) and implement programs and control measures so as to reduce the discharges of pollutants in storm water to the MEP and achieve water quality standards.
3. Each Permittee shall require that treatment control BMPs being implemented under the provisions of this Order shall be designed, at a minimum, to achieve the BMP performance criteria for storm water pollutants likely to be discharged as identified in Attachment "C", Table 3 for an 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998). Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database. Permittees shall select Treatment BMPs based on the primary class of pollutants likely to be discharged from the site/facility (e.g. metals from an auto repair shop). Permittees may develop guidance for appropriate Treatment BMPs for project type based on Attachment "C". For the treatment of pollutants causing impairments within the drainage of the impaired waterbody, permittees shall select BMPs from the top three performing BMP categories or alternative BMPs that are designed to meet or exceed the performance of the highest performing BMP for the pollutant causing impairment.
4. Each Permittee shall implement programs and measures to comply with the TMDLs' WLAs for the MS4 as specified in Part 6.
5. If TMDL requirements, including Implementation Plans and Reports, address substantially similar requirements as the MS4 permit, the Executive Officer may approve the applicable reports, plans, data or submittals under the applicable TMDL as fulfilling requirements under the MS4.

**B. Legal Authority**

1. Permittees shall possess the necessary legal authority to prohibit, including, but not limited to:
  - (a) Illicit connections and illicit discharges, and to remove illicit connections.
  - (b) The discharge of non-storm water to the MS4 from:
    - (1) Washing or cleaning of gas stations, auto repair garages, or other types of automotive service facilities
    - (2) Mobile auto washing, carpet cleaning, steam cleaning, sandblasting and other such mobile commercial and industrial operations
    - (3) Areas where repair of machinery and equipment which are visibly leaking oil, fluid or antifreeze, is undertaken
    - (4) Storage areas for materials containing grease, oil, or other hazardous substances, and uncovered receptacles containing hazardous materials
    - (5) Swimming pools<sup>6</sup> that have a concentration greater than:
      - (A) Chlorine/ bromine- 0.1mg/L
      - (B) Chloride- 250mg/L
    - (6) Swimming pool filter backwash
    - (7) Decorative fountains and ponds
    - (8) Industrial/ Commercial areas, including restaurant mats
    - (9) Concrete truck cement, pumps, tools, and equipment washout
    - (10) Spills, dumping, or disposal of materials other, such as:
      - (A) Litter, landscape and construction debris, garbage, food, animal waste, fuel or chemical wastes, batteries, and any other materials which have the potential to adversely impact water quality; and
      - (B) Any pesticide, fungicide or herbicide
    - (11) Stationary and mobile pet grooming facilities
    - (12) Trash container leachate
2. The Permittees shall possess adequate legal authority to:
  - (a) Control through interagency agreement, the contribution of pollutants from one portion of the MS4 to another portion of the MS4.

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<sup>6</sup> MS4s discharging directly to the ocean are not subject to this prohibition.

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- (b) Require persons within their jurisdiction to comply with conditions in the Permittees' ordinances, permits, contracts, model programs, or orders (i.e. hold dischargers to its MS4 accountable for their contributions of pollutants and flows).
  - (c) Utilize enforcement measures (e.g., stop work orders, notice of violations, fines, referral to City, County, and/ or District Attorneys, referral to strikeforces, etc.) by ordinances, permits, contracts, orders, administrative authority, and civil and criminal prosecution.<sup>7</sup>
  - (d) Control pollutants, including potential contribution<sup>8</sup> in discharges of storm water runoff associated with industrial activities, including construction activities to its MS4, and control the quality of storm water runoff from industrial sites, including construction sites.
  - (e) Carry out all inspections, surveillance and monitoring procedures necessary to determine compliance and non-compliance with permit conditions including the prohibition on illicit discharges to the MS4.
  - (f) Require the use of control measures to prevent or reduce the discharge of pollutants to achieve water quality objectives.
  - (g) Require that Treatment Control BMPs be properly operated and maintained.
3. Each Permittee has adopted a Storm Water Quality Ordinance based upon a countywide model. Each Permittee shall ensure, no later than May 7, 2011, that its Storm Water Quality Ordinance authorizes the Permittee to enforce all requirements of this Order.
  4. Each Permittee shall submit no later than two years after Order adoption date, a statement by its legal counsel that the Permittee has obtained and possesses all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.

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<sup>7</sup>In the case of private responsible parties such as, HOAs, the Permittee must retain enforcement authority.

<sup>8</sup> "Potential contributions" and "potential to discharge," means adequate legal authority to prevent an actual discharge of pollutants to the municipal separate storm sewer system.

**C. Fiscal Resources**

1. The Permittees shall implement the activities required to comply with the provisions of this Order.<sup>9</sup> Each Permittee shall:
  - (a) Submit an Annual Budget Summary that shall include:
    - (1) Budgets for the upcoming report year (estimated expenditure) for the following specific categories (estimated percentages and written explanations where necessary):
      - (A) Program Management Activities.
        - (i) Overall Administrative costs
      - (B) Program Implementation Activities (permit related activities only). Provide figures breakdown of expenditures for the categories below:
        - (i) Illicit connection/ illicit discharge program.
        - (ii) Development planning and approval
        - (iii) Construction program including inspection activities
        - (iv) Industrial/ Commercial program including inspection activities
        - (v) Public Agency Activities
          - (I) Maintenance and inspection of Treatment Control BMPs
          - (II) Municipal Street Sweeping
          - (III) Municipal Drainage Maintenance including catch basin clean-outs
          - (IV) Other costs associated with storm water management (describe)
        - (vi) Public Information and Participation.
        - (vii) Monitoring Program
        - (viii) Miscellaneous Expenditures (describe)

**D. Modifications/ Revisions**

1. No later than two years after the Order adoption date, each Permittee shall modify its storm water management programs, protocols, practices, and municipal codes to make them consistent with the requirements herein.

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<sup>9</sup> The sources of funding may be the general funds, and/or Benefit Assessment, plan review fees, permit fees, industrial/ commercial user fee, revenue bonds, grants or other similar funding mechanism.

**E. Designation and Responsibilities of the Principal Permittee**

1. The Ventura County Watershed Protection District is hereby designated as the Principal Permittee. The Principal Permittee shall:
  - (a) Participate in the County Environmental Crimes Task Force
  - (b) Coordinate and facilitate activities necessary to comply with the requirements of this Order, but the Principal Permittee is not responsible for ensuring compliance of any other individual Permittee
  - (c) Coordinate permit activities among Permittees and act as liaison between the Permittees and the Regional Water Board on permitting issues
  - (d) Provide technical and administrative support for committees that will be organized to implement this Order and its requirements
  - (e) Evaluate, assess, and synthesize the results of the monitoring program and the effectiveness of the implementation of BMPs
  - (f) Convene the Committee Meetings constituted pursuant to subpart 4.F.1., below, upon designation of representatives
  - (g) Implement the Countywide Monitoring Program required under the Order and evaluate, assess and synthesize the results of the monitoring program
  - (h) Provide personnel and fiscal resources for the collection, processing and submittal to the Regional Water Board of monitoring and annual reports, and summaries of other reports required under this Order

**F. Responsibilities of the Permittees**

1. Each Permittee is required to comply with the requirements of this Order applicable to discharges within its boundaries (see Findings- Permit Coverage D.1 and D.2). Permittees are not responsible for the implementation of the provisions applicable to the Principal Permittee or other Permittees. Each Permittee shall:
  - (a) Comply with the requirements of this Order and any modifications thereto
  - (b) Coordinate among its internal departments and agencies, as necessary, to facilitate the implementation of the requirements of this Order applicable to such Permittees in an efficient and cost-effective manner
  - (c) Participate in intra-agency coordination (e.g., Planning Department, Fire Department, Building and Safety, Code Enforcement, Public Health, Parks and Recreation, and

- others) necessary to successfully implement the provisions of this Order
- (d) Report, in addition to the Budget Summary, any supplemental dedicated budgets for the same categories
- (e) Participate in Committee Meetings, as necessary

#### **PART 4 - SPECIAL PROVISIONS (BASELINE)**

##### **A. General Requirements**

1. This Order and the provisions herein are intended to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the MEP and not cause or contribute to exceedances of water quality standards for the permitted areas in the County of Ventura.
2. Best Management Practice Substitution
  - (a) The Regional Water Board Executive Officer may approve any site-specific BMP substitution upon written request by a Permittee(s) and after public notice, if the Permittee can document that:
    - (1) The proposed alternative BMP or program will meet or exceed the objective of the original BMP or program in the reduction of storm water pollutants.
    - (2) The fiscal burden of the original BMP or program is greater than the proposed alternative and does not achieve a greater improvement in storm water quality.
    - (3) The proposed alternative BMP or program will be implemented within a similar period of time.
    - (4) BMP substitution will be in accordance with the public review provisions of the Order (Part 8C.1 and Part 8C.2).

##### **B. Watershed Initiative Participation**

1. The Principal Permittee shall participate in water quality meetings for watershed management and planning, including but not limited to the following:
  - (a) Southern California Stormwater Monitoring Coalition (SMC)
  - (b) Other Watershed planning groups as appropriate



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2. The Principal Permittee shall participate in the following regional water quality programs, and projects for watershed management and planning:
  - (a) SMC Regional Monitoring Programs
    - (1) Southern California Regional Bioassessment
      - (A) Level of effort per watershed
        - (i) Probabilistic sites per watershed
          - (I) Ventura River - Six
          - (II) Santa Clara River - Three
          - (III) Calleguas Creek - Six
        - (ii) Integrator sites per watershed
          - (I) Ventura River - One
          - (II) Santa Clara River - One
          - (III) Calleguas Creek - One
        - (iii) Fixed bioassessment sites
          - (I) The Permittees shall perform bioassessment at one fixed urban site in each major watershed. Site selection shall be determined by the results of the first year SMC results, as approved by the Executive Officer.
    - (b) Southern California Bight Projects
      - (1) Regional Monitoring Survey - 2008, and successive years.

**C. Public Information and Participation Program (PIPP)**

1. The Principal Permittee shall implement a Public Information and Participation Program (PIPP) that includes, but is not limited to, the requirements listed in this part. The Principal Permittee shall coordinate with Permittees to implement specific PIPP requirements. The objectives of the PIPP are as follows:
  - (a) To increase the knowledge of the target audience about the MS4, the adverse impacts of storm water pollution on receiving waters and potential solutions to mitigate the impacts
  - (b) To change the waste disposal and storm water pollution generation behavior of target audiences by encouraging implementation of appropriate solutions
  - (c) To involve and engage communities in Ventura County to participate in mitigating the impacts of storm water pollution
2. Residential Program
  - (a) "No Dumping" Message

Each Permittee shall label all storm drain inlets that they own with a legible "no dumping" message. In addition, signs with prohibitive language discouraging illegal dumping shall be posted at designated public access points to creeks, other relevant waterbodies, and channels. Signage and storm drain messages shall be legible and maintained.

(b) Public Reporting

Each Permittee shall identify staff who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/dumping, faded or missing catch basin labels, and general storm water management information. Permittees shall include this information, updated by July 1 of each year, in public information media such as the government pages of the telephone book, and internet web sites. The Principal Permittee shall compile a list of the general public reporting contacts submitted by all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request. Each Permittee is responsible for providing current, updated information to the Principal Permittee.

(c) Outreach and Education

- (1) Collaboratively, the Permittees shall implement the following activities:
  - (A) Conduct a Storm Water pollution prevention advertising campaign.
  - (B) Conduct Storm Water pollution prevention public service announcements.
  - (C) Distribute storm water pollution prevention public education materials within 365 days to:
    - (i) Automotive parts stores
    - (ii) Home improvement centers/ lumber yards/ hardware stores
    - (iii) Pet shops/ feed stores
  - (D) Public education materials shall include, but are not limited to information on the proper disposal, storage, and use of:
    - (i) Vehicle waste fluids
    - (ii) Household waste materials
    - (iii) Construction waste materials
    - (iv) Pesticides and fertilizers (including integrated pest management practices-IPM)
    - (v) Green waste (including lawn clippings and leaves)
    - (vi) Animal wastes

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- (E) Work with existing local watershed groups or organize watershed Citizen Advisory Groups/ Committees to develop effective methods to educate the public about storm water pollution no later than May 7, 2010.
  - (F) Organize events targeted to residents and population subgroups; and
  - (G) Maintain the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), which shall include educational material listed in the preceding subpart C.1(c)(1)(C).
- (2) The Principal Permittee shall develop a strategy to educate ethnic communities through culturally effective methods. Details of this strategy should be incorporated into the PIPP, and implemented, no later than May 7, 2010.
  - (3) Each Permittee shall continue the existing outreach program to residents on the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices.
  - (4) Each Permittee shall conduct educational activities within its jurisdiction and participate in countywide events.
  - (5) The Permittees shall make a minimum of 5 million impressions per year to the general public related to storm water quality, with a minimum of 2.5 million impressions via newspaper, local TV access, local radio and/ or internet access.
  - (6) The Principal Permittee, in cooperation with the Permittees, shall provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution. Alternatively, a Permittee may submit a plan to the Regional Water Board Executive Officer for consideration no later than (90 days after adoption of the Order), to provide outreach in lieu of the school curriculum. Pursuant to Water Code section 13383.6, the Permittees, in lieu of providing educational materials/ funding to School Districts in the County, may opt to provide an equivalent amount of funds or fraction thereof to the Environmental Education Account established within the State Treasury.
  - (7) Each Permittee shall provide the contact information for their appropriate staff responsible for storm water

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public education activities to the Principal Permittee and contact information changes no later than 30 days after a change occurs.

- (8) The Permittees shall develop and implement a behavioral change assessment strategy no later than May 7, 2010, in order to determine whether the PIPP is demonstrably effective in changing the behavior of the public. The strategy shall be developed based on current sociological data and studies.

(d) Pollutant-Specific Outreach

The Principal Permittee, in cooperation with the Permittees, shall coordinate to develop outreach programs that focus on metals, urban pesticides, bacteria and nutrients as the pollutants of concern no later than May 7, 2010. Metals may be appropriately addressed through the Industrial/ Commercial Facilities Program (e.g. the distribution of educational materials on appropriate BMPs for metal fabrication and recycling facilities that have been identified as a potential source). Region-wide pollutants may be included in the Principal Permittee's mass media outreach program.

3. Businesses Program

(a) Corporate Outreach

- (1) The Permittees shall work with other regional or statewide agencies and, associations such as the California Storm Water Quality Association (CASQA), to develop and implement a Corporate Outreach program to educate and inform corporate franchise operators and/or local facility managers about storm water regulations and BMPs. Once developed, the program shall target a minimum of four Retail Gasoline Outlets (RGO) franchisers and cover a minimum of 80% of RGO franchisees in the county, four retail automotive parts franchisers, two home improvement center franchisers and six restaurant franchisers. Corporate outreach for all target facilities shall be conducted not less than twice during the term of this Order, with the first outreach contact to begin no later than two years after Order adoption date. At a minimum, this program shall include:

- (A) Confer with franchise operators and/or local facility managers to explain storm water regulations.
- (B) Distribution and discussion of educational material regarding storm water pollution and

BMPs, and provide managers with recommendations to facilitate employee and facility compliance with storm water regulations.

(b) Business Assistance Program

(1) The Permittees shall implement a Business Assistance Program to provide technical information to small businesses to facilitate their efforts to reduce the discharge of pollutants in storm water. The Program shall include:

- (A) On-site, telephone or e-mail consultation regarding the responsibilities of businesses to reduce the discharge of pollutants, procedural requirements, and available guidance documents.
- (B) Distribution of storm water pollution prevention education materials to operators of auto repair shops, car wash facilities (including mobile car detailing), mobile carpet cleaning services, commercial pesticide applicator services and restaurants.

**D. Industrial/ Commercial Facilities Program**

I. Each Permittee shall require implementation of pollutant reduction and control measures, unless precluded by local ordinances, at industrial and commercial facilities, with the objective of reducing pollutants in storm water. Except where specified otherwise in this Order, pollutant reduction and control measures may be used alone or in combination, and may include Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollutant generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program shall include requirements to:

- (a) Track
- (b) Inspect
- (c) Ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water

1. Inventory of Critical Sources

(a) Each Permittee shall maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of storm water pollution. Critical Sources to be tracked are summarized below, and specified in Attachment "D":

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- (1) Commercial Facilities
  - (A) Restaurants
  - (B) Automotive service facilities
  - (C) RGOs and automotive dealerships
  - (D) Nurseries and nursery centers
- (2) U.S. EPA Phase I, II Facilities
- (3) Other Federally-mandated Facilities [as specified in 40 CFR122.26(d)(2)(iv)(C)]
  - (A) Municipal landfills
  - (B) Hazardous waste treatment, disposal, and recovery facilities
  - (C) Facilities subject to SARA Title III (also known as the Emergency Planning and Community Right-to-Know Act (EPCRA))
- (b) Each Permittee shall include the following minimum fields of information for each critical source industrial and commercial facility
  - (1) Name of facility and name of owner/ operator.
  - (2) Address of facility
  - (3) Coverage under the IASGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
  - (4) A narrative description including Standard Industrial Classification (SIC) System/ North American Industry Classification System (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
- (c) The Regional Water Board recommends that Permittees include additional fields of information, such as material usage and/ or industrial output, and discrepancies between SIC System/ NAICS Code designations (as reported by facility operators) and identify the actual type of industrial activity that has the potential to pollute storm water. In addition, the Regional Water Board recommends the use of an automated database system, such as a Geographical Information System (GIS) or Internet-based system.
- (d) Each Permittee shall update its inventory of critical sources at least annually. The update may be accomplished through collection of new information obtained through field activities or through other readily available inter and intra-agency informational databases (e.g. business licenses, pretreatment permits, sanitary sewer hook-up permits, and similar information).

2. Inspect Critical Sources

(a) Commercial Facilities

Permittee shall inspect all facilities identified in subpart 5.D.1. twice during the 5-year term of the Order, provided that the first inspection occurs no later than May 7, 2010. A minimum interval of 6 months between the first and the second mandatory compliance inspection is required. In addition, each Permittee shall implement the activities outlined in the following subparts. At each facility, inspectors shall verify that the operator is implementing the source control BMPs. The Permittees may require implementation of additional BMPs where storm water flows from the MS4 discharge to an environmentally sensitive area (ESA, see part 7 for definition) or a CWA § 303(d) listed waterbody (see subpart 3(b) below).

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- (1) Restaurants-  
Level of inspections: Each Permittee shall inspect all restaurants within its jurisdiction to confirm that storm water BMPs are being effectively implemented in compliance with State law, County and municipal ordinances. BMPs in Table 2 (BMPs at Restaurants) shall be implemented, unless the pollutant generating activity does not occur.

Table 2 - BMPs at Restaurants

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Waste/ Hazardous Materials Storage, Handling and Disposal	Implementation of effective storage, handling and disposal procedures for hazardous materials.	By Municipality
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance	Implementation of proper conveyance system operation and maintenance protocols.	SC-44



(2) Automotive Service Facilities-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 3 (BMPs at Automotive Service Facilities) are being implemented, unless the pollutant generating activity does not occur.

Table 3 - BMPs at Automotive Service Facilities

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling.	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning.	Implementation of effective equipment/ vehicle cleaning practices and appropriate wash water management practices	SC-21
Vehicle/ Equipment Repair	Implementation of effective vehicle/ equipment repair practices and source control devices.	SC-22
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43
Storm Water Conveyance System Maintenance Practices	Implementation of proper conveyance system operation and maintenance protocols.	SC-44

- (3) Retail Gasoline Outlets and Automotive Dealerships-  
 Level of Inspections: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 4 (BMPs at Retail Gasoline Outlets) are being implemented, unless the pollutant generating activity does not occur.

Table 4 - BMPs at Retail Gasoline Outlets

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Accidental Spills/ Leaks	Implementation of effective spills/ leaks prevention and response procedures.	SC-11
Vehicle/ Equipment Fueling	Implementation of effective fueling source control devices and practices.	SC-20
Vehicle/ Equipment Cleaning	Implementation of effective wash water control devices.	SC-21
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Storage and Handling of Solid Waste	Implementation of effective solid waste storage/ handling practices and appropriate control measures	SC-34
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41
Parking/ Storage Area Maintenance	Implementation of effective parking/ storage area designs and housekeeping/ maintenance practices	SC-43

- (4) Commercial Nurseries and Nursery Centers  
 (Merchant Wholesalers, Nondurable Goods, and  
 Retail Trade)-

Level of Inspection: Each Permittee shall confirm that BMPs are being effectively implemented at each facility within its jurisdiction, in compliance with County and municipal ordinances. The inspections shall verify that BMPs in Table 5 (BMPs at Nurseries) are being implemented, unless the pollutant generating activity does not occur.

Table 5 - BMPs at Nurseries

Pollutant-Generating Activity	BMP Narrative Description	2003 California Stormwater BMP Handbook Industrial and Commercial BMP Identification #
Unauthorized Non-Storm Water Discharges	Effective elimination of non-storm water discharges.	SC-10
Outdoor Loading/ Unloading	Implementation of effective outdoor loading/ unloading practices.	SC-30
Outdoor Liquid Storage	Implementation of effective outdoor liquid storage source controls and practices.	SC-31
Outdoor Equipment Operations	Implementation of effective outdoor equipment source control devices and practices.	SC-32
Outdoor Storage of Raw Materials	Implementation of effective source control practices and structural devices.	SC-33
Building and Grounds Maintenance	Implementation of effective facility maintenance practices.	SC-41

(b) Industrial Facilities

Each Permittee shall conduct compliance inspections as specified below.

(1) **Frequency of Inspection**

(A) Each Permittee shall perform an initial inspection at all industrial facilities identified by the U.S. EPA in 40 CFR122.26(c) no later than 2 years after Order adoption date. After the initial inspection, all facilities determined as having exposure of industrial activities to storm water are subject to a second mandatory compliance inspection. A minimum interval of 6 months between the first and the second compliance inspection is required.

(B) Following the first mandatory compliance inspection, a Permittee shall perform a second mandatory compliance inspection yearly at a minimum of 20% of the facilities determined not to have exposure of industrial activities to storm water. The purpose of this inspection is to verify the continuity of the no exposure status. Facilities determined as having exposure will be notified that they must obtain coverage under the IASGP. A facility need not be inspected more than twice during the term of the Order unless subject to an enforcement action. A minimum interval of 6 months in between the first and the second compliance inspection is required.

(C) Applicable to all facilities: A Permittee need not inspect facilities that have been inspected by the Regional Water Board within the previous 24 month interval. However, if the Regional Water Board performed only one inspection, the Permittee shall conduct the second required mandatory compliance inspection.

(2) **Level of Inspection:** Each Permittee shall confirm that each operator:

(A) Has a current Waste Discharge Identification (WDID) number for facilities discharging storm water associated with industrial activity, and that a Storm Water Pollution Prevention Plan (SWPPP) is available on-site.

(B) Is effectively implementing BMPs in compliance with County and municipal

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ordinances. Facilities must implement the source control BMPs identified in subpart 5.D.3. and Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*; or

- (C) Has applied and has a current No Exposure Certification (and WDID number) for facilities subject to this requirement.

3. Ensure Compliance of Critical Sources

- (a) **BMP Implementation:** Facilities must implement the source control BMPs identified in Part 5. D. 2. and, as applicable, Appendix D, *California Stormwater Industrial and Commercial BMP Handbook (2003)*. In the event that a Permittee determines that a BMP is infeasible at any site, the Permittee shall require implementation of similar BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges. Likewise, for those BMPs that are not protective of water quality standards, Permittees may require additional site-specific controls.
- (b) **Environmentally Sensitive Areas (ESAs) and Impaired Waters:** For critical sources that discharge to MS4s that directly discharge to ESAs or to CWA § 303(d) listed impaired waterbodies, the Permittees shall require operators to implement additional pollutant specific controls to reduce pollutants in storm water runoff that are causing or contributing to exceedances of water quality objectives. A Regional Board approved TMDL Implementation Plan for the receiving water will substitute for this requirement.
- (c) **Progressive Enforcement:** Each Permittee shall implement a progressive enforcement policy to ensure that facilities are brought into compliance with all storm water requirements within a reasonable time period as specified below.
- (1) In the event that a Permittee determines, based on an inspection conducted, that an operator has failed to adequately implement all necessary BMPs, that Permittee shall take progressive enforcement actions which, at a minimum, shall include a follow-up inspection within 4 weeks from the date of the initial inspection.
  - (2) In the event that a Permittee determines that an operator has failed to adequately implement BMPs after a follow-up inspection, that Permittee shall take

enforcement action as established through authority in its municipal code and ordinances or through the judicial system.

- (3) Each Permittee shall maintain records and make them available on request to the Regional Water Board, including inspection reports, warning letters, notices of violations, and other enforcement records, demonstrating a good faith effort to bring facilities into compliance.

4. Interagency Coordination

- (a) **Referral of Violations of the Municipal Storm Water Ordinances and California Water Code § 13260:** A Permittee may refer a violation(s) of § 13260 by Industrial and Commercial facilities to the Regional Water Board provided that under its municipal storm water ordinance the Permittee has made a good faith effort of progressive enforcement. At a minimum, a Permittee's good faith effort must be documented with:

- (1) Two follow-up inspections
- (2) Two warning letters or notices of violation

- (b) **Referral of Violations of the Industrial Activities Storm Water General Permit (IASGP), including Requirements to File a Notice of Intent or No Exposure Certification:** For those facilities in violation of the municipal storm water ordinance and subject to the IASGP, Permittees may escalate referral of such violations to the Regional Water Board (electronically on a quarterly basis to the Regional Water Board's Storm Water Site at [MS4stormwaterrb4@waterboards.ca.gov](mailto:MS4stormwaterrb4@waterboards.ca.gov)) after one inspection and one written notice (copied to the Regional Water Board) to the operator regarding the violation. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Name of the facility
- (2) Operator of the facility
- (3) Owner of the facility
- (4) WDID Number (if applicable)
- (5) Industrial activity being conducted at the facility that is subject to the IASGP
- (6) Records of communication with the facility operator regarding the violation, which shall include at least an inspection report
- (7) The written notice of the violation copied to the Regional Water Board

- (c) **Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:** Each Permittee shall initiate, within one business day,<sup>10</sup> investigation of complaints (other than non-storm water discharges) to the MS4 from facilities within its jurisdiction. The initial investigation shall include, at a minimum, a limited inspection of the facility to confirm the complaint to determine if the facility is effectively complying with the municipal storm water urban runoff ordinances and, if necessary, to oversee corrective action.
- (d) **Assistance of Regional Water Board Enforcement Actions:** As directed by the Regional Water Board Executive Officer, Permittees shall assist Regional Water Board enforcement actions by: helping in identification of current owners, operators, and lessees of facilities; providing staff, when available, for joint inspections with Regional Water Board inspectors; appearing as witnesses in Regional Water Board enforcement hearings; and providing copies of inspection reports and other progressive enforcement documentation.
- (e) **Participation in a Task Force:** The Permittees shall participate with the Regional Water Board, and other public agencies on an enforcement task force such as the Storm Water Task Force, to communicate concerns regarding special cases of storm water violations by industrial and commercial facilities and to develop a coordinated approach to enforcement action.

## E. Planning and Land Development Program

### I. Purpose

1. The Permittees shall implement a Planning and Land Development Program pursuant to part 4.E. for all New Development and Redevelopment projects subject to this Order to:
  - (a) Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development towards existing communities via infill or redevelopment, safeguarding of environmentally sensitive areas, mixing of land uses (e.g., homes, offices, and shops), transit accessibility, and better pedestrian and bicycle amenities.

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<sup>10</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to “initiate” the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

- (b) Minimize the adverse impacts from storm water runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of waterbodies in accordance with requirements under CEQA (Cal. Pub. Resources Code § 21100).
- (c) Minimize the percentage of effective impervious surfaces on land developments to mimic predevelopment water balance through infiltration, evapotranspiration and reuse.
- (d) Minimize pollutant loadings from impervious surfaces such as roof-tops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), Low Impact Development Strategies, and Treatment Control BMPs.
- (e) Properly select, design and maintain Treatment Control BMPs and Hydromodification Control BMPs to address pollutants that are likely to be generated, assure long-term function, and to avoid the breeding of vectors.<sup>11</sup>
- (f) Prioritize the selection of BMPs suites to remove storm water pollutants, reduce storm water runoff volume, and beneficially reuse storm water to support an integrated approach to protecting water quality and managing water resources in the following order of preference:
  - (1) Infiltration BMPs
  - (2) BMPs that store and reuse storm water runoff.
  - (3) BMPs that incorporate vegetation to promote pollutant removal and runoff volume reduction and integrate multiple uses
  - (4) BMPs which percolate runoff through engineered soil and allow it to discharge downstream slowly
  - (5) Approved modular/ proprietary treatment control BMPs that are based on LID concepts and that meet pollution removal goals

## II. Applicability

- 1. New Development Projects.
  - (a) Development projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:
    - (1) All development projects equal to 1 acre or greater of disturbed area and adding more than 10,000 square feet of impervious surface area

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<sup>11</sup> Treatment BMPs when designed to drain within 72 hours of the end of rainfall minimize the potential for the breeding of vectors.



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- (2) Industrial park 10,000 square feet or more of surface area
- (3) Commercial strip mall 10,000 square feet or more of impervious surface area
- (4) Retail gasoline outlet 5,000 square feet or more of surface area
- (5) Restaurant (SIC 5812) 5,000 square feet or more of surface area
- (6) Parking lot 5,000 square feet or more of impervious surface area, or with 25 or more parking spaces
- (7) Streets, roads, highways, and freeway construction of 10,000 square feet or more of impervious surface area shall incorporate USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets to the maximum extent practicable.
- (8) Automotive service facilities (SIC 5013, 5014, 5511, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area]
- (9) Redevelopment projects in subject categories that meet Redevelopment thresholds (identified in subpart E.II.2 below)
- (10) Projects located in or directly adjacent to, or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
  - (A) Discharge storm water runoff that is likely to impact a sensitive biological species or habitat; and
  - (B) Create 2,500 square feet or more of impervious surface area
- (11) Single-family hillside homes. To the extent that a Permittee may lawfully impose conditions, mitigation measures or other requirements on the development or construction of a single-family home in a hillside area as defined in the applicable Permittee's Code and Ordinances, each Permittee shall require that during the construction of a single-family hillside home, the following measures to be implemented:
  - (A) Conserve natural areas
  - (B) Protect slopes and channels
  - (C) Provide storm drain system stenciling and signage
  - (D) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability

- (E) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability

2. Redevelopment Projects

(a) Redevelopment projects subject to Permittee conditioning and approval for the design and implementation of post-construction controls to mitigate storm water pollution, prior to completion of the project(s), are:

- (1) Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on development categories identified in subpart 4.E.III.1.(a)-(c).
- (2) Where Redevelopment results in an alteration to more than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, the entire project must be mitigated.
- (3) Where Redevelopment results in an alteration to less than fifty percent of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

(b) Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety. Impervious surface replacement, such as the reconstruction of parking lots and roadways which does not disturb additional area and maintains the original grade and alignment, is considered a routine maintenance activity. Redevelopment does not include the repaving of existing roads to maintain original line and grade.

(c) Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.

3. Effective Date –The New Development and Redevelopment requirements contained in Section E of the Order shall begin 90 calendar days after Regional Board Executive Officer

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approval of the changes to the Technical Guidance Manual needed to comply with this permit. After that date all discretionary permit projects or project phases that have not been deemed complete for processing, or discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals must comply with the requirements in Section E. Projects that have been deemed complete prior to the update of the technical design manual are not subject to this section. For Permittee's projects the effective date shall be the date the governing body or their designee approves initiation of the project design.

**III. New Development/ Redevelopment Performance Criteria**

1. Integrated Water Quality/Flow Reduction/Resources Management Criteria
  - (a) Except as provided in subpart 4.E.III.1.(c) below, Permittees shall require all New Development and Redevelopment projects identified in subpart 4.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/biofiltration by reducing the percentage of Effective Impervious' Area (EIA) to 5 percent or less of the total project area.
  - (b) Impervious surfaces may be rendered "ineffective," and thus not count toward the 5 percent EIA limitation, if the stormwater runoff from those surfaces is fully retained onsite for the design storm event specified in provision (c), below. To satisfy the EIA limitation and low-impact development requirements, the permittees must require stormwater runoff to be infiltrated, reused, or evapotranspired onsite through a stormwater management technique allowed under the terms of this permit and implementing documents.
  - (c) The permittees shall require all features constructed or otherwise utilized to render impervious surfaces "ineffective," as described in provision (b), above, to be properly sized to infiltrate, store for reuse, or evapotranspire, without any runoff at least the volume of water that results from:
    - (1) The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area

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using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998);

- (2) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures (July 2002 and its revisions); or
  - (3) The volume of runoff produced from a 0.75 inch storm event.
- (d) To address any impervious surfaces that may not be rendered "ineffective," surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.II which have complied with subparts 4.E.III.1.(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.1.(c).

## 2. Alternative Compliance for Technical Infeasibility

- (a) To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.III.1, above, to comply with this permit through the alternative compliance measures described in subpart 4.E.III.2., below.
- (b) To utilize alternative compliance measures, the project applicant must demonstrate that compliance with the applicable post-construction requirements would be technically infeasible by submitting a site-specific hydrologic and/or design analysis conducted and endorsed by a registered professional engineer, geologist, architect, and/or landscape architect. Technical infeasibility may result from conditions including the following:
  - (1) Locations where seasonal high groundwater is within 5 feet of the surface;
  - (2) Locations within 100 feet of a groundwater well used for drinking water;

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- (3) Brownfield development sites or other locations where pollutant mobilization is a documented concern;
  - (4) Locations with potential geotechnical hazards;
  - (5) Smart growth and infill or redevelopment locations where the density and/or nature of the project would create significant difficulty for compliance with the onsite volume retention requirement; and
  - (6) Other site or implementation constraints identified in the LID Technical Guidance document required by subpart 4.E.IV.5.
- (c) Alternative Compliance Measures. When a permittee finds that a project applicant has demonstrated technical infeasibility, the permittee shall identify alternative compliance measures that the project will need to comply with as a substitute for the otherwise applicable post-construction requirements listed in subparts 4.E.III.1.(a)-(c) of this permit. The Ventura County Technical Guidance Manual shall be revised to identify the alternative compliance measures and shall include the following requirement
- (1) Minimum onsite requirement. The project must reduce the percentage of Effective Impervious Area to no more than 30 percent of the total project area and treat all remaining runoff pursuant to the design and sizing requirements of subparts 4.E.III.1.(b)-(d).
  - (2) Offsite mitigation volume. The difference in volume between the amount of stormwater infiltrated, reused, and/or evapotranspired by the project onsite and the otherwise applicable requirements of subparts 4.E.III.1.(a)-(c) (the "offsite mitigation volume"), above, must be mitigated by the project applicant either by performing offsite mitigation that is approved by the permittee or by providing sufficient funding for public or private offsite mitigation to achieve equivalent stormwater volume and pollutant load reduction through infiltration, reuse, and/or evapotranspiration.
  - (3) Location of off site mitigation. Offsite mitigation projects must be located in the same sub-watershed (defined as draining to the same hydrologic area in the Basin Plan) as the new development or redevelopment

project. A list of eligible public and private offsite mitigation projects available for funding shall be identified by the Permittees and provided to the project applicant. Off site mitigation projects include green streets projects, parking lot retrofits, other site specific LID BMPs, and regional BMPs. Project applicants seeking to utilize these alternative compliance provisions may propose other offsite mitigation projects, which the Permittees may approve if they meet the requirements of this subpart.

- (4) Timing and Reporting Requirements for Offsite Mitigation Projects. The Permittee(s) shall develop a schedule for the completion of offsite mitigation projects, including milestone dates to identify fund, design, and construct the projects. Offsite mitigation projects shall be completed as soon as possible, and at the latest, within 4 years of the certificate of occupancy for the first project that contributed funds toward the construction of the offsite mitigation project, unless a longer period is otherwise authorized by the Executive Officer. For public offsite mitigation projects, the permittees must provide in their annual reports a summary of total offsite mitigation funds raised to date and a description (including location, general design concept, volume of water expected to be retained, and total estimated budget) of all pending public offsite mitigation projects. Funding sufficient to address the offsite mitigation volume must be transferred to the permittee (for public offsite mitigation projects) or to an escrow account (for private offsite mitigation projects) within one year of the initiation of construction.
  - (5) The project applicant must demonstrate that the EIA achieved onsite is as close to 5 percent EIA as technically feasible, given the site's constraints.
- (d) Watershed equivalence. Regardless of the methods through which permittees allow project applicants to implement alternative compliance measures, the sub-watershed -wide (defined as draining to the same hydrologic area in the Basin Plan) result of all development must be at least the same level of water quality protection as would have been achieved if all projects utilizing these alternative compliance provisions had complied with subparts 4.E.III.1.(a)-(d) of the permit. The permittees shall provide in their annual report to the Regional Board a list of mitigation project descriptions and pollutant

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and flow reduction analyses (compiled from design specifications submitted by project applicants and approved by the permittee(s)) comparing the expected aggregate results of alternative compliance projects to the results that would otherwise have been achieved by meeting the 5 percent EIA requirement onsite.

#### IV. Implementation

1. Maintenance Agreement and Transfer
  - (a) Prior to issuing approval for final occupancy each Permittee shall require that all new development and redevelopment projects subject to post-construction BMP requirements provide an operation and maintenance plan and verification of ongoing maintenance provisions for LID practices, Treatment Control BMPs, and Hydromodification Control BMPs including but not limited to: final map conditions, legal agreements, covenants, conditions or restrictions, CEQA mitigation requirements, conditional use permits, and/ or other legally binding maintenance agreements.
    - (1) Verification at a minimum shall include the developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred; and either
      - (A) A signed statement from the public entity assuming responsibility for BMP maintenance; or
      - (B) Written conditions in the sales or lease agreement, which require the property owner or tenant to assume responsibility for BMP maintenance and conduct a maintenance inspection at least once a year; or
      - (C) Written text in project covenants, conditions, and restrictions (CCRs) for residential properties assigning BMP maintenance responsibilities to the Home Owners Association (HOA); or
      - (D) Any other legally enforceable agreement or mechanism that assigns responsibility for the maintenance of BMPs.
  - (b) Each Permittee shall require all development projects subject to post-construction BMP requirements to provide a plan for the operation and maintenance of all structural and treatment controls. The Operation and Maintenance plan shall follow the Technical Guidance Manual Appendix D "Maintenance Plan Guidance" (or subsequent guidance manual) for each BMP component. The plan shall be submitted for examination of relevance to keeping the BMPs in proper working order. Where BMPs are transferred to Permittee for ownership and maintenance, the plan shall also include all relevant costs for upkeep of BMPs in the transfer. Operation and Maintenance plans for private BMPs shall be kept on site for periodic review by Permittee inspectors.
2. Tracking, Inspection, and Enforcement of Post-Construction BMPs
  - (a) Each Permittee shall implement a tracking system and an inspection and enforcement program for new development and redevelopment post-construction storm water BMPs as set fort in part 4.E no later than May 7, 2010.
    - (1) Implement a GIS or other electronic system for tracking projects that have been conditioned for post-construction BMPs. The electronic system, at a minimum, should contain the following information:



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- (A) Municipal Project ID
  - (B) State WDID No
  - (C) Project Acreage
  - (D) BMP Type and Description
  - (E) BMP Location (coordinates)
  - (F) Date of Acceptance
  - (G) Date of Maintenance Agreement
  - (H) Maintenance Records
  - (I) Inspection Date and Summary
  - (J) Corrective Action
  - (K) Date Certificate of Occupancy Issued
  - (L) Replacement or Repair Date
- (b) Inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and Hydromodification control BMPs. The inspection may be combined with other inspections provided it is conducted by trained personnel.
- (c) Verify proper maintenance and operation of post-construction BMPs previously approved for new development and redevelopment and operated by the Permittees. The post construction BMP maintenance inspection program shall incorporate the following elements:
- (1) Post-construction BMP Maintenance Inspection checklist.
  - (2) Inspection at least once every 2 years, beginning May 7, 2010, of post-construction BMPs to assess operation conditions with particular attention to:
    - (3) Criteria and procedures for post construction Treatment Control and Hydromodification Control BMP repair, replacement, or re-vegetation.
- (d) For post construction BMPs operated and maintained by parties other than the Permittees the Permittees shall require annual reports by the other parties demonstrating proper maintenance and operations.
- (e) Undertake enforcement as appropriate based on the results of the inspection.
3. Alternative Post Construction Storm Water Mitigation Programs
- (a) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) for redevelopment projects within the Redevelopment Project Areas, in consideration of exceptional site constraints that inhibit site-by-site or project-by-project implementation of post-construction requirements.
- (b) Upon review and a determination by the Regional Water Board Executive Officer that the proposal is technically valid and appropriate, the Regional Water Board may consider for approval such a program if its implementation will:
- (1) Result in equivalent or superior reduction of storm water pollutant loads in comparison to individual projects regulated by this permit.
  - (2) Satisfy, on a Redevelopment Project Area-wide basis, the hydromodification criteria of this section.

- (3) Reduce the percentage of Effective Impervious Area (EIA) to a target of 5 percent or less of the Redevelopment Project Area, using properly sized storm water treatment/collection features, as described in this Section.
    - (4) Be fiscally sustainable and have secure funding; and
    - (5) Be completed in four years of the adoption date of this permit.
  - (c) The RPAMP should prioritize the implementation of LID storm water mitigation measures, as described in this section.
  - (d) A Permittee or a coalition of Permittees may apply to the Regional Water Board for approval of a Redevelopment Project Area Master Plan (RPAMP) that takes into consideration the balancing of water quality protection with the needs for adequate housing, population growth, public transportation and management, land recycling, and urban revitalization.
  - (e) For the RPAMP to be considered, a technical panel of the Local Government Commission or an equivalent state or regional planning agency must have reviewed and approved the proposed RPAMP, prior to its submittal to the Regional Water Board. The Regional Water Board Executive Officer may then consider the RPAMP for approval, or elect to submit it to the Regional Water Board for consideration.
  - (f) The RPAMP, on approval, may substitute in part or wholly for post-construction requirements.
  - (g) Redevelopment Project Areas include the following:
    - (1) City Center areas
    - (2) Historic District areas
    - (3) Brownfield areas
    - (4) Infill Development areas
    - (5) Urban Transit Villages
    - (6) Any other redevelopment area so designated by the Regional Water Board
  - (h) Nothing in these provisions shall be construed as to delay the implementation of post-construction control requirements, as approved in this Order.
4. Developer Technical Guidance and Information
  - (a) The Permittees shall update the Ventura County Technical Guidance Manual for Storm Water Quality Control Measures to include, at a minimum, the following:
    - (1) Hydromodification Control criteria described in this Order, including numerical criteria.
    - (2) Expected BMP pollutant removal performance including effluent quality (ASCE/ U.S. EPA International BMP Database, CASQA New Development BMP Handbook, technical reports, local data on BMP performance, and the scientific literature appropriate for southern California geography and climate).
    - (3) Selection of appropriate BMPs for storm water pollutants of concern.
    - (4) Data on Observed Local Effectiveness and performance of implemented BMPs.
    - (5) BMP Maintenance and Cost Considerations.

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- (6) Guiding principles to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits.
  - (7) LID principles and specifications, including the objectives and specifications for integration of LID strategies in the areas of:
    - (A) Site Assessment.
    - (B) Site Planning and Layout.
    - (C) Vegetative Protection, Revegetation, and Maintenance.
    - (D) Techniques to Minimize Land Disturbance.
    - (E) Techniques to Implement LID Measures at Various Scales
    - (F) Integrated Water Resources Management Practices.
    - (G) LID Design and Flow Modeling Guidance.
    - (H) Hydrologic Analysis.
    - (I) LID Credits.
  - (b) Permittees shall update the Technical Guidance Manual within 365 days of the adoption of this Order.
  - (c) The Permittees shall facilitate implementation of LID by providing key industry, regulatory, and other stakeholders with information regarding LID objectives and specifications contained in the LID Technical Guidance Section through a training program. The LID training program will include the following:
    - (1) LID targeted sessions and materials for builders, design professionals, regulators, resource agencies, and stakeholders
    - (2) A combination of awareness on national efforts and local experience gained through LID pilot projects and demonstration projects
    - (3) Materials and data from LID pilot projects and demonstration projects including case studies
    - (4) Guidance on how to integrate LID requirements into the local regulatory program(s) and requirements
    - (5) Availability of the LID Technical Guidance regarding integration of LID measures at various project scales
    - (6) Guidance on the relationship among LID strategies, Source Control BMPs, Treatment Control BMPs, and Hydromodification Control requirementsThe Permittees shall submit revisions to the Ventura County Technical Guidance Manual to the Regional Board for Executive Officer approval.
5. Project Coordination
- (a) Each Permittee shall facilitate a process for effective approval of post-construction storm water control measures. The process shall include:
    - (1) Detailed BMP review including BMP sizing calculations, BMP pollutant removal performance, and municipal approval; and
    - (2) An established structure for communication and delineated authority between and among municipal departments that have jurisdiction over project review, plan approval, and project construction through memoranda of understanding (MOU) or an equivalent agreement.

## V. State Statute Conformity

1. California Environmental Quality Act (CEQA) Document Update
  - (a) Each Permittee shall incorporate into its CEQA process no later than November 7, 2009 those additional procedures necessary for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents.
    - (1) The procedures shall require consideration of the following:
      - (A) Potential impact of project construction on storm water runoff.
      - (B) Potential impact of project post-construction activity on storm water runoff.
      - (C) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas.
      - (D) Potential for discharge of storm water to impair the beneficial uses of the receiving waters.
      - (E) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and waterbodies.
      - (F) Potential for significant changes in the flow velocity or volume of storm water runoff to cause harm to or impair the beneficial uses of natural drainage systems.
      - (G) Potential for significant increases in erosion at the project site or surrounding areas.
2. General Plan Update
  - (a) Each Permittee shall amend, revise or update its General Plan to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended:
    - (1) Land Use
    - (2) Housing
    - (3) Conservation
    - (4) Open Space
  - (b) Each Permittee shall provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or General Plan is noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq.*

**F. Development Construction Program**

- I. Each Permittee shall implement a construction program that prevents illicit construction-related discharges of pollutants into the MS4, implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites, reduces construction site discharges of pollutants from the MS4 to the MEP, and prevents construction site discharges from the MS4 from causing or contributing to a violation of water quality standards.
  - 1. BMP Implementation - Construction Sites Less Than One Acre
    - (a) Each Permittee shall require the implementation of an effective combination of erosion and sediment control BMPs from Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes.<sup>1</sup>

Table 6 - BMPs at Construction sites less than 1 acre

Minimum Set of BMPs for All Construction Sites	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Sand Bag Barrier	SE-8	SC-8
Stabilized Construction Site Entrance/Exit	TC-1	TC-1
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>2</sup>	NS-2	NS-2
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

<sup>1</sup> The BMPs are taken from the *California BMP Handbook, Construction, January 2003* and the *Caltrans Stormwater Quality Handbooks, Construction Site Best Management Practices (BMPs) Manual, March 2003*, and addenda.

<sup>2</sup> Pondered storm water may be discharged at a concentration of Total Suspended Solids (TSS) of 100mg/L or less.

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## 2. BMP Implementation - Construction Sites One Acre but Less than 5 acres.

- (a) Each Permittee shall require the implementation of an effective combination of appropriate erosion and sediment control BMPs from Table 7 in addition to the ones identified in Table 6 to prevent erosion and sediment loss, and the discharge of construction wastes:

Table 7 - BMPs at Construction sites 1 acre or greater but less than 5 acres

BMPs	CASQA Handbook	Caltrans Handbook
<b>For Erosion Control</b>		
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
<b>Sediment Controls</b>		
Fiber Rolls	SE-5	SC-5
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/ or Vacuum	SE-7	SC-7
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/ Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/ Exit Tire Wash	TC-3	TC-3
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Washing	NS-8	NS-8
Vehicle and Equipment Fueling	NS-9	NS-9

3. BMP Implementation - Construction Sites 5 acres and Greater
  - (a) Each Permittee shall require the implementation of an effective combination of the following BMPs in Table 8 (BMPs at Construction sites 5 acres or greater) in addition to the ones identified in Table 6 (BMPs at Construction sites less than 1 acre) and Table 7 (BMPs at Construction sites 1 acre or greater but less than 5 acres) at all construction sites 5 acres and greater to prevent erosion and sediment loss, and the discharge of construction wastes. Erosion control BMPs shall be preferred to sediment control BMPs.

Table 8 - BMPs at Construction sites 5 acres or greater

BMPs	CASQA Handbook	Caltrans Handbook
<b>Sediment Controls</b>		
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
<b>Tracking Control BMPs</b>		
Stabilized Construction Entrance/ Exit	TR-1	TC-1
<b>Non-Storm Water Management</b>		
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Spill Prevention and Control	WM-4	WM-4
Concrete Waste Management	WM-8	WM-8
Sanitary/ Septic Waste Management	WM-9	WM-9

4. Enhanced Construction BMP Implementation.
  - (a) Each Permittee shall implement, or require implementation of, enhanced practices that preclude impacts to water quality posed by all construction sites on hillsides as defined in this Order and construction sites that directly discharge to a waterbody listed on the CWA § 303 (d) list for siltation or sediment, or that occur within or directly adjacent to an Environmentally Sensitive Area (ESAs). Construction sites located on hillsides, adjacent to CWA 303(d) listed waters for siltation or sediment, and directly adjacent to ESAs are termed "High risk sites."
  - (b) Each Permittee shall require implementation of enhanced practices for high risk sites which shall include increased BMP inspection and maintenance requirements.
    - (1) Each Permittee shall require that high risk sites shall be inspected by the project proponent's Qualified SWPPP Developer or Qualified SWPPP Practitioner or personnel or consultants who are Certified Professionals in Erosion and Sediment Control (CPESC) at the time of BMP installation, at least weekly during the wet season, and at least once each 24 hour period during a storm event that generates runoff from the site, to identify BMPs that need maintenance to operate effectively, that have failed or could fail to operate as intended.
    - (2) During the wet season, the area of disturbance shall be limited to the area that can be controlled with an effective combination of erosion and sediment

control BMPs. Enhanced sediment controls should be used in combination with erosion controls and should target portions of the site that cannot be effectively controlled by standard erosion controls described above. Effective sediment and erosion control BMPs proposed by the proponent shall include the BMPs listed in Table 9 below. The project proponents are responsible to implement the BMPs below unless shown unnecessary. The Permittee shall require that the project proponent retain records of the inspection and a determination and rationale of the BMPs selected to control runoff.

Table 9 - Enhanced Construction BMP Implementation.

<b>CONSTRUCTION SITE BMPs</b>	<b>CASQA Handbook</b>	<b>Caltrans Handbook</b>
<b>Erosion Controls</b>		
Scheduling	EC-1	SS-1
Preservation of Existing Vegetation	EC-2	SS-2
Hydraulic Mulch	EC-3	SS-3
Hydroseeding	EC-4	SS-4
Soil Binders	EC-5	SS-5
Straw Mulch	EC-6	SS-6
Geotextiles and Mats	EC-7	SS-7
Wood Mulching	EC-8	SS-8
Slope Drains	EC-11	SS-11
<b>Sediment Controls</b>		
Silt Fence	SE-1	SC-1
Fiber Rolls	SE-5	SC-5
Sediment Basin	SE-2	SC-2
Check Dam	SE-4	SC-4
Gravel Bag Berm	SE-6	SC-6
Street Sweeping and/or Vacuum	SE-7	SC-7
Sand Bag Barrier	SE-8	SC-8
Storm Drain Inlet Protection	SE-10	SC-10
<b>Additional Controls</b>		
Wind Erosion Controls	WE-1	WE-1
Stabilized Construction Entrance/Exit	TC-1	TC-1
Stabilized Construction Roadway	TC-2	TC-2
Entrance/Exit Tire Wash	TC-3	TC-3
Advanced Treatment Systems <sup>1</sup>		
<b>Non-Storm Water Management</b>		
Water Conservation Practices	NS-1	NS-1
Dewatering Operations (Groundwater dewatering only under NPDES Permit No. CAG994004). <sup>19</sup>	NS-2	NS-2
Vehicle and Equipment Washing	NS-8	NS-8

<sup>1</sup> If appropriate given natural background stormwater runoff and receiving water quality conditions.



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CONSTRUCTION SITE BMPs	CASQA Handbook	Caltrans Handbook
Vehicle and Equipment Fueling	NS-9	NS-9
Vehicle and Equipment Maintenance	NS-10	NS-10
<b>Waste Management</b>		
Material Delivery and Storage	WM-1	WM-1
Stockpile Management	WM-3	WM-2
Spill Prevention and Control	WM-4	WM-4
Solid Waste Management	WM-5	WM-5
Concrete Waste Management	WM-8	WM-8
Sanitary/Septic Waste Management	WM-9	WM-9

5. Local Agency Requirements

(a) Each Permittee shall require for all construction sites 1 acre or greater, compliance with all conditions identified in the preceding subparts F.1 - F.4, and the following requirements:

(1) Local Storm Water Pollution Prevention Plan (Local SWPPP),

(A) Each Permittee shall require the preparation and submittal of a Local SWPPP, for the Permittee’s review and written approval prior to issuance of a grading or construction permit for construction or demolition projects. The Permittees’ approval signature shall be contained within the first pages of the Local SWPPP

(i) The Permittee shall not approve any Local SWPPP unless it contains appropriate site-specific construction site BMPs, specific locations, and maintenance schedules.

(ii) The Local SWPPP must include the rationale used for selecting or rejecting BMPs for various construction phases and weather conditions. The project architect, or engineer of record, or authorized qualified designee, must sign a statement on the Local SWPPP to the effect:

(I) *“As the architect/ engineer of record, I have selected appropriate BMPs to effectively minimize the negative impacts of this project’s construction activities on storm water quality. The project owner and contractor are aware that the selected BMPs must be installed, monitored, and maintained to ensure their effectiveness. The BMPs not selected for implementation are redundant or deemed not applicable to the proposed construction activity.”*

(2) Certification Statement

(A) Each Permittee shall require that each landowner or the landowner’s agent sign a statement on the Local SWPPP to the effect:

(i) *“I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons*

*directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that submitting false and/ or inaccurate information, failing to update the Local SWPPP to reflect current conditions, or failing to properly and/ or adequately implement the Local SWPPP may result in revocation of grading and/ or other permits or other sanctions provided by law."*

- (ii) The Local SWPPP certification shall be signed by the property owner or owner's representative/designee. If the Local SWPPP or SWPPP is being prepared by the local agency then the appropriate authority of the local agency shall sign the document.

6. Roadway Paving or Repaving Operations (For Private or Public Projects)

- (a) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project:
- (1) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions
  - (2) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat
  - (3) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
  - (4) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt
  - (5) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly
  - (6) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly
  - (7) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly
  - (8) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm
  - (9) Cover loads with tarp before haul-off to a storage site, and do not overload trucks
  - (10) Minimize airborne dust by using water spray during grinding
  - (11) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters
  - (12) Protect stockpiles with a cover or sediment barriers during a rain

7. Electronic Site Tracking System
  - (a) Each Permittee shall use an electronic system to track grading permits, encroachment permits, demolition permits, building permits, or construction permits (and any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) issued by each Permittee. To satisfy this requirement, the use of a database or GIS system is encouraged, but not required.
  
8. Inspections
  - (a) Each Permittee shall inspect all construction sites for the implementation of storm water quality controls a minimum of once during the wet season. Concurrently, each Permittee shall ensure that:
    - (1) The Local SWPPP is reviewed for compliance with local codes, ordinances, and permits.
    - (2) A follow-up inspection takes place within two weeks for inspected sites that have not adequately implemented their Local SWPPP.
  - (b) Each Permittee shall take additional enforcement actions to achieve compliance as specified in municipal codes, if compliance with municipal codes, ordinances, or permits has not been attained.
  - (c) Each Permittee can refer sites to the Regional Water Board for joint enforcement actions for violation of municipal storm water ordinances and the Construction Activities Storm Water General Permit (CASGP), or Small Linear Underground/ Overhead Construction Projects General Permit (small LUPs), after conducting a minimum of 2 site inspections and issuing a minimum of 2 written notices to the operator regarding the violation (copied to the Regional Water Board). In making such referrals, Permittees shall include, at a minimum, the following documentation:
    - (1) Name of the site
    - (2) WDID number
    - (3) Site developer
    - (4) Site owner
    - (5) Records of communication with the site operator regarding the violation(s), which shall include at least an inspection report
    - (6) Written notice of the violation copied to the Regional Water
  - (d) Prior to approving and/ or signing off for occupancy and issuing the Certificate of Occupancy for all construction projects subject to post-construction controls, each Permittee shall inspect the constructed site design, source control and treatment control BMPs to verify that they have been constructed in compliance with all specifications, plans, permits, ordinances, and this Order. The initial/ acceptance BMP verification inspection does not constitute a maintenance and operation inspection, as required in the preceding subpart E.IV.2(c).

9. State Conformity Requirements

- (a) Each Permittee shall ensure that no grading permit, encroachment permit, demolition permit, building permit, electrical permit, or construction permit (or any other municipal authorization to move soil and/ or construct or destruct that involves land disturbance) is issued for any project requiring coverage under the CASGP or Small LUP General Permit<sup>1</sup> unless:
- (1) Proof of filing a Notice of Intent for coverage under a State NPDES permit is demonstrated).
  - (2) Demonstration or Certification that a SWPPP has been prepared by the project developer.
  - (3) Proof of Change of Information form (COI) and a copy of the modified SWPPP(s) at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going.

10. Interagency Coordination

(a) **Referral of Violations:**

A Permittee may refer a violator of the municipal storm water ordinance and CWC § 13260 to the Regional Water Board provided that the Permittee has made a good faith effort at progressive enforcement consistent with the preceding subpart F.8(c). At a minimum, the Permittee's good faith effort shall be documented with:

- (1) A minimum of 2 follow-up inspection reports (inspections completed within 3 months).
- (2) A minimum of two warning letters or NOVs.

(b) **Referral of Non-filers under the CASGP or the Small LUP General Permit:**

Each Permittee shall refer non-filers (i.e., those projects which cannot demonstrate that they have a WDID number) under the CASGP or Small LUP General Permit, to the Regional Water Board, no later than 15 days after making a determination of failure to file. In making such referrals, Permittees shall include, at a minimum, the following documentation:

- (1) Project location address
- (2) Project description
- (3) Developer or owners name with complete mailing address
- (4) Project size
- (5) Records of communication with the developer or owner regarding filing requirements

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<sup>1</sup> NPDES Permit No. CAS000005, Waste Discharge Requirements For Discharges of Storm Water Runoff Associated with Small Linear Underground/ Overhead Construction Projects (Small LUP General Permit) for any linear land disturbing activity or activities (cumulatively) that will cause one acre or more of land disturbance but not more than 5 acres.

**(c) Investigation of Complaints Regarding Facilities – Transmitted by the Regional Water Board Staff:**

- (1) Each Permittee shall initiate, within one business day,<sup>1</sup> an initial investigation of complaint(s) (other than non-storm water discharges) on the construction site(s) within its jurisdiction.
  - (A) The initial investigation shall include, at a minimum, an inspection on the facility and its perimeter to confirm the complaint and to determine if the site operator is effectively complying with the municipal storm water/ urban runoff ordinances, and to oversee corrective action.

**(d) Support of Regional Water Board Enforcement Actions – As directed by the Regional Water Board Executive Officer:**

- (1) Each Permittee shall support Regional Water Board enforcement actions by:
  - (A) Assisting in identification of current owners, operators, and lessees of properties and sites.
  - (B) Providing staff, when available, for joint inspections with Regional Water Board inspectors.
  - (C) Appearing to testify as witnesses in Regional Water Board enforcement hearings.
  - (D) Providing copies of inspection reports and other progressive enforcement documentation.

**G. Public Agency Activities Program**

- I. Each Permittee shall implement a Public Agency Activities Program to minimize storm water pollution impacts from public agency activities. Public Agency requirements consist of:
  - i. Public Construction Activities Management.
  - ii. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Municipal Operations.
  - iii. Vehicle and Equipment Wash Areas
  - iv. Landscape and Recreational Facilities Management
  - v. Storm Drain Operation and Management
  - vi. Streets and Roads Maintenance
  - vii. Public Industrial Activities Management
  - viii. Emergency Procedures
  - ix. Employee Training
  - x. Infrastructure Maintenance
1. Public Construction Activities Management
  - (a) Each Permittee shall implement and comply with the Planning and Land Development Program requirements in part 5.E. of this Order at Permittee owned

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<sup>1</sup> Permittees may comply with the Permit by taking initial steps (such as logging, prioritizing, and tasking) to “initiate” the investigation within that one business day. However, the Regional Water Board would expect that the initial investigation, including a site visit, to occur within four business days.

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- or operated public construction projects for project types identified in part 5.E of this Order.
- (b) Each Permittee shall implement and comply with the appropriate Development Construction Program requirements in part 5.F. of this Order at Permittee owned or operated construction projects as applicable.
  - (c) For public projects including those under a Capital Improvement Project Plan that disturb less than one acre of soil the Permittees shall require the development and implementation of a Storm Water Pollution Control Plan. The SWPCP shall include BMPs as identified in Tables 5, 9 and 10.
2. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management/ Long Term Maintenance Programs
- (a) Each Permittee shall implement the activity specific BMPs<sup>1</sup> listed in Table 10 when such activities occur at Permittee owned/leased facilities and job sites including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the following Tables. Additionally, for any activity or area described in the footnote below,<sup>2</sup> each Permittee shall also implement the BMPs in the Caltrans Storm Water Quality Handbook Maintenance Staff Guide described as B-4 in Table 10 (BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards).

Table 10 - BMPs at Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards  
From the Caltrans Storm Water Quality Handbook Maintenance Staff Guide Appendix B

Activity Specific BMPs	Page
<b>General BMPs</b>	B-4
<b>Flexible Pavement</b>	B-9
Asphalt Cement Crack and Joint Grinding/ Sealing	B-9
Asphalt Paving	B-10
Structural Pavement Failure (Digouts) Pavement Grinding and Paving	B-11
Emergency Pothole Repairs	B-13
Sealing Operations	B-14
<b>Rigid Pavement</b>	B-15
Portland Cement Crack and Joint Sealing	B-15
Mudjacking and Drilling	B-16
Concrete Slab and Spall Repair	B-17
<b>Slope/ Drains/ Vegetation</b>	B-19
Shoulder Grading	B-19
Nonlandscaped Chemical Vegetation Control	B-21
Nonlandscaped Mechanical Vegetation Control/ Mowing	B-23
Nonlandscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-24

<sup>1</sup> These BMPs are identified in Appendix B of the *Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003*, and its addenda. Other BMPs may be substituted upon approval by the Executive Officer.

<sup>2</sup> Scheduling and Planning; Spill Prevention and Control; Sanitary/ Septic Waste Management; Material Use; Safer Alternative Products; Vehicle/ Equipment Cleaning, Fueling, and Maintenance; Illicit Connections Detection, Reporting and Removal; Illegal Spill / Discharge Control and Maintenance Facility Housekeeping Practices.

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<b>Activity Specific BMPs</b>	<b>Page</b>
Fence Repair	B-25
Drainage Ditch and Channel Maintenance	B-26
Drain and Culvert Maintenance	B-28
Curb and Sidewalk Repair	B-30
<b>Litter/ Debris/ Graffiti</b>	B-32
Sweeping Operations	B-32
Litter and Debris Removal	B-33
Emergency Response and Cleanup Practices	B-34
Graffiti Removal	B-36
<b>Landscaping</b>	B-37
Chemical Vegetation Control	B-37
Manual Vegetation Control	B-39
Landscaped Mechanical Vegetation Control/ Mowing	B-40
Landscaped Tree and Shrub Pruning, Brush Chipping, Tree and Shrub Removal	B-41
Irrigation Line Repairs	B-42
Irrigation (Watering), Potable and Nonpotable	B-43
<b>Environmental</b>	B-44
Storm Drain Stenciling	B-44
Roadside Slope Inspection	B-45
Roadside Stabilization	B-46
Storm Water Treatment Devices	B-48
Traction Sand Trap Devices	B-49
<b>Public Facilities</b>	B-50
Public Facilities	B-50
<b>Bridges</b>	B-52
Welding and Grinding	B-52
Sandblasting, Wet Blast with Sand Injection and Hydroblasting	B-54
Painting	B-56
Bridge Repairs	B-57
<b>Other Structures</b>	B-59
Pump Station Cleaning	B-59
Tube and Tunnel Maintenance and Repair	B-61
Tow Truck Operations	B-63
Toll Booth Lane Scrubbing Operations	B-64
<b>Electrical</b>	B-65
Sawcutting for Loop Installation	B-65
<b>Traffic Guidance</b>	B-67
Thermoplastic Striping and Marking	B-67
Paint Striping and Marking	B-68
Raised/ Recessed Pavement Marker Application and Removal	B-70
Sign Repair and Maintenance	B-71
Median Barrier and Guard Rail Repair	B-73
Emergency Vehicle Energy Attenuation Repair	B-75
<b>Snow and Ice Control</b>	B-76
Snow Removal	B-76

Activity Specific BMPs	Page
Ice Control	B-77
<b>Storm Maintenance</b>	B-78
Minor Slides and Slipouts Cleanup/ Repair	B-78
<b>Management and Support</b>	B-80
Building and Grounds Maintenance	B-80
Storage of Hazardous Materials (Working Stock)	B-82
Material Storage Control (Hazardous Waste)	B-84
Outdoor Storage of Raw Materials	B-85
Vehicle and Equipment Fueling	B-86
Vehicle and Equipment Cleaning	B-87
Vehicle and Equipment Maintenance and Repair	B-88
Aboveground and Underground Tank Leak and Spill Control	B-90

3. Vehicle and Equipment Wash Areas
  - (a) Each Permittee shall eliminate discharges of wash waters from vehicle and equipment washing no later than May 7, 2010 by implementing any of the following measures at existing facilities with vehicle or equipment wash areas:
    - (1) Self-contain, and haul off for disposal
    - (2) Equip with a clarifier
    - (3) Equip with an alternative pre-treatment device; or
    - (4) Plumb to the sanitary sewer
  - (b) Each Permittee shall ensure that any municipal facilities constructed, redeveloped, or replaced has all vehicle and equipment wash areas plumbed to the sanitary sewer or be self contained and all wastewater/ washwater hauled for legal disposal.
  
4. Landscape, Park, and Recreational Facilities Management
  - (a) Integrated Pest Management (IPM)
 

IPM is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques such as biological control, habitat manipulation, modification of cultural practices, and use of resistant varieties. Each Permittee shall implement an IPM program within 365 days that includes the following:

    - (1) Pesticides are used only if monitoring indicates they are needed according to established guidelines.
    - (2) Treatments are made with the goal of removing only the target organism.
    - (3) Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial, non-target organisms, and the environment.
    - (4) Its use of pesticides, including Organophosphates and Pyrethroids do not threaten water quality.
    - (5) Partner with other agencies and organizations to encourage the use of IPM.
    - (6) Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) in the Permittees' overall operations and on municipal property.



- (7) Policies, procedures, and ordinances shall include commitments and timelines to reduce the use of pesticides that cause impairment of surface waters by implementing the following procedures:
  - (A) Quantify pesticide use by its staff and hired contractors.
  - (B) Prepare and annually update an inventory of pesticides used by all internal departments, divisions, and other operational units.
  - (C) Demonstrate reductions in pesticide use.
- (b) Each Permittee shall implement the following requirements no later than November 3, 2009:
  - (1) Use a standardized protocol for the routine and non-routine application of pesticides (including pre-emergents), and fertilizers.
  - (2) Ensure no application of pesticides or fertilizers are applied to an area immediately prior to, during, or immediately after a rain event, or when water is flowing off the area.
  - (3) Ensure that no banned or unregistered pesticides are stored or applied.
  - (4) Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.
  - (5) Implement procedures to encourage the retention and planting of native vegetation to reduce water, pesticide and fertilizer needs; and
  - (6) Store pesticides and fertilizers indoors or under cover on paved surfaces or use secondary containment.
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills.
    - (B) Regularly inspect storage areas.
  - (7) Comply with the provisions and the monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2004-0008-DWQ).

5. Storm Drain Operation and Management

(a) Catch Basin Cleaning

- (1) Each Permittee shall designate catch basin inlets within its jurisdiction as one of the following:

Priority A: Catch basins that are designated as consistently generating the highest volumes of trash.

Priority B: Catch basins that are designated as consistently generating moderate volumes of trash.

Priority C: Catch basins that are designated as generating low volumes of trash.

Within one year of Order adoption, Permittees shall submit a map or list of Catch Basins with their GPS coordinates and their designations. The map or list shall contain the rationale or data to support designations.

- (2) Each Permittee shall inspect catch basins according to the following schedule:
    - Priority A: A minimum of 3 times during the wet season and once during the dry season every year.
    - Priority B: A minimum of once during the wet season and once during the dry season every year.
    - Priority C: A minimum of once per year.Catch basins shall be cleaned as necessary on the basis of inspections. Permittees shall maintain inspection records for Regional Board review.
  - (3) In addition to the preceding schedule, Permittees shall ensure that any catch basin that is determined to be at least 25% full of trash shall be cleaned out.
- (b) Trash Management at Public Events
- (1) Each Permittee shall require for any event in the public right of way or wherever it is foreseeable that substantial quantities of trash and litter may be generated, the following measures:
    - (A) Proper management of trash and litter generated; and
    - (B) Arrangement for temporary screens to be placed on catch basins; or
    - (C) Provide clean out of catch basins, trash receptacles, and grounds in the event area within 24 hours subsequent to the event.
- (c) Trash Receptacles
- (1) Each Permittee shall install trash receptacles, or equivalent trash capturing devices in areas subject to high trash generation within its jurisdiction no later than May 7, 2010.
  - (2) Each Permittee shall ensure that all trash receptacles are cleaned out and maintained as necessary to prevent trash overflow.
- (d) Catch Basin Labels
- (1) Each Permittee shall inspect the legibility of the catch basin stencil or label nearest each catch basin and inlet before the wet season begins.
  - (2) Each Permittee shall record and re-stencil or re-label within 15 days of inspection, catch basins with illegible stencils.
- (e) Additional Trash Management Practices
- (1) Each Permittee shall install trash excluders, or equivalent devices on or in catch basins or outfalls to prevent the discharge of trash to the storm drain system or receiving water no later than two years after Order adoption date in areas defined as Priority A (Provision 1a(2)) except in sites where the application of such BMP(s) alone will cause flooding. Lack of maintenance that causes flooding is not an acceptable exception to the requirement to install BMPs. Alternatively the Permittee may implement alternative or enhanced BMPs beyond the provisions of this permit (such as but not limited to increased street sweeping, adding trash cans near trash generation sites, prompt enforcement of trash accumulation, increased trash collection on public property, increased litter prevention messages or trash nets within the MS4) that provide substantially equivalent removal of trash. Permittees shall demonstrate that BMPs, which substituted for trash excluders provide equivalent trash removal performance as excluders. When outfall trash

capture is provided, revision of the schedule for inspection and cleanout of catch basins in task (a) may be proposed by the Permittee for approval by the Executive Officer.

(f) Storm Drain Maintenance

(1) Each Permittee shall implement a program for Storm Drain Maintenance no later than November 3, 2009 that includes the following:

- (A) Visual monitoring of Permittee-owned open channels and other drainage structures for debris at least annually.
- (B) Remove trash and debris from open channel storm drains a minimum of once per year before the wet season.
- (C) Eliminate the discharge of contaminants during MS4 maintenance and clean outs.
- (D) Quantify the amount of materials removed using techniques appropriate for quantifying solid waste and ensure the materials are properly disposed of.

(g) Spill Response Plan

(1) Each Permittee shall implement a response plan for spills to the MS4 within their respective jurisdiction. The response Plan shall clearly identify agencies responsible and telephone numbers and e-mail address for contact and shall contain at a minimum the following:

- (A) Investigation of all complaints received within 24 hours of the incident report.
- (B) Response within 2 hours to spills for containment upon notification, except where such overflows occur on private property, in which case the response should be within 2 hours of gaining legal access to the property.
- (C) Notification to appropriate public health agencies and the Office of Emergency Services (OES).

(h) Permittee Owned Treatment Control BMPs

(1) Each Permittee shall implement an inspection and maintenance program for all Permittee owned treatment control BMPs, including post-construction treatment control BMPs.

(2) Each Permittee shall ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.

(3) Any residual water produced by a treatment control BMP and not being internal to the BMP performance when being maintained shall be:

- (A) Hauled away and legally disposed of; or
- (B) Applied to the land without runoff; or
- (C) Discharged to the sanitary sewer system (with permits or authorization); or
- (D) Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations set in Table 11 (Discharge Limitations for Dewatering Treatment BMPs) prior to discharge to the MS4.

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Table 11 - Discharge Limitations for Dewatering Treatment BMPs<sup>1</sup>

Parameter	Units	Limitation
Total Suspended Solids	mg/L	100
Turbidity	NTU	50
Oil and Grease	mg/L	10

## 6. Streets and Roads Maintenance

## (a) Maintenance

- (1) Each Permittee shall perform street sweeping of curbed streets in commercial areas and areas subject to high trash generation to control trash and debris at least two times per month.

## (b) Road Reconstruction

- (1) Each Permittee shall require that for any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, that the following BMPs be implemented for each project.
- (A) Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall<sup>2</sup> unless required by emergency conditions.
- (B) Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
- (C) Prevent the discharge of release agents including soybean oil, other oils, or diesel to the storm water drainage system or receiving waters.
- (D) Minimize non storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
- (E) Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
- (F) Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
- (G) Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
- (H) Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
- (I) Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
- (J) Minimize airborne dust by using water spray during grinding.
- (K) Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near storm water drainage system or receiving waters.
- (L) Protect stockpiles with a cover or sediment barriers during a rain.

<sup>1</sup> Technology based effluent limits.

<sup>2</sup> A probability of precipitation (POP) of 50% is required.

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7. Emergency Procedures
  - (a) Each Permittee may conduct repairs of essential public service systems and infrastructure in emergency situations with a self-waiver of the provisions of this Order.
    - (1) Where the self-waiver has been invoked, the Permittee shall submit to the Regional Water Board Executive Officer a statement of the occurrence of the emergency, an explanation of the circumstances, and the measures that were implemented to reduce the threat to water quality, no later than 30 business days after the situation of emergency has passed.
    - (2) Minor repairs of essential public service systems and infrastructure in emergency situations (can be completed in less than one day) are not subject to the notification provisions. Appropriate BMPs to reduce the threat to water quality shall be implemented.
  
8. Municipal Employee and Municipal Contractor Training
  - (a) Each Permittee shall, no later than May 7, 2010 and annually thereafter before June 30, train all of their employees and contractors in targeted positions (whose interactions, jobs, and activities affect storm water quality) on the requirements of the overall storm water management program to:
    - (1) Promote a clear understanding of the potential for activities to pollute storm water.
    - (2) Identify opportunities to require, implement, and maintain appropriate BMPs in their line of work.
  - (b) Each Permittee shall, no later than May 7, 2010 and annually thereafter before June 30, train all of their employees and contractors who use or have the potential to use pesticides or fertilizers (whether or not they normally apply these as part of their work). Training programs shall address:
    - (1) The potential for pesticide-related surface water toxicity.
    - (2) Proper use, handling, and disposal of pesticides.
    - (3) Least toxic methods of pest prevention and control, including IPM.
    - (4) Reduction of pesticide use.
  - (c) Each Permittee shall, no later than May 7, 2010 and annually thereafter before June 30, train all of their employees and contractors who are responsible for illicit connections and illicit/ illegal discharges. Training programs shall address:
    - (1) Identification
    - (2) Investigation
    - (3) Termination
    - (4) Cleanup
    - (5) Reporting of Incidents
    - (6) Documentation of Incidents

## H. Illicit Connections and Illicit Discharges Elimination Program

- I. Each Permittee shall implement an Illicit Connections and Illicit Discharges (IC/ IDs) program to eliminate IC/IDs to the storm drain system, and shall document, track, and report all such cases in accordance with the elements and performance measures specified in the following subsections.
  1. General
    - (a) Implementation - Each Permittee shall implement an IC/ ID Program. The IC/ ID procedures shall be documented and made available for public review.
    - (b) Tracking - All Permittees shall, no later than May 7, 2012, map at a scale and in a format specified by the Principal Permittee all known connections to their storm drain system. All Permittees shall map at a scale and in a format specified by the Principal Permittee incidents of illicit connections and discharges since January 2009 on their baseline maps, and shall transmit this information to the Principal Permittee no later than May 7, 2012. Permittees shall use this information to identify priority areas for further investigation and elimination of IC/ ID.
  2. Public Reporting
    - (a) Permittees shall establish and maintain a phone hotline and internet site to receive all reports of IC/ ID complaints.
    - (b) Permittees shall document the location of the reported IC/ ID and the actions undertaken in response to all IC/ ID complaints.
  3. Illicit Connections
    - (a) Screening for Illicit Connections
      - (1) Each Permittee shall submit to the Principal Permittee:
        - (A) A map at a scale and in a format specified by the Principal Permittee showing the location and length of underground pipes 18 inches and greater in diameter, and channels within their permitted area and operated by the Permittee in accordance with the following schedule:
          - (i) All channeled portions of the storm drain system no later than May 7, 2010.
          - (ii) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, no later than May 7, 2012. This provision is not meant to exclude Permittees from using equally effective alternative methods not listed in the manual.
          - (iii) All portions of the storm drain system consisting of storm drain pipes 18 inches in diameter or greater, no later than May 7, 2014.
        - (B) The status of suspected, confirmed, and terminated illicit connections.
      - (2) Permittees shall conduct field screening of their storm drain systems in accordance with screening procedures described in the Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development

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and Technical Assessments (2004)<sup>1</sup>. Permittees shall conduct field screening of their storm drain system that has not been previously screened and reported to the Regional Board, for illicit connections in accordance with the following schedule:

- (A) All portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, no later than May 7, 2012.
  - (B) High priority areas identified during the mapping of illicit connections and discharges, no later than May 7, 2012.
  - (C) All portions of storm drain systems 50 years or older in age, no later than May 7, 2012.
- (3) Each Permittee shall maintain a list containing all connections under investigation for possible illicit connection and their status.
- (b) Response to Illicit Connections
- (1) Investigation -  
Each Permittee, upon discovery or upon receiving a report of a suspected illicit connection, shall complete an investigation within 21 days, to determine the following:
    - (A) Source of the connection.
    - (B) Nature and volume of discharge through the connection.
    - (C) Responsible party for the connection.
  - (2) Termination -  
Each Permittee, upon confirmation of an illicit storm drain connection, shall ensure the following:
    - (A) Termination of the connection within 180 days of completion of the investigation, using formal enforcement authority to eliminate the illicit connection.
  - (3) Documentation -  
Each Permittee shall keep records of all illicit connection investigations and the formal enforcement taken to eliminate all illicit connections.

4. Illicit Discharges

(a) Investigation -

Each Permittee shall investigate an illicit/ illegal discharge during or immediately following containment and cleanup activities, and shall take appropriate enforcement action to eliminate the illegal discharge.

(b) Abatement and Cleanup -

Each Permittee shall respond, within 1 business day of discovery or a report of a suspected illicit/ illegal discharge, with actions to abate, contain, and/or clean up all illegal discharges, including hazardous waste.

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<sup>1</sup> *Illicit Discharge Detection and Elimination, A Guidance Manual for Program Development and Technical Assessments*. The Center for Watershed Protection, Pitt R., October 2004. Chapter 13, 13.1, 13.2, 13.3, 13.4

(c) Documentation -

Each Permittee shall maintain records of all illicit/ illegal discharge discoveries, reports of suspected illicit/ illegal discharges, their response to the illicit/ illegal discharges and suspected illicit/ illegal discharges, and the formal enforcement taken to eliminate all illicit/ illegal discharges.

**I. REPORTING PROGRAM**

1. The Principal Permittee in consultation with the Permittees and Regional Water Board staff shall convene an adhoc working group to develop an Electronic Reporting Program, the basis of which shall be the requirements in this Order. The Committee shall no later than May 7, 2010 submit the electronic reporting form in each subsequent year.
2. Each Permittee shall submit information required in the Reporting Program in a method as appropriate to the format approved by the Regional Water Board Executive Officer.
3. The Principal Permittee shall submit by December 15<sup>th</sup> of each year, an Annual Report to the Regional Water Board Executive Officer in the form one hard copy and three compact disk (CD) copies (or an electronic equivalent).
4. The Annual Report shall document the status of the Municipal Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1- Monitoring Report.
  - (b) The requirements described under Part 2- Program Report.
5. Plans shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
6. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).
7. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of one hard copy and three compact disk (CD) copies (or an electronic equivalent).



**PART 5 - TOTAL MAXIMUM DAILY LOAD PROVISIONS**

- I. Part 6 of this Order incorporates provisions to assure that Ventura County MS4 Permittees comply with WLAs and other requirements of TMDLs covering impaired waters impacted by the Permittees' discharges.
- II. Each Permittee shall attain the storm water WLAs incorporated into this Order by implementing BMPs in accordance with the TMDL Technical Reports, Implementation Plans, or as identified as a result of TMDL special studies specified in the Basin Plan Amendment.
- III. The Permittees shall comply with the following Wasteload Allocations, consistent with the assumptions and requirements of the Wasteload Allocations documented in the Implementation Plans, including compliance schedules, associated with the State adoption and approval of the TMDL at compliance monitoring points established in each TMDL (40CFR122.44(d)(1)(vii)(B)).
- IV. TMDLs in effect and covered in this Order are the following:
  1. TMDL for Nutrients for Malibu Creek Watershed (Effective date: March 21, 2003)
  2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek (Effective date: July 16, 2003)
  3. TMDL for Nitrogen Compounds for the Santa Clara River (Effective date: March 23, 2004).
  4. TMDL for Chloride in Santa Clara River, Reach 3 (Effective date: June 18, 2003)
  5. TMDL for Chloride in Upper Santa Clara River (Effective date: May 4, 2005)
  6. TMDL for Toxicity, Chlorpyrifos and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon - (Effective date: March 24, 2006).
  7. TMDL for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 24, 2006).
  8. TMDL for Bacteria in Malibu Creek and Lagoon (Effective date: January 24, 2006).
  9. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon (Effective date: March 26, 2007)
  10. TMDL for Trash in Revolon Slough and Beardsley Wash (Effective date: March 6, 2008).
  11. TMDL for Boron, Chloride, Sulfate, and TDS in Calleguas Creek Watershed (Effective date: December 2, 2008)
  12. TMDL for Trash in the Ventura River Estuary (Effective date: March 6, 2008).
  13. TMDL for Bacteria in Harbor Beaches of Ventura County (Effective date: September 23, 2008).

IV. TMDL Interim WLAs incorporated into this Order due to compliance dates which exceed the term of this Order are the following:

1. Final Wet Weather Bacteria WLAs for Malibu Creek and Lagoon – (Compliance date: January 24, 2016).
2. Final Chloride WLAs for Upper Santa Clara River – (Compliance date: May 4, 2016)
3. Final Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon – (Compliance date: March 24, 2026).
4. Final Metals and Selenium WLAs for Calleguas Creek, its Tributaries and Mugu Lagoon (Compliance date: March 26, 2022)
5. Final Boron, Chloride, Sulfate, and TDS WLAs for Calleguas Creek watershed (Compliance date: December 2, 2023)

V. TMDL WLAs and Other TMDL Provisions Incorporated into this Order are as follows:

1. TMDL for Nutrients for Malibu Creek Watershed

(a) Summer Load Allocations

	Nitrogen (lbs/day)	Phosphorus (lbs/day)
- Runoff from developed areas	26	2.6
- Golf Course Fertilization	37	6.6
- Dry Weather Urban Runoff	52	4.6
- Other	56	4.1

(b) Winter concentration-based Load Allocations

	Nitrogen (Nitrate-N + Nitrite-N) (mg/L)
- Runoff from Developed Areas	8
- Golf Course Fertilization	8
- Dry Weather Urban Runoff	8
- Other	8

(c) Compliance Monitoring:

This TMDL was established and approved by U.S. EPA and did not include an implementation plan.

(d) Actions and Special Studies required for Malibu Creek MS4 permittees

(1) Extent of algal impairment. EPA recommends studies to investigate the current extent of impairment due to excessive algal growth in the creek by surveying algal biomass and species composition at multiple sites within the creek.

(2) Limiting factor analysis. EPA recommends further study to assess whether total nitrogen or total phosphorus or other parameters such as flow and light limit algal growth in the Malibu Creek watershed.

(3) Fate of nutrients in Malibu Lagoon. EPA recommends this special study to determine if the expected upstream reductions in nutrient loadings would result in desired improvements in water quality in the lagoon.

2. TMDL for Nitrogen Compounds and Related Effects in Calleguas Creek Watershed

The stormwater permitted discharges were considered minor sources of nitrogen to the Calleguas Creek. Therefore, WLAs are not assigned to storm water permitted discharges. The monitoring program of this TMDL includes data collection to quantify loadings and associated WLAs from these sources.

3. TMDL for Nitrogen Compounds in the Santa Clara River

(a) Waste Load Allocations:

(1) The Ventura County MS4 permittees discharging to the Santa Clara River (the cities of Fillmore and Santa Paula) ("Santa Clara MS4 permittees") shall implement BMPs to achieve the following MS4 wasteload allocations applicable to River Reach 3:

Ammonia nitrogen 30-day average	2.0 mg/L
Ammonia nitrogen 1-hour average	4.2 mg/L
Nitrate + Nitrite nitrogen 30-day average	8.1 mg/L

(b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Santa Clara MS4 permittees:

- (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

4. TMDL for Chloride in Santa Clara River, Reach 3

(a) Waste Load Allocation:

MS4 permittees discharging to Santa Clara River, Reach 3 shall implement BMPs to achieve the following MS4 WLAs:

Chloride (mg/L)	80
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- (b) Compliance Monitoring: This TMDL was established and approved by U.S. EPA and did not include an implementation plan.
- (c) Actions and Special Studies required of Santa Clara MS4 permittees:
  - (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

5. TMDL for Chloride in Upper Santa Clara River

- (a) Waste Load Allocation:  
MS4 permittees discharging to Upper Santa Clara River shall implement BMPs to achieve the following WLAs  
Chloride (mg/L) 100
- (b) Compliance monitoring:
  - (1) Compliance with the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Clara River Nitrogen TMDL Monitoring Program approved by the Executive Officer.
  - (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports and Implementation Plans. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Santa Clara MS4 permittees:
  - (1) Annual Progress Reports. Santa Clara River MS4 permittees, either independently or in conjunction with other stakeholders, shall submit an annual progress report with respect to achievement of the WLAs.

6. TMDL for Toxicity, Chlorpyrifos, and Diazinon in the Calleguas Creek, its Tributaries and Mugu Lagoon.

- (a) Waste Load Allocations:
  - (1) MS4 permittees discharging to Calleguas Creek, its tributaries and Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) ("Calleguas MS4 permittees") shall implement BMPs to achieve the following MS4 WLAs:

Toxicity WLA	1.0 TUc
Chlorpyrifos WLA	0.014 ug/L
Diazinon WLA	0.10 ug/L
  - (2) Pursuant to the TMDL, the final storm water WLAs for Toxicity, Chlorpyrifos and Diazinon, listed above, are receiving water concentrations measured in-stream at the base of each subwatershed within the Calleguas Creek watershed.

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## (b) Compliance Monitoring:

- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (3) If as a result of compliance monitoring and subsequent investigations it is determined that a Calleguas MS4 permittee is responsible for exceedance of the in-stream Toxicity WLA, that permittee shall initiate the TRE/TIE process as outlined in U.S. EPA's "Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program" (2000) or the approved Toxicity TMDL monitoring plan, and take appropriate action to eliminate the identified source of the toxicity.

## (c) Actions and Special Studies required of Calleguas MS4 permittees:

- (1) Special Study #1. Together with Calleguas POTW permittees, investigate the pesticides that will replace diazinon and chlorpyrifos in the urban environment, their potential impact on receiving waters and potential control measures. Special Study #1 was completed by March 24, 2008.
- (2) Special Study #2. Together with Calleguas Agricultural Dischargers, consider results of monitoring of sediment concentrations by source/land use type through the special study required in the Calleguas OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.
- (3) Pesticide Collection Program. Together with Calleguas POTW permittees, develop and implement a collection program for diazinon and chlorpyrifos and an educational program. Collection and education could occur through existing programs such as household hazardous waste collection events. The Pesticide Collection Program is to be implemented by March 24, 2009.
- (4) Special Study #3. Together with Calleguas Agricultural Dischargers, consider the findings of transport rates developed through the OC Pesticide, PCB and Siltation TMDL Implementation Plan. Complete within 6 months of completion of the OCs TMDL special study #1.

## 7. TMDL for Organochlorine (OC) Pesticides, Polychlorinated Biphenyls (PCBs) and Siltation in the Calleguas Creek, its Tributaries and Mugu Lagoon.

## (a) Waste Load Allocations:

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- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, and Simi Valley) (“Calleguas MS4 permittees”) shall implement BMPs to achieve the interim WLAs listed in Table 12.

Table 12 - Interim Sediment Concentration WLAs (ng/g)

Constituent	Subwatershed					
	Mugu Lagoon	Calleguas Creek	Revolon Slough	Arroyo Las Posas	Arroyo Simi	Conejo Creek
Chlordane	25	17	48	3.3	3.3	3.4
4,4-DDD	69	66	400	290	140	5.3
4,4-DDE	300	470	1600	950	170	20
4,4-DDT	39	110	690	670	25	2
Dieldrin	19	3	5.7	1.1	1.1	3
PCBs	180	3800	7600	25700	25700	3800
Toxaphene	22900	260	790	230	230	260

- (2) Pursuant to the TMDL, the interim storm water WLAs for OC Pesticides, PCBs and Siltation, listed above, are annual average, sediment-based concentrations measured in surface waters at the base of each subwatershed within the Calleguas Creek watershed.
- (b) Compliance Monitoring:
  - (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
  - (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Calleguas MS4 permittees:
  - (1) Pesticide Collection Program. Together with Calleguas POTW permittees, implement a collection program and source control measures pursuant to a work plan approved by the Executive Officer. The Pesticide Collection Program is to be implemented by March 24, 2011.
  - (2) Special Study #1. Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, submit a work plan to quantify sedimentation in the Calleguas Creek Watershed, evaluate management methods to control siltation and contaminated sediment transport to Calleguas Creek, identify appropriate BMPs to reduce sediment loadings and evaluate the effect of sediment on habitat preservation in Mugu Lagoon for approval by the Executive Officer. This special study is also to evaluate the concentration of OC pesticides and PCBs in sediments from

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various sources/land use types. Special Study #1 is to be completed by March 24, 2014.

- (3) Special Study #2. Together with Calleguas Agricultural Dischargers, identify areas of high OC concentrations and evaluate the effects of watershed protection and land use practices on water quality. Such practices include but are not limited to management of sediment reduction practices and structures, streambank stabilization, and other projects related to stormwater conveyance and flood control improvements in the Calleguas Creek watershed. Special Study #2 is to be completed based on the schedule provided in the workplan, submitted in March, 2007
- (4) Special Study #3 – Together with Calleguas POTW permittees, Calleguas Agricultural Dischargers, and the Point Mugu Naval Base, evaluate natural attenuation rates and evaluate methods to accelerate organochlorine pesticide and polychlorinated biphenyl attenuation and examine the attainability of wasteload and load allocations in the Calleguas Creek Watershed. Special Study #3 is to be completed by March 24, 2016.

8. TMDL for Metals and Selenium in the Calleguas Creek, its Tributaries and Mugu Lagoon.

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Calleguas Creek, its tributaries or Mugu Lagoon (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo, Moorpark, Oxnard, Simi Valley and Thousand Oaks) (“Calleguas MS4 permittees”) shall implement BMPs to achieve the interim WLAs listed in Table 13 and Table 14.

Table 13 - Interim WLAs for Copper, Nickel and Selenium (ug/L)

Constituent	Calleguas and Conejo Creek (a)			Revolon Slough		
	Dry Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)	Dry Daily Maximum (ug/L)	Dry Monthly Average (ug/L)	Daily Maximum (ug/L)
Copper	23	19	204	23	19	204
Nickel	15	13	(a)	15	13	(a)
Selenium	(b)	(b)	(b)	14(c)	13(c)	(a)

- (A) The current loads do not exceed the TMDL under wet conditions, interim limits are not required
- (B) Selenium allocations have not been developed for this reach as it is not on the 303(d) list
- (C) Attainment of interim limits will be evaluated in consideration of background loading data, if available

- (2) Pursuant to the TMDL, the interim storm water WLAs for copper, nickel, and selenium are receiving water concentrations measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.

Table 14 - Mass-based WLAs for copper, nickel and selenium

Annual Cumulative Flow (million gallons per year)	Calleguas Creek (lbs/yr)	Revolon Slough (lbs/yr)
0-15,000	3.3	1.7
15,000-25,000	10.5	4
Above 25,000	64.6	10.2

- (3) Pursuant to the TMDL, the interim storm water WLAs for mercury are suspended sediment loads measured in-stream at the base of Calleguas Creek and Revolon Slough and in Mugu Lagoon.
- (4) Determination of the applicable interim WLA will be determined by calculating the total annual flow (October 1-September 30) in the Calleguas Creek watershed as measured by the flow gage at CSUCI.
- (b) Compliance Monitoring:
- (1) Compliance with the WLAs is to be determined through the measurement of in-stream water quality and total suspended solids (TSS) at the base of Calleguas Creek, Revolon Slough and in Mugu Lagoon, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Calleguas MS4 permittees:
- (1) Conduct a source control study, develop and submit an Urban Water Quality Management Program (UWQMP) for copper, mercury, nickel, and selenium. Complete by March 26, 2009.
- (2) Implement the UWQMP within one year of approval by Executive Officer.
- (3) In cooperation with agricultural dischargers, evaluate the results of the OCs TMDL special study on sediment transport rates for applicability to the metals and selenium TMDL. Complete within 6 months of completion of the OCs TMDL special study #1.
- (4) In cooperation with agricultural dischargers, include monitoring for copper, mercury, nickel and selenium in the OC pesticides TMDL special study – Monitoring of Sediment by Source and Land Use Type. The special study is to be completed by March 26, 2014.



- (5) Evaluate the results of the OC Pesticides TMDL Special Study – Effects of BMPs on Sediment and Siltation, to determine the impacts on metals and selenium. Complete within 6 months of completion of the OC Pesticides special study #1.
- (6) Evaluate the effectiveness of BMPs implemented under the UWQMP in controlling metals and selenium discharges. This is to be completed by March 26, 2013.
- (7) Re-evaluate agricultural and urban waste load allocations for copper, mercury, nickel and selenium based on the evaluation of BMP effectiveness. By March 26, 2012, urban dischargers will have a required 25% reduction in the difference between the loadings at the time of the TMDL preparation and the final WLAs effective in 2022.
- (8) In cooperation with POTW permittees and agricultural dischargers, conduct a study to identify selenium contaminated groundwater sources. Special Study is to be completed within one year of the approval of the workplan.
- (9) In cooperation with agricultural dischargers, conduct a study to investigate metals “hot spots” and natural soils concentrations. This special study is to be completed within 2 years of the approval of the workplan.

9. TMDL for Bacteria in Malibu Creek and Lagoon

(a) Waste Load Allocations:

- (1) MS4 permittees discharging to Malibu Creek or its tributaries (Ventura County Watershed Protection District, County of Ventura and the cities of Thousand Oaks and Simi Valley) (“Malibu MS4 permittees”) shall achieve the WLAs identified in Resolution 2004-19. . These WLAs are expressed as the number of daily or weekly sample days that may exceed the single sample limits or 30-day geometric mean bacteria targets in Resolution 2004-19.

Table 15 - Bacteria Targets

Parameters	Unit	Fresh Water Targets	
		Geometric Mean	Single Sample
E. coli	mg	126/ 100	235/ 100
Fecal coliform	mg	200/ 100	400/ 100

- (2) The wasteload allocations are to be achieved no later than January 26, 2012.

(b) Compliance Monitoring:

- (1) Achievement of the WLAs is to be determined through receiving water monitoring conducted in accordance with the Santa Monica Bacteria TMDL Compliance Monitoring Program approved by the Executive Officer.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

- (c) Actions and Special Studies required of Malibu MS4 permittees:
  - (1) If TMDL compliance monitoring indicates that the Malibu MS4 permittees are causing or contributing to an exceedance of the WLAs in the receiving waters, the permittees shall conduct a source identification study and implement additional controls sufficient to achieve the WLAs in the receiving waters.
  
- 10. TMDL for Trash in Revolon Slough and Beardsley Wash
  - (a) Wasteload Allocations
    - (1) MS4 permittees discharging to Revolon Slough and Beardsley Wash (Ventura County Watershed Protection District, County of Ventura and the cities of Camarillo and Oxnard) shall implement BMPs to achieve the WLAs of zero trash.
  - (b) Compliance Monitoring
    - (1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in Revolon Slough and Beardsley Wash and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.
    - (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
  - (c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees
    - (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.
  
- 11. TMDL for Trash in the Ventura River Estuary
  - (a) Wasteload Allocations
    - (1) MS4 permittees discharging to the Ventura River Estuary (Ventura County Watershed Protection District, County of Ventura and the City of Ventura) shall implement BMPs to achieve the WLAs of zero trash.
  - (b) Compliance Monitoring
    - (1) Responsible jurisdictions will develop a TMRP for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in the Ventura River Estuary and/or within responsible jurisdiction land areas. The TMRP shall include a plan to establish the trash Baseline WLAs.

- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Revolon Slough and Beardsley Wash MS4 permittees
  - (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through a progressive implementation schedule of full capture devices or implementation of other measures to attain the required trash reduction.

12. TMDL for Boron, Chloride, Sulfate and TDS in Calleguas Creek Watershed

(a) Waste Load Allocation

Table 16 - Interim Dry Weather WLAs for Permitted Stormwater Dischargers

Constituent	Interim Limit 30-day average (mg/L)
Boron Total	1.3
Chloride Total	230
Sulfate Total	1289
TDS Total	1720

Table 17 - Final Dry Weather WLAs for Permitted Stormwater Dischargers

Subwatershed	Critical Condition Flow Rate (mgd)	Chloride Allocation (lb/day)	TDS Allocation (lb/day)	Sulfate Allocation (lb/day)	Boron Allocation (lb/day)
Simi	1.39	1,738	9,849	2,897	12
Las Posas	0.13	157	887	261	N/A
Conejo	1.26	1,576	8,931	2,627	N/A
Camarillo	0.06	72	406	119	N/A
Pleasant Valley (Calleguas)	0.12	150	850	250	N/A
Pleasant Valley (Revolon)	0.25	314	1,778	523	2

(b) Compliance Monitoring

- (1) A monitoring plan will be submitted to the RWQCB for Executive Officer approval on June 2, 2009. Monitoring will begin one year after Executive Officer approval of the monitoring plan to allow time for the installation of automated monitoring equipment.

- (2) Compliance with the WLAs is to be determined through the measurement of in-stream water quality at the base of each of the Calleguas Creek subwatersheds, in accordance with the Calleguas Creek Watershed TMDL Monitoring Program approved by the Executive Officer.
  - (3) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.
- (c) Actions and Special Studies required of Calleguas Creek Watershed MS4 permittees

Responsible jurisdictions including MS4 permittees shall submit compliance monitoring plan to the Los Angeles Regional Board for Executive Officer approval on June 2, 2009. Monitoring shall begin monitoring as outlined in the approved monitoring plan six months after approval of the work plan.

Responsible jurisdictions including MS4 permittees shall demonstrate that implementation actions have reduced the boron, sulfate, TDS, and chloride imbalance by 20%, 40%, 70% by December 2 of 2011, 2015, and 2018 respectively. Stormwater dischargers shall achieve WLAs, which shall be expressed as NPDES mass-based limits specified in accordance with federal regulations and state policy on water quality control by December 2, 2023.

### 13. TMDL for Bacteria in Harbor Beaches of Ventura County

#### (a) Waste Load Allocations

- (1) MS4 permittees discharging to the Channel Islands Harbor Beaches (the County of Ventura, the Ventura County Watershed Protection District (VCWPD) and associated Municipal Separate Storm Sewer System (MS4) permittees in the Channel Islands Harbor subwatershed, and the City of Oxnard shall implement BMPs to achieve the interim WLAs listed in Table 15. All WLAs for summer dry-weather single sample bacteria densities at the Harbor Beaches of Ventura County are zero (0) days of allowable exceedances; winter dry weather and wet weather final WLAs are listed in Table 17 below.

The Basin Plan objectives that serve as the numeric targets for this TMDL are (single sample limits):

- a. Total coliform density shall not exceed 10,000/100 ml.
- b. Fecal coliform density shall not exceed 400/100 ml.
- c. Enterococcus density shall not exceed 104/100 ml.
- d. Total coliform density shall not exceed 1,000/100ml, if the ratio of fecal-to-total coliform exceeds 0.1.

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Table 18 - Interim WLAs for Single Sample Exceedance Days

Location	Summer Dry Weather		Winter Dry Weather		Wet Weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Kiddie Beach	54	8	23	4	32	5
Hobie Beach	40	6	25	4	38	6

Table 19 - Final Allowable Exceedance Days by Location

Location	Summer Dry-weather		Winter Dry-weather		Wet-weather	
	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling	Daily Sampling	Weekly Sampling
Hobie Beach	0	0	3	1	17	3
Kiddie Beach	0	0	3	1	17	3

- (2) Pursuant to the TMDL, the interim storm water WLAs for bacteria are from samples taken at existing monitoring sites in ankle to knee- high depths.

## (b) Compliance Monitoring

- (1) Compliance and monitoring for Harbor Beaches of Ventura County is based on existing monitoring protocols and locations. Monitoring shall continue at sampling locations (VCEHD 36000 and VCEHD37000) and at the current weekly monitoring frequency, consistent with AB411 compliance monitoring. Monitoring shall be conducted on a year-round basis at the current monitoring locations including the summer months (i.e., April to October) and winter months (i.e., November to March). Bacteria sampling shall be conducted in ankle- to knee-high water, consistent with AB411. However, if additional monitoring stations are added or if changes are made to the sampling frequencies or existing monitoring locations, then submittal of a monitoring plan is required for Executive Officer approval.
- (2) If any WLA is exceeded at a compliance monitoring site, permittees shall implement BMPs in accordance with the TMDL Technical Reports, Implementation Plans or as identified as a result of TMDL special studies identified in the Basin Plan Amendment. Following these actions, Regional Water Board staff will evaluate the need for enforcement action.

(c) Actions and Special Studies required of Harbor Beaches of Ventura County MS4 permittees

- (1) Per the adopted Basin Plan Amendment, compliance with the TMDL may be either through structural and non-structural BMPs or implementation of other measures to attain the required source control.
- (2) Special studies are not required for implementation of the TMDL though conducting special studies is within the discretion of the responsible parties.

**PART 6 - DEFINITIONS**

The following are definitions for terms in this Order:

**Adverse Impact** - means a detrimental effect upon water quality or beneficial uses caused by a discharge or loading of a pollutant or pollutants.

**Agriculture** - means the science, art, and business of cultivating the soil, producing crops, and raising livestock.

**Antidegradation Policies** - means policies which protect surface and ground waters from degradation, and federal policies, which protect high quality surface waters. In particular, this policy protects waterbodies where existing quality is higher than that necessary for the protection of beneficial uses including the protection of fish and wildlife propagation and recreation on and in the water (*Statement of Policy with Respect to Maintaining High Quality Water in California*, State Board Resolution No. 68-16; 40 CRF 131.12).

**Applicable Standards and Limitations** - means all State, interstate, and Federal standards and limitations to which a "discharge" or a related activity is subject under the CWA, including effluent limitations, water quality standards, standards of performance, toxic effluent standards or prohibitions, best management practices, and pretreatment standards under § 301, § 302, § 303, § 304, § 306, § 307, § 308, § 403, and § 404 of CWA.

**Areas of Special Biological Significance (ASBS)** - means all those areas of this state listed as ASBS, listed specifically within the California Ocean Plan or so designated by the State Board which, among other areas, includes the area from Mugu Lagoon to Latigo Point: Oceanwater within a line originating from Laguna Point at 34° 5' 40" north, 119° 6' 30" west, thence southeasterly following the mean high tideline to a point at Latigo Point defined by the intersection of the mean high tide line and a line extending due south of Benchmark 24; thence due south to a distance of 1000 feet offshore or to the 100 foot isobath, whichever distance is greater; thence northwesterly following the 100 foot isobath or maintaining a 1,000-foot distance from shore, whichever maintains the greater distance from shore, to a point lying due south of Laguna Point, thence due north to Laguna Point.

**Authorized Discharge** - means any discharge that is authorized pursuant to an NPDES permit, waste discharge requirement, conditional waiver from waste discharge requirements, or meets the conditions set forth in this Order.

**Automotive Repair Shop** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

**Automotive Service Facilities** - means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) and North American Industry Classification System (NAICS) codes. For inspection purposes, Permittees need not inspect facilities with SIC codes 5013, 5014, 5541, 5511, provided that these facilities have no outside activities or materials that may be exposed to storm water.

SIC Code	Corresponding NAICS Code
5013	425120, 441310, 425110, & 423120
5014	425120, 425110, 423130, & 441320
5511	441110
5541	447110, & 447190
7532	811121
7533	811112
7534	326212, & 811198
7536	811122
7537	811113
7538	811111
7539	811198, & 811118

**Bacteria Total Maximum Daily Load (TMDL) Dry Weather** - defined in the Bacteria TMDLs as those days with less than 0.1 inch of rainfall and those days occurring more than 3 days after a rain.

**Bacteria Total Maximum Daily Load (TMDL) Wet Weather** - defined in the Bacteria TMDLs as a day with 0.1 inch or more of rain and 3 days following the rain event.

**Basin Plan** - means the Water Quality Control Plan, Los Angeles Region, Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted by the Regional Water Board on June 13, 1994 and subsequent amendments.

**Beneficial Uses** - means the existing or potential uses of receiving waters in the permit area as designated by the Regional Water Board in the Basin Plan.

**Best Management Practices (BMPs)** - means methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including storm water. BMPs include structural and nonstructural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

**California Environmental Quality Act (CEQA)** - means a California statute that requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible (Reference: California Public Resources Code § 21000 et seq.)

**Channel** - means an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two waterbodies.

**Chronic Toxicity** - means a measurement of a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms.

**Commercial Area(s)** - means any geographic area of the Permittees' jurisdiction that is not heavy industrial or residential. A commercial area includes, but is not limited to areas surrounding: commercial activity, hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Commercial Development** - means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

**Construction** - Construction activity includes any construction or demolition activity, clearing, grading, grubbing, or excavation or any other activity that results in a land disturbance. Construction does not include emergency construction activities required to immediately protect public health and safety or routine maintenance activities required to maintain the integrity of structures by performing minor repair and restoration work, maintain original line and grade, hydraulic capacity, or original purpose of the facility. See "Routine Maintenance" definition for further explanation. Where clearing, grading or excavating of underlying soil takes place during a repaving operation, State General Construction Permit coverage is required if more than one acre is disturbed or the activities are part of a larger plan.

**Construction Activities Storm Water General Permit (CASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from construction activities under certain conditions.

**Control** - means to minimize, reduce, eliminate, or prohibit by technological, legal, contractual or other means, the discharge of pollutants from an activity or activities.

**Critical Sources** - means commercial facilities and businesses that have a potential to contribute pollutants to stormwater runoff if effective BMPs are not implemented. Attachment "D" specifies the commercial facilities and businesses that have been identified as Critical Sources.



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**Dechlorinated/ Debrominated Swimming Pool Discharge** - means any swimming pool discharge with a residual chlorine or bromine level of 0.1mg/L or less; and does not contain any detergents, wastes, algaecides, or cyanuric acid in excess of 50 ppm, or any other chemicals including salts from pools commonly referred to as "salt water pools". The term does not include swimming pool filter backwash or swimming pool water containing bacteria.

**Development** - means any construction, rehabilitation, redevelopment or reconstruction of any public or private residential project (whether single-family, multi-unit or planned unit development); industrial, commercial, retail and any other non-residential projects, including public agency projects; or mass grading for future construction.

**Directly Adjacent** - means situated within 200 feet of the contiguous zone required for the continued maintenance, function, and structural stability of the environmentally sensitive area.

**Directly Discharging** - means outflow from a drainage conveyance system that is composed entirely or predominately of flows from the subject, property, development, subdivision, or industrial facility and not commingled with the flows from adjacent lands.

**Discharge** - means when used without qualification the "discharge of a pollutant."

**Discharging Directly** - means outflow from a drainage conveyance system that is composed entirely or predominantly of flows from the subject, property, development, subdivision, or industrial facility, and not commingled with the flows from adjacent lands.

**Discharge of a Pollutant** - means any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source" or, any addition of any pollutant or combination of pollutants to the waters of the "contiguous zone" or the ocean from any point source other than a vessel or other floating craft, which is being used as a means of transportation. The term discharge includes additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man; discharges through pipes, sewers, or other conveyances owned by a State, municipality, or other person which do not lead to a treatment works; and discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

**Disturbed Area** - means any area that is altered as a result of land disturbance. Examples include but are not limited to: clearing, grading, grubbing, stockpiling and/ or excavation, etc...

**Dry Day** - means a non-wet day for Malibu Creek and Lagoon Bacteria TMDL WLA. A wet day is defined as a day with a 0.1 inch or more of rain and 3 days following the rain event is a non-wet day for Bacteria TMDL WLA.

**Effect Concentration (EC)** is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in a given percent of the test organisms, calculated from a continuous model (e.g., Probit Model). EC<sub>25</sub> is a point estimate of the toxicant concentration that would cause an observable adverse effect in 25 percent of the test organisms.

**Effective Impervious Surface** - means that portion of the surface area that is hydrologically connected via sheet flow over a hardened conveyance or impervious surface without any intervening medium to mitigate flow volume.

**Effluent limitation** - means any restriction imposed by the Permitting Authority (PA) on quantities, discharge rates, concentrations, and/ or mass loadings of "pollutants" which are "discharged" from "point sources" into "waters of the United States," the waters of the "contiguous zone," or the ocean.

**Emergency** - means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage. (Reference: California Public Resources Code § 21060.3. Emergency).

**End-of-Pipe** - means the end of the major outfall as defined in 40 CFR122.26 (b)(5) and 40 CFR122.26 (b)(6).

**Endpoint** - means a biological measurement used to quantify the results obtained from analytical methods such as whole effluent toxicity testing [e.g., lethal concentration (LC<sub>50</sub>); inhibition concentration (IC<sub>25</sub>); and no observed effect concentration (NOEC)]. Such endpoints are quantitative measurements of the responses of test organisms (e.g., survival, growth, mobility, reproduction, and weight gain or loss) in response to exposure to a serial dilution of effluent.

**Environment** - means the physical conditions, which exist within the area and which will be affected by a proposed project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

**Environmentally Sensitive Area (ESA)** - means an area "in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which would be easily disturbed or degraded by human activities and developments" (Reference: California Public Resources Code § 30107.5). ESAs will include Clean Water Act 303d Listed Water Bodies in all reaches that are unimproved, all California Coastal Commission's Environmentally Sensitive Habitat Areas as delineated on maps in Local Coastal Plans and Regional Water Quality Control Board's Basin Plan Rare, Threatened or Endangered Species (RARE) and Preservation of Biological Habitats (BIOL) designated waterbodies. The California Department of Fish and Game's Significant Natural Areas map will

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be considered for inclusion as the department field verifies the designated locations. Watershed restoration projects will be considered for inclusion as the department field verifies the designated locations.

**Erosivity Factor** - The Erosivity Factor is a criterion that to assess the risk of erosion on disturbed land. It is described in "Predicting soil erosion by water: A guide to conservation planning with the Revised Universal Soil Loss Equation (RUSLE), Agricultural Handbook 703, USDA-ARS, U.S. Government Printing Office, Washington, D.C., 1997 by Renard, K.C., G.R. Foster, G.A. Weesies, D.K. McCool, and D.C. Yoder.

**Federal Clean Water Act (CWA)** - means (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act Amendments of 1972) Public Law 92—500, as amended by Public Law 95—217, Public Law 95—576, Public Law 96—483 and Public Law 97—117, codified at 33 U.S.C. 1251 et seq.

**First Storm Event** - means the first storm event of the wet season that produces at least 0.25 inches of rain.

**Forest Land** - means land at least 10 percent stocked with live trees, or land that had this minimum tree stocking in the past and is not currently developed for nonforest use. The minimum area recognized is 1 acre.

**Groundwater Dewatering** - means the active practice of removing standing water from soil excavations using a pump(s) or other means.

**Hillside** - means property located in an area with known erosive soil conditions, where the development will result in grading on any slope that is 20% or greater or an area designated by the Municipality under a General Plan or ordinance as a "hillside area".

**Horse Stables** - means a property where at least one horse is stabled at least part of the year.

**Hydromodification** - means the alteration away from a natural state of stream flows or the beds or banks of rivers, streams, or creeks, including ephemeral washes, which results in hydrogeomorphic changes.

**Illegal Discharge** - means any discharge to the municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illegal discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to an NPDES permit, discharges that are identified in part 1, "Discharge Prohibitions" of this order, or discharges authorized by the Regional Water Board Executive Officer.

**Illicit Connection** - means any engineered conveyance that is connected to the storm drain system without a permit or municipal authorization. It also means any engineered conveyance through which discharges of pollutants to the separate storm drainage systems, which are not composed entirely of storm water or are not authorized by an NPDES permit, may occur.

**Illicit Discharge** - means any discharge to a municipal separate storm sewer (storm drain system) that is prohibited under local, state, or federal statutes, ordinances, codes, or regulations. The term illicit discharge includes all non-storm water discharges not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges that are identified in part 1, "Discharge Prohibitions" of this order, or authorized by the Regional Water Board Executive Officer.

**Illicit Disposal** - means any disposal, either intentionally or unintentionally, of material(s) or waste(s) that can pollute storm water.

**Industrial/ Commercial Facility** - means any facility involved and/ or used in the production, manufacture, storage, transportation, distribution, exchange or sale of goods and/ or commodities, and any facility involved and/ or used in providing professional and non-professional services. This category of facilities includes, but is not limited to, any facility defined by either the Standard Industrial Classifications (SIC) or the North American Industry Classification System (NAICS). Facility ownership (federal, state, municipal, private) and profit motive of the facility are not factors in this definition.

**Industrial Activities Storm Water General Permit (IASGP)** - means the general NPDES permit adopted by the State Board, which authorizes the discharge of storm water from certain industrial activities under certain conditions.

**Industrial Park** - means a land development that is set aside for industrial development. Industrial parks are usually located close to transport facilities, especially where more than one transport modalities coincide: highways, railroads, airports, and navigable rivers. It includes office parks, which have offices and light industry.

**Inhibition Concentration (IC)** - means a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). IC25 is a point estimate of the toxic concentration that would cause a 25-percent reduction in a non-lethal biological measurement.

**Inspection** - means entry and the conduct of an on-site review of a facility and its operations, at reasonable times, to determine compliance with specific municipal or other legal requirements. The steps involved in performing an inspection, include, but are not limited to:

1. Pre-inspection documentation research
2. Request for entry
3. Interview of facility personnel

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4. Facility walk-through
5. Visual observation of the condition of facility premises
6. Examination and copying of records as required
7. Sample collection (if necessary or required)
8. Exit conference (to discuss preliminary evaluation)
9. Report preparation, and if appropriate, recommendations for coming into compliance

**Integrated Pest Management (IPM)** - means a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools in a way that minimizes economic, health, and environmental risks.

**Large Municipal Separate Storm Sewer System (MS4)** - means all MS4s that serve a population greater than 250,000 (1990 Census) as defined in 40 CFR122.26 (b)(4). The Regional Water Board designated Ventura County as a large MS4 in 1990, based on: (i) the U.S. Census Bureau 1990 population count of 669,016 thousand, and (ii) the interconnectivity of the MS4s in the incorporated and unincorporated areas within the County.

**Local SWPPP** - means the Local Storm Water Pollution Prevention Plan (LSWPPP) required by the local agency for a project that disturbs one or more acres of land. Shall mean a plan identifying potential pollutant sources from a construction site and describing proposed design, placement and implementation of BMPs, to effectively prevent non-storm water discharges and reduce pollutants in storm water discharges to the storm drain system, during construction activities. Also referred as a Storm Water Pollution Control Plan (SWPCP).

**Low Impact Development (LID)** – means a design strategy with the goal of maintaining or replicating the pre-development hydrologic regime through the use of design techniques to create a functionally equivalent hydrologic site design. Hydrologic functions of storage, infiltration and ground water recharge, as well as the volume and frequency of discharges are maintained through the use of integrated and distributed micro-scale storm water retention and detention areas, reduction of impervious surfaces, and the lengthening of runoff flow paths and flow time. Other strategies include the preservation/protection of environmentally sensitive site features such as riparian buffers, wetlands, steep slopes, valuable (mature) trees, flood plains, woodlands, and highly permeable soils.

**Major Municipal Separate Storm Sewer Outfall (“or major outfall”)** - means a major municipal separate storm sewer outfall that discharges from a single pipe with an inside diameter of 36 inches or more or its equivalent (discharge from a single conveyance other than circular pipe which is associated with a drainage area of more than 50 acres); or for municipal separate storm sewers that receive storm water from lands zoned for industrial activity (based on comprehensive zoning plans or the equivalent), an outfall that discharges from a single pipe with an inside diameter of 12 inches or more or from its equivalent (discharge from other than a circular pipe associated with a drainage area of 2 acres or more), as defined in 40 CFR122.26 (b)(5).

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**Major Outfall** - means a major municipal separate storm sewer outfall, as defined in 40 CFR122.26 (b)(6).

**Maximum Extent Practicable (MEP)** – The technology-based permit requirement established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based requirements, including MEP, establish a level of pollutant control that is derived from available technology or other controls. MEP requires municipal dischargers to perform at maximum level that is practicable. Compliance with MEP may be achieved by emphasizing pollution prevention and source control BMPs in combination with structural and treatment methods where appropriate. The MEP approach is an ever evolving and advancing concept, which considers technical and economic feasibility.

**Method Detection Limit (MDL)** - means the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 CFR136, Appendix "G" of this Order.

**Minimum Level (ML)** - means the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed. The ML value represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interferences. Assuming that all method-specific analytical steps are followed, the ML value will also represent, after the appropriate application of method-specific factors, the lowest standard in the calibration curve for that specific analytical technique.

**Minimum Significant Difference (MSD)** - means a measure of test sensitivity that establishes the minimum difference required between a control and a test treatment in order for that difference to be considered statistically significant.

**Municipal Separate Storm Sewer System (MS4)** - means a conveyance or system of conveyances (including roads w/ drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains), as defined in 40 CFR122.26(b)(8):

1. Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under § 208 of the Federal Clean Water Act (CWA) that discharges into waters of the United States
2. Designed or used for collecting or conveying storm water
3. Which is not a combined sewer
4. Which is not part of a Publicly Owned Treatment Works (POTW), as defined in 40 CFR122.2

**NAICS** - means North American Industry Classification System.

**National Pollutant Discharge Elimination System (NPDES)** - means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under CWA § 307, 402, 318, and 405.

**Natural Drainage Systems** - means unlined or unimproved (not engineered) creeks, streams, rivers or similar waterways.

**New Development** - means land disturbing activities; structural development, including construction or installation of a building or structure, creation and replacement of impervious surfaces; and land subdivision.

**Non-Storm Water Discharge** - means any discharge to a storm drain that is not composed entirely of storm water.

**No Observed Effect Concentration (NOEC)** - means the highest tested concentration of an effluent or toxicant that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically different from the controls).

**Nuisance** - means anything that meets all of the following requirements: (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property; (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal; (3) occurs during, or as a result of, the treatment or disposal of wastes.

**Nursery** - means NAICS classification to describe nursery operations and determine the type of operations covered under this Order and those covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Conditional Waiver).

1. There are 3 broad NAICS sectors available to classify nurseries:

- (1) 111xxx - Crop Production - Agriculture
- (a) 424xxx - Merchant Wholesalers, Nondurable Goods
- (b) 44xxxx - Retail Trade

(1) **Nursery (Agricultural Facilities - Crop Production)** - means Nursery and Floriculture Production under NAICS Code 11142x. These operations are subject to the **Conditional Waiver**. This industry comprises establishments primarily engaged in (1) growing nursery and floriculture products (e.g., nursery stock, shrubbery, cut flowers, flower seeds, foliage plants, sod) under cover or in open fields and/ or (2) growing short rotation woody trees with a growing and harvesting cycle of 10 years or less for pulp or tree stock (e.g., cut Christmas trees, cottonwoods).

- (2) **Nursery (Commercial Facilities - Merchant Wholesalers, Nondurable Goods, and Retail Trade)** - means industries Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers under NAICS Code 424930; and Nursery, Garden Center, and Farm Supply Stores under NAICS Code 444220. This Order covers these types of operations. The industry in NAICS Code 424930 comprises establishments primarily engaged in the merchant wholesale distribution of flowers, florists' supplies, and/ or nursery stock (except plant seeds and plant bulbs). The industry in NAICS Code 444220 comprises establishments primarily engaged in retailing nursery and garden products, such as trees, shrubs, plants, seeds, bulbs, floriculture products and sod, which are predominantly grown elsewhere. These establishments may sell a limited amount of a product they grow themselves.

**Open Channel** - means a storm drainage channel that is not a natural water course.

**Parking Lot** - means land area or facility for the parking or storage of motor vehicles used for businesses, commerce, industry, or personal use.

**Percent Minimum Significant Difference (PMSD)** - means the minimum significant difference divided by the control mean, expressed as a percent (see minimum significant difference).

**Permit** - means an authorization, license, or equivalent control document issued by U.S. EPA or an "approved State" to implement the requirements of 40 CFR Parts 122, 123, and 124. "Permit" includes an NPDES "general permit" (§ 122.28). Permit does not include any permit, which has not yet been the subject of final agency action, such as a "draft permit" or a "proposed permit."

**Permittee(s)** - means co-permittee(s) and any agency named in this Order as being responsible for permit conditions within its jurisdiction, as defined by Federal Regulation. Permittees to this Order include the Ventura Water Protection District, Ventura County, and the cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, San Buenaventura, Santa Paula, Simi Valley and Thousand Oaks.

**Point Source** - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

**Point Zero** - means in the context of the TMDLs, the point at which water from the storm drain or creek initially mixes with water. Point zero has been selected as the compliance point for the TMDL numeric target because access to these drains is, on the whole, not restricted.

**Pollutants** - means those "pollutants" defined in CWA § 502(6) (33.U.S.C. § 1362(6)), and incorporated by reference into California Water Code § 13373.



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**Pollutants of Concern** - means constituents that have exceeded Basin Plan Objectives, and CTR- Chronic or Acute Objectives during monitoring at Mass Emission, Receiving Water, and Land Use stations.

**Potable Water Sources** - means the potable water system for the treatment, distribution, and provision of water for residential, commercial, industrial, or institutional use that meets all California safe drinking water regulatory standards for human consumption.

**Pre-Developed Condition** - means native vegetation and soils that existed at a site prior to first development. The pre-developed condition may be assumed to be an area with the typical vegetation, soil, and storm water runoff characteristics of open space areas in coastal Southern California unless reasonable historic information is provided that the area was atypical.

**Priority Pollutants** - means those constituents referred to in 40 CFR401.15 and listed in the U.S. EPA NPDES Application Form 2C, pp. V-3 through V-9.

**Project** - means all development, redevelopment, and land disturbing activities. The term is not limited to "Project" as defined under CEQA (Reference: California Public Resources Code § 21065).

**Qualified SWPPP Developer or Qualified SWPPP Practitioner** – refer to State of California General Construction Stormwater Permit for definition.

**Rare, Threatened, or Endangered Species (RARE)** - means a beneficial use for waterbodies in the Los Angeles Region, as designated in the Basin Plan (Table 2-1), that supports habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

**Redevelopment** - means land-disturbing activity that results in the creation, addition, or replacement of 5,000 square feet or more of impervious surface area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint; addition or replacement of a structure; replacement of impervious surface area that is not part of a routine maintenance activity; and land disturbing activities related to structural or impervious surfaces. It does not include routine maintenance to maintain original line and grade, hydraulic capacity, or original purpose of facility, nor does it include emergency construction activities required to immediately protect public health and safety.

**Regional Administrator** - means the Regional Administrator of the Regional Office of the U.S. EPA or the authorized representative of the Regional Administrator.

**Report of Waste Discharge (ROWD)** - means an application for renewal of the NPDES Permit for Waste Discharge Requirements for Municipal Separate Storm Sewer Discharges Within the Ventura County Watershed Protection District, County of Ventura and the Incorporated Cities Therein.

**Restaurant** - means a facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC Code 5812).

**Restoration** - means the reestablishment of predisturbance aquatic functions and related physical, chemical and biological characteristics (Reference: National Research Council. 1992. Restoration of Aquatic Ecosystems: Science, Technology and Public Policy. National Academy Press, Washington, D.C.).

**Retail Gasoline Outlet (RGO)** - means any facility engaged in selling gasoline and lubricating oils- SIC 5541 and NAICS 447110 & 447190.

1. RGOs: 447190 Other Gasoline Stations:

This industry comprises establishments known as gasoline stations (except those with convenience stores) primarily engaged in one of the following: (1) retailing automotive fuels (e.g., diesel fuel, gasohol, gasoline) or (2) retailing these fuels in combination with activities, such as providing repair services; selling automotive oils, replacement parts, and accessories; and/ or providing food services.

2. RGOs: 447110 Gasoline Stations with Convenience Stores:

Retailing automotive fuels in combination with a convenience store or food mart.

**Routine Maintenance** – Routine maintenance projects include, but are not limited to projects conducted to:

1. Maintain the original line and grade, hydraulic capacity, or original purpose of the facility.
2. Perform as needed restoration work to preserve the original design grade, integrity and hydraulic capacity of flood control facilities.
3. Includes road shoulder work, regrading dirt or gravel roadways and shoulders and performing ditch cleanouts.
4. Update existing lines\* and facilities to comply with applicable codes, standards, and regulations regardless if such projects result in increased capacity.
5. Repair leaks

Routine maintenance does not include construction of new\*\* lines or facilities resulting from compliance with applicable codes, standards and regulations.

\* Update existing lines includes replacing existing lines with new materials or pipes.

\*\* New lines are those that are not associated with existing facilities and are not part of a project to update or replace existing lines.

**Screening** - means using proactive methods to identify illicit connections through a continuously narrowing process. The methods may include: performing baseline monitoring of open channels, conducting special investigations using a prioritization approach, analyzing maintenance records for catch basin and storm drain cleaning and operation, and verifying all permitted connections into the storm drains. Special investigation techniques may include: dye testing, visual inspection, smoke testing, flow monitoring, infrared, aerial and thermal photography, and remote control camera operation.

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**Sidewalk Rinsing** - means only sidewalk rinsing using high pressure and low volume of water with no additives and at an average usage of 0.006 gallons per square foot of surface area to be rinsed. Any waste generated from the activity must be collected and properly and legally disposed of. It does not mean hosing of any sidewalk or street with a garden hose with a pressure nozzle.

**Site** - means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

**Small Construction** - means any soil disturbing activities less than 5 acres.

**Smart Growth** - development in or near cities intended to lessen or reverse suburban sprawl, decrease the use of automobiles, and shorten daily travel. It uses compact building design to cluster together residential, shopping, and work areas and encourages walking and public transportation. Smart Growth is considered a stormwater BMP in the 2005 publication *Using Smart Growth Techniques as Stormwater Best Management Practices*, EPA 231-B-05-002.

**Source Control BMP** - means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

**Southern California Stormwater Monitoring Coalition (SMC)** - means the Stormwater Monitoring Coalition, which is a collaborative research/ monitoring partnership of the Southern California Water Boards, Municipal Storm Water Agencies, and municipalities to develop the methodologies and assessment tools to more effectively understand urban storm water and non-storm water (anthropogenic) impacts to receiving waters and to conduct research/ monitoring through Subsequent Research Implementation Agreements. The first original cooperative agreement was entered into on February 8, 2001.

**Stream** - means a body of flowing water; natural water course containing water at least part of the year. In hydrology, it is generally applied to the water flowing in a natural channel as distinct from a canal (Reference: US Geological Survey).

**Strip Mall** - means a commercial development that is a shopping center where the stores are arranged in a row, with a sidewalk in front. Strip malls are typically developed as a unit and have large parking lots in front. They face major traffic arterials and tend to be self-contained with few pedestrian connections to surrounding neighborhoods. It is also called a plaza.

**Storm Event Monitoring** - means a rainfall event that produces more than 0.25 inch of precipitation and is separated from the previous storm event by at least 1 week of dry weather, for the purpose of monitoring.

**Storm Water** - means storm water runoff, snow melt runoff, and surface runoff and drainage, as defined in 40 CFR122.26(b)(13).

**Storm Water Discharge Associated with Industrial Activity** - means industrial discharge, as defined in 40 CFR122.26(b)(14).

**Storm Water Quality Management Program** - means the Ventura Countywide Storm Water Quality Management Plan, which includes descriptions of programs, collectively developed by the Permittees in accordance with provisions of the NPDES Permit, to comply with applicable federal and state law, as the same is amended from time to time.

**Structural BMP** - means any structural facility designed and constructed to mitigate the adverse impacts of storm water runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

**Summer Dry Weather** - means dry weather days occurring from April 1 through October 31 of each year.

**t-Test** (formally Student's t-test) - means a statistical analysis comparing two sets of replicate observations, in the case of WET, only two test concentrations (e.g., a control and 100% effluent). The purpose of this test is to determine if the means of the two sets of observations are different [e.g., if the 100% effluent concentration differs from the control (i.e., the test pass or fails)].

**Targeted Employees** - means management and staff who perform or direct activities that directly or indirectly have an effect of storm water quality. The employees generally are employed in the following areas: department of public works, engineering, sanitation, storm water maintenance, drainage and flood control, transportation, streets and roads, parks and recreation, public landscaping and corporation yards, planning or community development, code enforcement, building and safety, harbor or port departments, airports, or general services and fleet services.

**Total Maximum Daily Load (TMDL)** - means the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background.

**Toxicity Identification Evaluation (TIE)** - means a set of procedures to identify the specific chemical(s) responsible for toxicity through a process of chemical/ physical manipulations of samples followed by toxicity tests. These procedures are performed in 3 phases (Phase I- Toxicity Characterization Procedure, Phase II- Toxicity Identification Procedure, and Phase III- Toxicity Confirmation Procedure) using aquatic organism toxicity tests.

**Toxicity Reduction Evaluation (TRE)** - means a study conducted in a step-wise process to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity.

**Toxicity Test** - means a procedure using living organisms to determine whether a chemical or an effluent is toxic. A toxicity test measures the degree of the effect of a specific chemical or effluent on exposed test organisms.

**Toxic Unit (TU)** - means a measure of toxicity in an effluent as determined by the acute toxicity units (TUa) or chronic toxicity units (TUc) measured. The larger the TU, the greater the toxicity.

**Toxic Unit - Chronic (TUc)** - means 100 times the reciprocal of the effluent concentration that causes no observable effect on the test organisms in a chronic toxicity test ( $TUc = 100/NOEC$  or  $100/EC25$ ) (see NOEC).

**Treatment** - means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media absorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

**Treatment Control BMP** - means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media absorption or any other physical, biological, or chemical process.

**Urbanization** - means the process of changing of land use and land patterns from rural characteristics to urban (city-like) characteristics. These changes include (i) the replacement of pervious surfaces with impervious surfaces such as rooftops and buildings, and impervious materials such as asphalt and concrete; and (ii) the conversion of rural land to house new residents, support new businesses, and facilitate vehicular traffic flow.

**U.S. EPA Phase I Facilities** - means facilities in specified industrial categories that are required to obtain an NPDES permit for storm water discharges, as required by 40 CFR122.26(c).

These categories include:

1. Facilities subject to storm water effluent limitation guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR N)
2. Manufacturing facilities
3. Oil and gas/ mining facilities
4. Hazardous waste treatment, storage, or disposal facilities
5. Landfills, land application sites, and open dumps
6. Recycling facilities
7. Steam electric power generating facilities
8. Transportation facilities
9. Sewage of wastewater treatment works
10. Light manufacturing facilities

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**Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards** - means any Permittee owned or operated facility or portion thereof that:

1. Conducts industrial activity, operates or stores equipment or materials, and provides services similar to Federal Phase I facilities;
2. Performs fleet vehicle service/ maintenance including repair, maintenance, washing, or fueling;
3. Performs maintenance and/ or repair of machinery/ equipment; or
4. Stores chemicals, raw materials, or waste materials.

**Waste Load Allocations (WLAs)** - means a portion of a receiving water's Total Maximum Daily Pollutant Load (TMDL) that is allocated to one of its existing or future point sources of pollution (Reference: 40 CFR130.2(h)).

**Water Quality Objectives** - means water quality criteria contained in the Basin Plan, the California Ocean Plan, the National Toxics Rule, the California Toxics Rule, and other state or federally approved surface water quality plans. Such plans are used by the Regional Water Board to regulate all discharges, including storm water discharges.

**Water Quality Standards** - means the State Water Quality Standards, which are comprised of beneficial uses, water quality objectives and the State's Antidegradation Policy.

**Waters of the State** - means any surface water or groundwater, including saline waters, within boundaries of the state (Reference: California Water Code § 13050).

**Waters of the United States or Waters of the US** - means:

1. All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters, including interstate "wetlands";
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, "wetlands," sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
  - a. Which are or could be used by interstate or foreign travelers for recreational or other purposes
  - b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
  - c. Which are used or could be used for industrial purposes by industries in interstate commerce
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in the preceding paragraph (1) through (4) of this definition;
6. The territorial sea; and

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7. "Wetlands" adjacent to waters (other than waters that are themselves wetlands) identified in the preceding paragraph (1) through (6) of this definition.  
(Reference: 33 CFR328)

**Watercourse** - means any natural or artificial channel for passage of water, including the VCFCD jurisdictional channels included in the List of Channels within the Comprehensive Plan of the VCFCD, as approved by the Board of Supervisors of the VCFCD on October 4, 1993, and any amendments thereto.

**Watershed Management** - means approach for water resources protection. It is a strategy for integrating and managing resources, both human and fiscal that focuses on regulation of point sources, to a more regional approach that acknowledges environmental impacts from other activities.

**Watershed Management Areas (WMA)** - means the geographically-defined watershed areas where the Regional Water Board will implement the watershed approach. These generally involve a single large watershed within which exists smaller subwatersheds but in some cases may be an area that does not meet the strict hydrologic definition of a watershed e.g., several small Ventura coastal waterbodies in the region are grouped together into one WMA.

**Wet Season** - means the calendar period beginning October 1 through April 15.

**Winter Dry Weather** - means dry weather days occurring from November 1 - March 31 of each year.

**Whole Effluent Toxicity** - means the aggregate toxic effect of an effluent measured directly by a toxicity test.

## PART 7 - STANDARD PROVISIONS

### A. General Requirements

1. The Permittee shall comply with all provisions and requirements of this Order.
2. Should the Permittee discover that it failed to submit any relevant facts or that it submitted incorrect information in a report it shall promptly submit the missing or correct information.
3. The Permittee shall report all instances of non-compliance not otherwise reported at the time monitoring reports are submitted.
4. This Order includes Attachment "H", the Reporting Program, which is a part of this Order and must be complied with.

**B. Regional Water Board Review**

1. The Regional Water Board may review any formal determination or approval made by the Regional Water Board Executive Officer pursuant to the provisions of this Order.
  - (a) Permittee(s) or a member of the public may request such review upon petition within 30 days of the effective date of the notification of such decision to the Permittee(s) and interested parties on file at the Regional Water Board.

**C. Public Review**

1. All documents submitted to the Regional Water Board in compliance with the terms and conditions of this Order shall be made available to members of the public pursuant to the Freedom of Information Act (5 U.S.C. § 552), as amended, and the Public Records Act (California Government Code § 6250 et seq.).
2. All documents submitted to the Regional Water Board Executive Officer for approval shall be made available to the public for a 30-day period to allow for public comment.

**D. Duty to Comply [40 CFR122.41(a)]**

1. Each Permittee must comply with all of the terms, requirements, and conditions of this Order. Any violation of this order constitutes a violation of the Clean Water Act, its regulations and the California Water Code, and is grounds for enforcement action, Order termination, Order revocation and reissuance, denial of an application for reissuance, or a combination thereof [40 CFR122.41(a), CAL. WATER CODE § 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, 13350].
2. A copy of these waste discharge specifications shall be maintained by each Permittee so as to be available during normal business hours to Permittee employees and members of the public.
3. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

**E. Duty to Mitigate [40 CFR122.41 (d)]**

1. Each Permittee shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.



**F. Inspection and Entry; Investigations; Responsibilities [40 CFR122.41(i), Cal. Water Code § 13225 and § 13267]**

1. The Regional Water Board, U.S. EPA, and other authorized representatives shall be allowed:
  - (a) Entry upon premises where a regulated facility is located or conducted, or where records are kept under conditions of this Order;
  - (b) Access to copy any records, at reasonable times that are kept under the conditions of this Order;
  - (c) To inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order;
  - (d) To photograph, sample, and monitor at reasonable times for the purpose of assuring compliance with this Order, or as otherwise authorized by the CWA and the CAL. WATER CODE;
  - (e) To review any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement to investigate the quality of any waters of the state within its region; and,
  - (f) To require as necessary any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.

**G. Proper Operation and Maintenance [40 CFR122.41 (e), Cal. Water Code § 13263(f)]**

1. The Permittees shall at all times properly operate and maintain all facilities and systems of treatment (and related appurtenances) that are installed or used by the Permittees to achieve compliance with this Order. Proper operation and maintenance includes:
  - (a) adequate laboratory controls; and
  - (b) appropriate quality assurance procedures.
2. This provision requires the operation of backup or auxiliary facilities or similar system that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order.

**H. Signatory Requirements [40 CFR122.41(k) & 122.22]**

1. Except as otherwise provided in this Order, all applications, reports, or information submitted to the Regional Water Board shall be signed by the City Manager or Mayor, or authorized designee and certified as set forth in 40 CFR122.22.

**I. Reopener and Modification [40 CFR122.41(f) & 122.62]**

1. This Order may only be modified, revoked, or reissued, prior to the expiration date, by the Regional Water Board, in accordance with the procedural requirements of the CAL. WATER CODE and CCR Title 23 for the issuance of waste discharge requirements, 40 CFR122.62, and upon prior notice and hearing, to:
  - (a) Address changed conditions identified in the required reports or other sources deemed significant by the Regional Water Board;
  - (b) Incorporate applicable requirements or statewide water quality control plans adopted by the State Board or amendments to the Basin Plan, including TMDLs;
  - (c) Comply with any applicable requirements, guidelines, and/ or regulations issued or approved pursuant to CWA § 402(p); and/ or,
  - (d) Consider any other federal, or state laws or regulations that became effective after adoption of this Order.
  
2. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
  - (a) Violation of any term or condition contained in this Order;
  - (b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;  
or,
  - (c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
  
3. The filing of a request by the Principal Permittee or Permittees for a modification, revocation and re-issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
  
4. This Order may be modified to make corrections or allowances for changes in the permitted activity listed in this section, following the procedures at 40 CFR122.63, if processed as a minor modification. Minor modifications may only:
  - (a) Correct typographical errors; or
  - (b) Require more frequent monitoring or reporting by the Permittee.

**J. Severability**

1. The provisions of this Order are severable; and if any provision of this Order or the application of any provision of this Order to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Order shall not be affected.

**K. Duty to Provide Information [40 CFR122.41(h)]**

1. The Permittees shall furnish, within a reasonable time, any information the Regional Water Board or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order.
2. The Permittees shall also furnish to the Regional Water Board, upon request, copies of records required to be kept by this Order.

**L. Twenty-Four Hour Reporting [40 CFR122.41(l)(6)]<sup>1</sup>**

1. The Permittees shall report to the Regional Water Board any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time any Permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
2. The Regional Water Board may waive the required written report on a case-by-case basis.

**M. Bypass [40 CFR122.41(m)]<sup>2</sup>**

1. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Water Board may take enforcement action against Permittees for bypass unless:
  - (a) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.);

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<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

<sup>2</sup> This provision applies to the operation and maintenance of storm water controls and BMPs as provided in this Order or in the Ventura County SMP.

- (b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance;
- (c) The Permittee submitted a notice at least ten days in advance of the need for a bypass to the Regional Water Board; or,
- (d) Permittees may allow a bypass to occur that does not cause effluent limitations to be exceeded, but only if it is for essential maintenance to assure efficient operation. In such a case, the above bypass conditions are not applicable. The Permittee shall submit notice of an unanticipated bypass as required.

**N. Upset [40 CFR122.41(n)]<sup>1</sup>**

- 1. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- 2. A Permittee that wishes to establish the affirmative defense of an upset in an action brought for non compliance shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (a) An upset occurred and that the Permittee can identify the cause(s) of the upset;
  - (b) The permitted facility was being properly operated by the time of the upset;
  - (c) The Permittee submitted notice of the upset as required; and,
  - (d) The Permittee complied with any remedial measures required.
- 3. No determination made before an action for noncompliance, such as during administrative review of claims that non-compliance was caused by an upset, is final administrative action subject to judicial review.
- 4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof.

**O. Property Rights [40 CFR122.41(g)]**

- 1. This Order does not convey any property rights of any sort, or any exclusive privilege.

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<sup>1</sup> This provision applies to incidents where effluent limitations (numerical or narrative) as provided in this Order or in the Ventura County SMP are exceeded, and which endanger public health or the environment.

**P. Enforcement**

1. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The CWA provides the following:

(a) Criminal Penalties for:

- (1) Negligent Violations [CWA 309 (c)(1)(B)]:

The CWA provides that any person who negligently violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$2,500 nor more than \$25,000 per day for each violation, or by imprisonment for not more than 1 year, or both.

- (2) Knowing Violations [CWA 309 (c)(2)(B)]:

The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

- (3) Knowing Endangerment [CWA 309 (c)(3)(A)]:

The CWA provides that any person who knowingly violates permit conditions implementing CWA § 301, 302, 307, 308, 318, or 405 and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

- (4) False Statement [CWA 309 (c)(4)]:

The CWA provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000 or by imprisonment for not more than two years, or by both. If a conviction is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.

- (b) Civil Penalties [[CWA 309 (d)]

The CWA provides that any person who violates a permit condition implementing CWA § 301, 302, 306, 307, 308, 318, or 405 is subject to a civil penalty not to exceed \$27,500 per day for each violation.

2. Violation of any of the provisions of the NPDES permit or any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalties may be applied for each kind of violation. The Cal Water Code §13885 provides the following:
  - (a) Any person who violates any of the following shall be liable civilly in accordance with this section:
    - (1) Section 13375 or 13376.
    - (2) Any waste discharge requirements or dredged or fill material permit issued pursuant to this chapter or any water quality certification issued pursuant to Section 13160.
    - (3) Any requirements established pursuant to Section 13383.
    - (4) Any order or prohibition issued pursuant to Section 13243 or Article 1 (commencing with Section 13300) of Chapter 5, if the activity subject to the order or prohibition is subject to regulation under this chapter.
    - (5) Any requirements of Section 301, 302, 306, 307, 308, 318, 401, or 405 of the Clean Water Act, as amended.
    - (6) Any requirement imposed in a pretreatment program approved pursuant to waste discharge requirements issued under Section 13377 or approved pursuant to a permit issued by the administrator.

**Q. Need to Halt or Reduce Activity not a Defense [40 CFR122.41(c)]**

1. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order.

**R. Termination of Board Order**

1. Regional Water Board Order No. 00-108 is hereby terminated.

**S. Board Order Expiration Date**

1. This Order expires on May 7, 2014. The Permittees must submit a Report of Waste Discharge (ROWD) and a proposed Storm Water Quality Management Program in accordance with CCR Title 23 as application for reissuance of waste discharge requirements no later than 180 days in advance of such date.

**T. MS4 Annual Reporting Program [40 CFR122.42(c)]**


1. The Annual Program Reporting shall include the following information:

(a) *Municipal separate storm sewer systems.*

The operator of a large or medium municipal separate storm sewer system or a municipal separate storm sewer that has been designated by the Director under 40 CFR122.26(a)(1)(v) of this part must submit an annual report by the anniversary of the date of the issuance of the permit for such system. The report shall include:

- (1) The status of implementing the components of the storm water management program that are established as permit conditions;
- (2) Proposed changes to the storm water management programs that are established as permit condition. Such proposed changes shall be consistent with 40 CFR122.26(d)(2)(iii) of this part;
- (3) Revisions, if necessary, to the assessment of controls and the fiscal analysis reported in the permit application under 40 CFR122.26(d)(2)(iv) and (d)(2)(v) of this part;
- (4) A summary of data, including monitoring data that is accumulated throughout the reporting year;
- (5) Annual expenditures and budget for year following each annual report;
- (6) A summary describing the number and nature of enforcement actions, inspections, and public education programs; and
- (7) Identification of water quality improvements or degradation.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on May 7, 2009.

  
Tracy J. Egoscue  
Executive Officer

Chief Deputy E.O.  
for

**Tentative Order Ventura County Municipal Separate Storm Sewer System Permit  
(NPDES No. CAS004002)  
June 3, 2009**

**Change Sheet  
(from the version transmitted on June 2, 2009)**

Proposed additions and/or edits are underlined. Deletions are in ~~strikethrough~~.

**Proposed Changes**

1. Page 61, 4.E.I.1- "The Permittees shall implement a Planning and Land Development Program pursuant to part 5.E. for all New Development and Redevelopment projects subject to this Order..."

**Correction:** "The Permittees shall implement a Planning and Land Development Program pursuant to part ~~5~~4.E. for all New Development and Redevelopment projects subject to this Order"

2. Page 64, 4.E.II.2.(a).(1)- "Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on development categories identified in subpart 5.E.II.1."

**Correction:** "Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site on development categories identified in subpart ~~5.E.II.1~~ 4.E.III.1.(a)-(c)."

3. Page 65, 4.III.1.(a)- "Except as provided in subpart 4.E.III.2 below, Permittees shall require all New Development and Redevelopment projects identified in subpart 4.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/biofiltration by reducing the percentage of Effective Impervious' Area (EIA) to 5 percent or less of the total project area."

**Correction:** "Except as provided in subpart 4.E.III.~~2~~1.(c) below, Permittees shall require all New Development and Redevelopment projects identified in subpart 4.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/biofiltration by reducing the percentage of Effective Impervious' Area (EIA) to 5 percent or less of the total project area."

4. Page 65, 4.III.1.(a)- "Except as provided in subpart 4.E.III.2 below, Permittees shall require all New Development and Redevelopment projects identified in subpart 4.E.II to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/biofiltration by reducing the percentage of Effective Impervious' Area (EIA) to 5 percent or less of the total project area."

**Correction:** "Page 65, 4.III.1.(a)- "Except as provided in subpart 4.E.III.2 below, Permittees shall require all New Development and Redevelopment projects identified in subpart 4.E.II



to control pollutants, pollutant loads, and runoff volume emanating from impervious surfaces through infiltration, storage for reuse, evapotranspiration, or bioretention/biofiltration by reducing the percentage of Effective Impervious' Area (EIA) to 5 percent or less of the total project area.”

5. Page 66, 4.E.III.1.(d)- “To address any impervious surfaces that may not be rendered "ineffective, " surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.11 which have complied with subparts 4.E.II 1 1(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.3.”

**Correction:** “To address any impervious surfaces that may not be rendered "ineffective, " surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.11 which have complied with subparts 4.E.II 1 1.(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.3.”

6. Page 66, 4.E.III.1.(d)- “To address any impervious surfaces that may not be rendered "ineffective, " surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.11 which have complied with subparts 4.E.II 1 1(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.3.”

**Correction:** Page 66, 4.E.III.1.(d)- “To address any impervious surfaces that may not be rendered "ineffective, " surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.11 which have complied with subparts 4.E.II 1 1(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.3.”

7. Page 66, 4.E.III.1.(d)- “To address any impervious surfaces that may not be rendered "ineffective, " surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.11 which have complied with subparts 4.E.II 1 1(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.3.”

**Correction:** “To address any impervious surfaces that may not be rendered "ineffective, " surface discharge of stormwater runoff if any, that results from New Development and Redevelopment projects identified in subpart 4.E.11 which have complied with subparts 4.E.II 1 1(a)-(c), above, shall be mitigated in accordance with subpart 4.E.III.3.1.(c)”

8. Page 66, 4.E.III.2.(a)- “To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.111.1, above, to comply with this permit through the alternative compliance measures described in subpart 4.E.II 1 2.c, below.”

**Correction:** “To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.111.1, above, to comply with this permit through the alternative compliance measures described in subpart 4.E.II 1 2.c, below.”

9. Page 66, 4.E.III.2.(a)- "To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.111.1, above, to comply with this permit through the alternative compliance measures described in subpart 4.E.111.2.c, below."

**Correction:** Page 66, 4.E.III.2.(a)- "To encourage smart growth and infill development of existing urban centers where onsite compliance with post-construction requirements may be technically infeasible, the permittees may allow projects that are unable to meet the Integrated Water Quality/Flow Reduction/Resources Management Criteria in subpart 4.E.111.1, above, to comply with this permit through the alternative compliance measures described in subpart ~~4.E.111.2.c~~ 4.E.III.2, below."

10. Page 67, 4.E.III.2.(c)- "Alternative Compliance Measures. When a permittee finds that a project applicant has demonstrated technical infeasibility, the permittee shall identify alternative compliance measures that the project will need to comply with as a substitute for the otherwise applicable post-construction requirements listed in subparts 4.E.III.1 (a)-(c) of this permit."

**Correction:** "Alternative Compliance Measures. When a permittee finds that a project applicant has demonstrated technical infeasibility, the permittee shall identify alternative compliance measures that the project will need to comply with as a substitute for the otherwise applicable post-construction requirements listed in subparts 4.E.III.1(a)-(c) of this permit."

11. Page 67, 4.E.III.2.(c). (1)- "The project must reduce the percentage of Effective Impervious Area to no more than 30 percent of the total project area and treat all remaining runoff pursuant to the design and sizing requirements of subparts 4.E.III.1 (b)-(d)."

**Correction:** "The project must reduce the percentage of Effective Impervious Area to no more than 30 percent of the total project area and treat all remaining runoff pursuant to the design and sizing requirements of subparts 4.E.III.1(b)-(d)."

12. Page 67, 4.E.III.2.(c).(2)- "The difference in volume between the amount of stormwater infiltrated, reused, and/or evapotranspired by the project onsite and the otherwise applicable requirements of subparts 4.E.III.1 (a)-(c) (the "offsite mitigation volume"), above, must be mitigated by the project applicant either by performing offsite mitigation that is approved by the permittee or by providing sufficient funding for public or private offsite mitigation to achieve equivalent stormwater volume and pollutant load reduction through infiltration, reuse, and/or evapotranspiration."

**Correction:** "The difference in volume between the amount of stormwater infiltrated, reused, and/or evapotranspired by the project onsite and the otherwise applicable requirements of subparts 4.E.III.1(a)-(c) (the "offsite mitigation volume"), above, must be mitigated by the project applicant either by performing offsite mitigation that is approved by the permittee or by providing sufficient funding for public or private offsite mitigation to achieve equivalent stormwater volume and pollutant load reduction through infiltration, reuse, and/or evapotranspiration."

# Land Jurisdictions in Ventura County, California

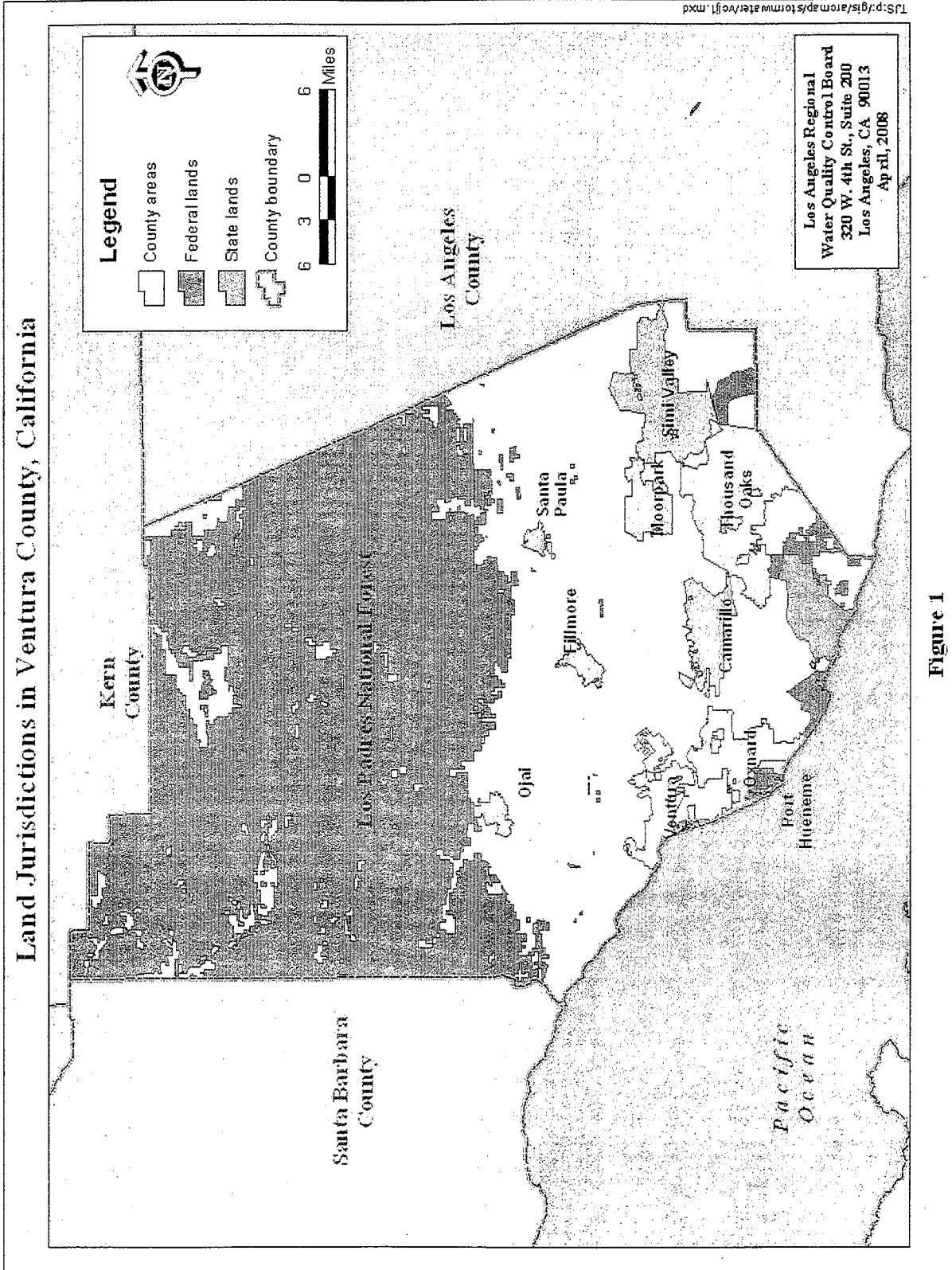


Figure 1

**ATTACHMENT A**  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Ventura River	402.10 402.20 402.31 402.32	Ventura River Ventura River Estuary Canada Larga Matilija Creek Matilija Creek Reservoir San Antonio Creek	Algae Coliform (fecal, total) Eutrophic Low DO Nitrogen Trash	City of Ojai City of San Buenaventura Ventura County Watershed Protection District
Santa Clara River	403.11 403.21 403.22 403.31 403.32 403.41 403.42 403.43 403.44 403.51 403.52 403.53 403.54 403.55	Santa Clara River Santa Clara River Estuary Brown Barranca/Long Canyon Elizabeth Lake Hopper Creek Lake Hughes Mint Canyon Creek Munz Lake Piru Creek Pole Creek Sespe Creek Torrey Canyon Creek Wheeler Canyon/Todd Barranca	Algae Ammonia ChemA* (tissue) Chloride Coliform Enrichment Eutrophic Fish kills Low DO/Organic Enrichment Nitrate + Nitrite Odors pH Sulfate Trash Total Dissolved Solids Toxaphene	City of Fillmore City of Oxnard City of San Buenaventura City of Santa Paula Ventura County Watershed Protection District

**ATTACHMENT A**  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Calleguas Creek	403.11 403.12 403.61 403.62 403.63 403.64 403.67 403.66 403.68	Calleguas Creek Calleguas Creek Estuary Arroyo Conejo Arroyo Las Posas Arroyo Simi Beardsley Channel Conejo Creek Fox Barranca Mugu Lagoon Mugu Drain/Oxnard Drain Rio de Santa Clara/Oxnard Drain Revolon Slough Tapo Canyon	Algae Ammonia Boron ChemA* (tissue) Chlordane (tissue, sediment) Chloride Chlorpyrifos (tissue) Coliform, fecal Copper (total, dissolved) Dacthal (sediment) DDT (tissue, sediment) Dieldrin (tissue) Endosulfan (tissue, sediment) Hexachlorocyclohexane (tissue) Mercury Nickel Nitrate + Nitrite Nitrate as Nitrogen (NO3) Nitrogen Organophosphorus Pesticides PCBs (tissue) Sediment Toxicity Sedimentation/Siltation Selenium Sulfate Total Dissolved Solids Toxaphene (tissue, sediment) Toxicity Trash Zinc	City of Camarillo City of Moorpark City of Oxnard City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

00010000

**ATTACHMENT A**  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Malibu Creek	401.00 403.11 404.21 404.22 404.23 404.24 404.25 404.26 404.47 404.45	Malibu Creek Malibu Creek Lagoon Lake Lindero Lake Sherwood Las Virgenes Creek Linero Creek Malibu Lake Medea Creek Palo Comado Santa Monica Bay Westlake Lake Triunfo Creek	Algae Ammonia Coliform DDT (tissue, sediment) Enteric viruses Eutrophic Lead Low DO/Organic Enrichment Nutrients (algae) PAHs (sediment) PCBs (tissue, sediment) PH Mercury Scum/foam Sedimentation/Siltation Sediment Toxicity Selenium Specific Conductance Trash	City of Simi Valley City of Thousand Oaks Ventura County Watershed Protection District

0001084

**ATTACHMENT A**  
Watershed Management Areas

Watershed Management Area	Hydrologic Units(s)	Major Surface Water Bodies	303(d) Pollutant(s) of Concern	Permittees
Miscellaneous Ventura Coastal	401.00 403.11	Channel Islands Harbor Channel Islands Beach Hobie Beach Mandalay Beach McGrath Lake McGrath Beach Ormond Beach Port Hueneme Harbor Promenade Park Beach Rincon Beach San Buenaventura Beach Santa Clara River Estuary Beach/Surfers Knoll Ventura Harbor: Ventura Keys	Beach closures Coliform (fecal) Chlordane (sediment) DDT (tissue, sediment) Dieldrin (sediment) PCBs (tissue, sediment) Lead (sediment) Sediment Toxicity Zinc (sediment)	City of Oxnard City of Port Hueneme City of San Buenaventura Ventura County Watershed Protection District

0001985

**ATTACHMENT B**  
 Calleguas Creek Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-CC), Receiving Water (W-3 & W-4), and Land Use (A-1) Sites

<b>Wet Weather</b>	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Residual Chlorine	
TDS	
<b>Metal</b>	
Aluminum - Total	Chromium - Total
Barium - Total	Cooper - Dissolved
Beryllium - Total	Mercury - Total
Cadmium - Total	Nickel - Total
<b>Nutrient</b>	
Nitrate as Nitrogen	
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Hexachlorobenzene	
Indeno(1,2,3-cd)pyrene	
Pentachlorophenol	
<b>Pesticide</b>	
4,4'-DDD	
4,4'-DDE	

<sup>1</sup> Mass Emission, Receiving Water, and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern



**ATTACHMENT B**

Santa Clara River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME-SCR) and Land Use (I-2 & R-1) Sites

<b>Wet Weather</b>	
<b>Anion</b>	
Chloride	
<b>Bacteriological</b>	
E. Coli	
Fecal Coliform	
<b>Conventional</b>	
Ph	
TDS	
<b>Metal</b>	
Aluminum - Total	Cooper - Dissolved
Arsenic - Total	Mercury - Total
Barium - Total	Nickel - Total
Cadmium - Total	Selenium - Total
Chromium - Total	Zinc - Dissolved
<b>Organic</b>	
Benzo(a)anthracene	
Benzo(a)pyrene	
Benzo(b)fluoranthene	
Benzo(k)fluoranthene	
Bis(2-ethylhexyl)phthalate	
Chrysene	
Dibenz(a,h)anthracene	
Indeno(1,2,3-cd)pyrene	
<b>Pesticide</b>	
4,4'-DDE	

<sup>1</sup> Mass Emission and Land Use wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07), data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

**ATTACHMENT B**  
 Ventura River Watershed Pollutants of Concern (2003 through 2007)<sup>1</sup>

Mass Emission (ME- VR & ME- VR2) Sites

<b>Wet Weather</b>
<b>Anion</b>
Chloride
<b>Bacteriological</b>
E. Coli
Fecal Coliform
<b>Conventional</b>
TDS
<b>Metal</b>
Aluminum - Total
Cadmium - Total
Chromium - Total
Mercury - Total
Nickel - Total
Zinc - Dissolved
<b>Organic</b>
Benzo(a)pyrene
Benzo(b)fluoranthene
Bis(2-ethylhexyl)phthalate
Chrysene
Hexachlorobenzene
<b>Pesticide</b>
4,4'-DDD
4,4'-DDE

<sup>1</sup> Mass Emission wet weather monitoring data was compared to Basin Plan Objectives and CTR-Acute Objectives, to obtain exceedences (Pollutants of Concern). Monitoring data is from the Ventura Countywide NPDES Stormwater Monitoring Program Water Quality Monitoring Reports (2003/04 through 2006/07). Monitoring data for 2000/01 through 2002/03 was either presented with exceedences not analyzed or by percent exceedence, so data could not be compared to 2003/04 through 2006/07 exceedence data. See definitions for Pollutants of Concern.

**ATTACHMENT C**  
Treatment BMP Performance Standards

**Table 1 - Effluent Concentrations as Median Values**

BMP Category	Total Suspended Solids mg/L	Total Nitrate-Nitrogen mg/L	Total Copper, ug/L	Total Lead, ug/L	Total Zinc, ug/L
Detention Pond	27	0.48	15.9	14.6	58.7
Wet Pond	10	0.2	5.8	3.4	21.6
Wetland Basin	13	0.13	3.3	2.5	29.2
Biofilter	18	0.36	9.6	5.4	27.9
Media Filter	11	0.66	7.6	2.6	32.2
Hydrodynamic Device	23	0.29	11.8	5	75.1

Expected BMP pollutant removal performance for effluent quality was developed from the WERF-ASCE/ U.S. EPA International BMP Database, 2007.

See subpart 4.A.3 (Storm Water Quality Management Program Implementation- General Requirements).

**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Municipal Landfills (SIC 4953)

Hazardous Waste Treatment, Disposal and Recovery Facilities<sup>1</sup>

Facilities Subject to SARA Title III (also known as EPCRA)<sup>2</sup>

Restaurants<sup>3</sup>

Wholesale trade (scrap, auto dismantling) (SIC 50)

Automotive service facilities<sup>2</sup>

Fabricated metal products (SIC 34)

Motor freight (SIC 42)

Chemical/allied products (SIC 28)

Automotive Dealers/Gas Stations (SIC 55)

Primary Metals Products (SIC 33)

Nursery<sup>3</sup> (NAICS 424930 and 444220)

Electric/Gas/Sanitary (SIC 49)

Air Transportation (SIC 45)

Water Transportation (SIC 44)

Rubbers/Miscellaneous Plastics (SIC 30)

Local/Suburban Transit (SIC 41)

Railroad Transportation (SIC 40)

Oil & Gas Extraction (SIC 13)

Lumber/Wood Products (SIC 24)

Machinery Manufacturing (SIC 35)

Transportation Equipment (SIC 37)

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<sup>1</sup> Non-underlined categories belong to Industrial Facilities.

<sup>2</sup> Various categories subject to these requirements.

<sup>3</sup> See Definition in Part 7. of the Order.

**ATTACHMENT D**  
Critical Sources Categories<sup>1</sup>

Stone, Clay, Glass, Concrete (SIC 32)

Leather/Leather Products (SIC 31)

Miscellaneous Manufacturing (SIC 39)

Food and kindred Products (SIC 20)

Mining of Nonmetallic Minerals (SIC 14)

Printing and Publishing (SIC 27)

Electric/Electronic (SIC 36)

Paper and Allied Products (SIC 26)

Furniture and Fixtures (SIC 25)

Laundries (SIC 72)

Instruments (SIC 38)

Textile Mills Products (SIC 22)

Apparel (SIC 23)

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<sup>1</sup> Non-underlined categories belong to Industrial Facilities.

**ATTACHMENT E**  
Determination of Erosion Potential

$E_p$  is determined as follows- The *total effective work* done on the channel boundary is derived and used as a metric to predict the likelihood of channel adjustment given watershed and stream hydrologic and geomorphic variables. The index under urbanized conditions is compared to the index under pre-urban conditions expressed as a ratio ( $E_p$ ). The effective work index ( $W$ ) is computed as the excess shear stress that exceeds a critical value for streambed mobility or bank material erosion integrated over time and represents the total work done on the channel boundary:

$$W = \sum_{i=1}^n (\tau_i - \tau_c)^{1.5} \cdot V \cdot \Delta t_i \quad (1)$$

Where  $\tau_c$  = critical shear stress that initiates bed mobility or erodes the weakest bank layer,  $\tau_i$  = applied hydraulic shear stress,  $\Delta t$  = duration of flows (in hours), and  $n$  = length of flow record. The effective work index for presumed stable stream channels under pre-urban conditions is compared to stable and unstable channels under current urbanized conditions. The comparison, expressed as a ratio, is defined as the Erosion Potential ( $E_p$ )<sup>1</sup> (McRae (1992, 1996).

$$E_p = \frac{W_{post}}{W_{pre}} \quad (2)$$

where:

$W_{post}$  = work index estimated for the post-urban condition  
 $W_{pre}$  = work index estimated for the pre-urban condition

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<sup>1</sup> MacRae, C.R. 1992. The Role of Moderate Flow Events and Bank Structure in the Determination of Channel Response to Urbanization. Resolving conflicts and uncertainty in water management: Proceedings of the 45th Annual Conference of the Canadian Water Resources Association. Shrubsole, D, ed. 1992, pg. 12.1-12.21; MacRae, C.R. 1996. Experience from Morphological Research on Canadian Streams: Is Control of the Two-Year Frequency Runoff Event the Best Basis for Stream Channel Protection. Effects of Watershed Development and Management on Aquatic Ecosystems, ASCE Engineering Foundation Conference, Snowbird, Utah, pg. 144-162

**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>CONSTITUENTS</b>	<b>MLs</b>
<b>CONVENTIONAL POLLUTANTS</b>	<b>mg/L</b>
Oil and Grease	5
Total Phenols	0.1
Cyanide	0.005
pH	0 - 14
Temperature	N/A
Dissolved Oxygen	Sensitivity to 5 mg/L
<b>BACTERIA (single sample limits)</b>	<b>MPN/100ml</b>
Total coliform (marine waters)	10,000
Enterococcus (marine waters)	104
Fecal coliform (marine & fresh waters)	400
E. coli (fresh waters)	235
<b>GENERAL</b>	<b>mg/L</b>
Dissolved Phosphorus	0.05
Total Phosphorus	0.05
Turbidity	0.1 NTU
Total Suspended Solids	2
Total Dissolved Solids	2
Volatile Suspended Solids	2
Total Organic Carbon	1
Total Petroleum Hydrocarbon	5
Biochemical Oxygen Demand	2
Chemical Oxygen Demand	20-900
Total Ammonia-Nitrogen	0.1
Total Kjeldahl Nitrogen	0.1
Nitrate-Nitrite	0.1
Alkalinity	2
Specific Conductance	1umho/cm
Total Hardness	2
MBAS	0.5
Chloride	2
Fluoride	0.1
Methyl tertiary butyl ether (MTBE)	1
Perchlorate	4 µg/L

<sup>1</sup> For priority pollutants, MLs published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified. Method Detection Levels (MDLs) must be lower than or equal to the ML value, unless otherwise approved by the Regional Board.

**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>METALS (Dissolved &amp; Total)</b>	<b>µg/L</b>
Aluminum	100
Antimony	0.5
Arsenic	1
Beryllium	0.5
Cadmium	0.25
Chromium (total)	0.5
Copper	0.5
Hex. Chromium	5
Iron	100
Lead	0.5
Mercury	0.5
Nickel	1
Selenium	1
Silver	0.25
Thallium	1
Zinc	1
<b>SEMIVOLATILE ORGANIC COMPOUNDS</b>	<b>µg/L</b>
<b>ACIDS</b>	<b>µg/L</b>
2-Chlorophenol	2
4-Chloro-3-methylphenol	1
2,4-Dichlorophenol	1
2,4-Dimethylphenol	2
2,4-Dinitrophenol	5
2-Nitrophenol	10
4-Nitrophenol	5
Pentachlorophenol	2
Phenol	1
2,4,6-Trichlorophenol	10
<b>BASE/NEUTRAL</b>	<b>µg/L</b>
Acenaphthene	1
Acenaphthylene	2
Anthracene	2
Benzidine	5
1,2 Benzanthracene	5
Benzo(a)pyrene	2
Benzo(g,h,i)perylene	5
3,4 Benzoflouranthene	10

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**ATTACHMENT G**Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>BASE/NEUTRAL</b>	<b>µg/L</b>
Benzo(k)flouranthene	2
Bis(2-Chloroethoxy) methane	5
Bis(2-Chloroisopropyl) ether	2
Bis(2-Chloroethyl) ether	1
Bis(2-Ethylhexl) phthalate	5
4-Bromophenyl phenyl ether	5
Butyl benzyl phthalate	10
2-Chloroethyl vinyl ether	1
2-Chloronaphthalene	10
4-Chlorophenyl phenyl ether	5
Chrysene	5
Dibenzo(a,h)anthracene	0.1
1,3-Dichlorobenzene	1
1,4-Dichlorobenzene	1
1,2-Dichlorobenzene	1
3,3-Dichlorobenzidine	5
Diethyl phthalate	2
Dimethyl phthalate	2
di-n-Butyl phthalate	10
2,4-Dinitrotoluene	5
2,6-Dinitrotoluene	5
4,6 Dinitro-2-methylphenol	5
1,2-Diphenylhydrazine	1
di-n-Octyl phthalate	10
Fluoranthene	0.05
Fluorene	0.1
Hexachlorobenzene	1
Hexachlorobutadiene	1
Hexachloro-cyclopentadiene	5
Hexachloroethane	1
Indeno(1,2,3-cd)pyrene	0.05
Isophorone	1
Naphthalene	0.2
Nitrobenzene	1
N-Nitroso-dimethyl amine	5
N-Nitroso-diphenyl amine	1
N-Nitroso-di-n-propyl amine	5
Phenanthrene	0.05
Pyrene	0.05
1,2,4-Trichlorobenzene	1

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**ATTACHMENT G**

Storm Water Monitoring Program's Constituents with Associated Minimum Levels (MLs)<sup>1</sup>

<b>CHLORINATED PESTICIDES</b>	<b>µg/L</b>
Aldrin	0.005
alpha-BHC	0.01
beta-BHC	0.005
delta-BHC	0.005
gamma-BHC (lindane)	0.02
alpha-chlordane	0.1
gamma-chlordane	0.1
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
Dieldrin	0.01
alpha-Endosulfan	0.02
beta-Endosulfan	0.01
Endosulfan sulfate	0.05
Endrin	0.01
Endrin aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Toxaphene	0.5
<b>POLYCHLORINATED BIPHENYLS</b>	<b>µg/L</b>
Aroclor-1016	0.5
Aroclor-1221	0.5
Aroclor-1232	0.5
Aroclor-1242	0.5
Aroclor-1248	0.5
Aroclor-1254	0.5
Aroclor-1260	0.5
<b>ORGANOPHOSPHATE PESTICIDES</b>	<b>µg/L</b>
Atrazine	2
Chlorpyrifos	0.05
Cyanazine	2
Diazinon	0.01
Malathion	1
Prometryn	2
Simazine	2
<b>HERBICIDES</b>	<b>µg/L</b>
2,4-D	0.02
Glyphosate	5
2,4,5-TP-SILVEX	0.2

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**ATTACHMENT I**  
Storm Water Monitoring Program's Major Outfall Stations

<b>PERMITTEE</b>	<b>STATION ID</b>	<b>LATITUDE</b>	<b>LONGITUDE</b>
City of Camarillo	Camarillo-1	34°13'10.00"N	119° 3'58.06"W
City of Fillmore	Fillmore-1	34°24'16.51"N	118°55'50.47"W
Unincorporated Ventura County	VCMeiners Oaks-1	34°26'43.98"N	119°17'25.18"W
City of Moorpark	Moorpark-1	34°16'44.29"N	118°54'19.40"W
City of Ojai	Ojai-1	34°26'41.25"N	119°14'28.43"W
City of Oxnard	Oxnard-1	34°14'17.38"N	119°11'23.08"W
City of Port Hueneme	Hueneme-1	34° 8'29.30"N	119°11'21.09"W
City of Santa Paula	Santa Paula-1	34°20'54.99"N	119° 3'19.82"W
City of Simi Valley	Simi Valley-1	34°16'18.59"N	118°47'1.51"W
City of Thousand Oaks	Thousand Oaks-1	34°12'49.16"N	118°55'16.24"W
City of Ventura	Ventura-1	34°14'35.86"N	119°11'40.86"W

**STATE OF CALIFORNIA**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**REPORTING PROGRAM - No. CI 7388  
FOR  
ORDER No. 09-0057  
NPDES PERMIT NO. CAS004002  
WASTE DISCHARGE REQUIREMENTS**

**MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.**

**May 7, 2009**



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**Reporting Program Requirements**

The Principal Permittee shall submit by December 15<sup>th</sup> of each year, beginning the year of 2007, an Annual Report to the Regional Water Board Executive Officer in the form of one hard copy and three compact disks (CD) (or equivalent electronic format).

1. The Annual Report shall document the status of the General Storm Water Program, an integrated summary of the results of analyses from:
  - (a) The monitoring program described under Part 1-Monitoring Report; and
  - (b) The requirements described under Part 2- Program Report.
2. Plans shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a compact disk (CD), submit 1 hard copy and 3 CD copies.
3. Study Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.
4. Progress Reports shall be submitted to the Regional Water Board Executive Officer in the form of a hard copy and on a CD, submit 1 hard copy and 3 CD copies.

**PART 1 - MONITORING REPORT****A. The following shall be included in the Annual Report:**

1. Mass Emissions
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the mass emission station annual monitoring results highlighting exceedences (POC) with corresponding sampling.
2. Major Outfalls
  - (a) Assess the variability of storm water constituents from the results of all monitored storms events.
  - (b) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (c) A summary of the major outfalls station annual monitoring results highlighting exceedences (POC) with corresponding sampling dates.
  - (d) Outfall(s) name and ID number (if applicable).

3. Aquatic Toxicity Monitoring
  - (a) An analysis of the mass emission station and major outfall station samples for aquatic toxicity.
  - (b) A report on the development, implementation, and results for each TRE Corrective Action Plan in the Annual Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  - (c) Report on the development, implementation, and results for each TRE Corrective Action Plan, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  - (d) All constituents (POCs) that caused toxicity or exceeded any applicable water quality objectives at the associated mass emission and/ or major outfall station the previous year shall be listed.
  - (e) A summary of the mass emission station and major outfall station annual monitoring results with corresponding sampling dates and Tox output.
  
4. TMDL Compliance Monitoring
  - (a) A summary of the annual monitoring results for each TMDL.
    - (1) Corresponding sampling dates and Tox output (if applicable).
  
5. Bioassessment
  - (a) Assess the effects of MS4 discharges on the biological integrity of the waterbody.
  - (b) Permittees shall conduct bioassessment, [using Southern California Regional Bioassessment protocol], at one fixed site in each of the watersheds below on an annual basis:
    - (1) Ventura River
    - (2) Santa Clara River
    - (3) Calleguas Creek

**B. The following shall be submitted to the Regional Water Board Executive Officer:**

1. Aquatic Toxicity Monitoring
  - (a) A TRE Corrective Action Plan within 30 days after the source of toxicity and appropriate BMPs are identified.
  
2. Pyrethroid Insecticides Study
  - (a) Pyrethroid insecticides study final report, no later than 8 months after completion of the study.
  
3. Hydromodification Control Study
  - (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
  
4. Non-Compliance



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- (a) When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted:
  - (1) Statement of situation.
  - (2) Explanation of circumstance(s) with documentation.
  - (3) Statement of corrective action for the future.
5. Low Impact Development
  - (a) Letter stating how the Principal Permittee is satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special studies.
6. Volunteer Monitoring Program
  - (a) Results as obtained by volunteer monitoring programs in the Ventura watersheds including, but not limited to, the following:
    - (1) Ventura River - (Ventura Stream Team)
    - (2) Santa Clara River - (Santa Clara River Stream Team)
    - (3) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program)
    - (4) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program)

**C. Submitted electronically to the Regional Water Board, the following shall be:**

1. Mass Emissions
  - (a) Monitoring results no later than 45 days from sample collection date.
2. Major Outfalls
  - (a) Monitoring results no later than 45 days from sample collection date.
3. Aquatic Toxicity Monitoring
  - (a) Monitoring results no later than 45 days from sample collection date.
3. TMDL Compliance Monitoring
  - (a) Monitoring results no later than 45 days from sample collection date.
4. Non-Compliance
  - (a) When the Order's monitoring requirements can not be performed due to circumstances beyond the Permittees' control, then within 48 hours the following shall be submitted to the Regional Water Board Executive Officer:
    - (1) Statement of situation.
    - (2) Explanation of circumstance(s) with documentation.
    - (3) Statement of corrective action for the future.

5. Data transmitted shall be in the SMCs Standardized Data Transfer Formats (SDTFs) and all updates are to be adhered to.<sup>1</sup>
  - (a) Regional Water Board's Storm Water E-mail Address:  
[MS4stormwaterrb4@waterboards.ca.gov](mailto:MS4stormwaterrb4@waterboards.ca.gov)
6. Beach Water Monitoring
  - (a) Assess bacteriological levels at various beaches in Ventura County, ensuring compliance with beach water quality standards.
  - (b) Reports of beach monitoring shall be submitted to the Regional Board electronically within one business day of completion of analysis.

## PART 2 - PROGRAM REPORT

On an annual basis the Permittees shall complete an Annual Monitoring Program Report that responds adequately to the evaluative questions below which correspond to the Order.

### DISCHARGE PROHIBITIONS

- (a) Have you effectively prohibited all non-storm discharges into the MS4 and watercourses?
- (b) If there are any exceptions in the municipal code, list the exceptions to the municipal code. In other words, which non-storm water discharges does your municipality allow? Under what conditions are they allowed (with BMPs)? List which BMPs are required prior to discharge.
- (c) Do you have a procedure to assure that any project within your jurisdiction which may undertake ground water dewatering obtain a permit from the Regional Water Board?
- (d) How many projects are permitted to dewater in your jurisdiction?
- (e) How many are permanent dewatering to continue after construction is completed?
- (f) Do you have a permitting/ permission system for the discharge of dechlorinated/ debrominated swimming pool discharges? Explain it.
- (g) If yes, how many swimming pools are drained with the agency's permit/ permission?
- (h) How do you ensure that discharge limits for chlorine, bromine, etc are not exceeded?
- (i) Do you allow the discharge of "salt water" swimming pool discharges? If yes
- (j) Do you have a permitting/ permission system for the discharge of "salt water" swimming pool discharges? Explain it.

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<sup>1</sup> The SMC developed a SDTFs for use by member agencies for electronic recording and transfer of storm water monitoring data. Southern California Coastal Water Research Project, Technical Report 421 (August, 2004).

### RECEIVING WATER LIMITATIONS

1. At any time, has the discharge from the MS4 caused or contributed to the violation of water quality objectives or water quality standards?
2. At any time, has the discharge from the MS4 for which a Permittee is at least partially responsible, caused or contributed to a condition of nuisance?
3. At any time, has the discharge of pollutant(s) from the MS4 exceeded the MS4 Waste Load Allocation(s) for Wet Weather Discharges?
4. For pollutant(s) which continue to cause or contribute to water quality impairments, but for which TMDLs have not yet been developed or approved, what has the Permittee implemented to eliminate future water quality impairments?

### PART 3 - STORM WATER QUALITY MANAGEMENT PROGRAM IMPLEMENTATION

#### A. General Requirements

#### B. Legal Authority

1. Does your municipal agency possess all the necessary legal authority to implement and enforce each requirement of this Order?
2. If the answer is no, explain why not.
3. By what date certain will the municipal agency have all the necessary legal authority?
4. Attach a copy of the new or updated statement by its legal counsel that the Permittee has obtained all necessary legal authority to comply with this Order through adoption of ordinances and/ or municipal code modifications.
5. After submitting the Statement from your legal counsel, was your city's municipal code (or other legal authority) changed (Any section that applies to or affects storm water permitting or requirements)? On what date(s) was it changed? Provide the changes.

#### C. Fiscal Resources

1. Provide a detailed Annual Budget Summary of the Permittee's allocation of funds expended to implement the activities required to comply with the conditions of this Order.
2. Indicate the source(s) of funding (whether general funds; and/ or Benefit Assessment Program funds; plan review fees; permit fees; industrial/ commercial user fee; revenue bonds; grants; or other funding mechanism. Each Permittee's Annual Budget Summary shall separately include:
3. Annual Budget Summary of expenditures applied to the storm water management program and also identify the storm water budget for the following year, using

estimated percentages and written explanations where necessary, for the specific categories noted below:

(a) Program Overall Management Activities;

(1) Administrative costs

(b) Program Required Activities Implementation;

Provide an estimated percent breakdown of expenditures for the categories below:

(1) Illicit connection/ illicit discharge

(2) Development planning

(3) Development construction

(4) Construction inspection activities

(5) Industrial/ Commercial inspection activities

(6) Public Agency Activities

(7) Maintenance of Structural BMPs and Treatment Control BMPs

(A) Municipal Street Sweeping for Commercial/ Industrial landuse only;

(B) Catch basin clean-outs (including dumping fees);

(C) Storm drain clean-outs (including dumping fees); and

(D) Other costs (describe).

(8) Public Information and Participation;

(9) Monitoring Program; and

(10) Miscellaneous Expenditures (describe).

**D. Designation and Responsibilities of the Principal Permittee**

The Principal Permittee shall submit within the Annual Program Report information on the implementation of the following:

1. Coordination and facilitation of activities to comply with the requirements of this Order;
2. Evaluation, assessment, and summary of the results of the monitoring program and the effectiveness of the implementation of BMPs and any recommended change.

**E. Responsibilities of the Permittees**

Each Permittee shall include within the Annual Program Report information on the implementation of the following:

1. A statement under penalty of perjury that the Permittee is or is not in compliance with the requirements of this Order and any subsequent modifications thereto.
2. A summary of how coordination occurs among its internal departments and agencies to ensure the implementation of the requirements of this Order.
3. Description of the intra-agency coordination by Agency departments (e.g. Community Development (Planning), Public Works, Sanitation, Engineering, Fire Department, Building and Safety, Code Enforcement, Public Health, Water and/ or Power Department, etc.) to ensure the successful implementation of the provisions of this Order.

4. In addition to the Budget Summary, identify any supplemental dedicated budgets for the storm water categories listed.
5. Identify the staff which participated at all committee or subcommittee meetings and when.

#### **PART 4 - SPECIAL PROVISIONS**

##### **A. General Requirements**

1. Best Management Practice Substitution
  - (a) Did the Regional Water Board Executive Officer approve any site-specific BMP substitution for your agency?
  - (b) If so, describe implementation of that/ those BMP(s).

##### **B. Watershed Initiative Participation**

1. Describe your participation (Principal Permittee) and present data results in the following:
  - (a) Southern California Stormwater Monitoring Coalitions' (SMC) Regional Monitoring program for the Southern California Regional Bioassessment.

##### **C. Public Information and Participation Program (PIPP)**

1. Describe the Permittee successes in:
  - Measurably increasing the knowledge of the target audiences regarding the MS4, the impacts of storm water pollution on receiving waters and potential solutions to mitigate the problems caused;
  - Measurably changing the waste disposal and runoff pollution generation behavior of target audiences by encouraging implementation of appropriate solutions;
  - Involving and engaging communities in Ventura County to participate in mitigating the impacts of storm water pollution.
2. Residential Program
  - (a) Did the Permittee label each storm drain inlet that they own with a legible "no dumping" message.
  - (b) How many inlets were labeled this year?
  - (c) How many inlets were labeled cumulatively?
  - (d) Did the Permittee install signs with prohibitive language discouraging illegal dumping at designated public access points to creeks, other relevant water bodies, and channels?
  - (e) How many?

##### Public Reporting

- (a) Identify the staff person(s) who will serve as the contact person(s) for reporting clogged catch basin inlets and illicit discharges/ dumping, faded or lack of catch basin stencils, and general storm water management information.
- (b) Did the Permittee update this information by July 1 of this year?
- (c) The Principal Permittee shall compile a list of the general public reporting contacts from all Permittees and make this information available on the web site (<http://www.vcstormwater.org/contact.htm>) and upon request.

#### Outreach and Education

- (1) Provide documentation to show that the Permittees implemented the following activities:
  - Storm Water pollution prevention advertising campaign.
  - Storm Water pollution prevention public service announcements.
  - Distribution of storm water pollution prevention public education materials to auto parts stores, home improvement centers and pet shops/ feed stores in regards to information on the proper storage and disposal of household waste materials, construction waste materials and vehicle waste fluids, the proper use of fertilizers and pesticides and the proper disposal of animal wastes.
  - Organization of watershed Citizen Advisory Groups/ Committees to develop/ implement effective methods to educate the public about storm water pollution.
  - Organization of events for residents and population subgroups.
  - Maintenance of the Countywide storm water website ([www.vcstormwater.org](http://www.vcstormwater.org)), including educational materials.
- (2) Provide documentation to show that the Principal Permittee implemented the strategy to educate ethnic communities through culturally acceptable and effective methods.
- (3) Did each Permittee implement outreach efforts to residents and school children related to the proper disposal of litter, green waste, pet waste, proper vehicle maintenance, lawn care and water conservation practices?
- (4) Did the Permittees make demonstrable positive effects on the general public related to storm water quality?
- (5) On 4 above, explain how so.
- (6) Did the Principal Permittee, in cooperation with the Permittees, provide schools within each School District in the County with materials, including, but not limited to, videos, live presentations, and other information necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution?
- (8) Provide the contact information for their appropriate staff responsible for storm water public education activities to the Principal Permittee and changes to contact information no later than 30 days after a change occurs.

- (9) Provide the assessment of the strategy to measure the effectiveness of in-school educational programs.

Businesses Program

- (a) Corporate Outreach
- (b) Provide a progress update on the Corporate Outreach program.

**D. Industrial/ Commercial Facilities Program**

Each Permittee shall require implementation of pollutant reduction and control measures at industrial and commercial facilities, with the objective of reducing pollutants in storm water runoff. Except as specified in other sections of this Order, pollutant reduction and control measures may be used alone or in combination, and may include Structural Treatment Control, Source Control BMPs, and operation and maintenance procedures, which may be applied before, during, and/ or after pollution generating activities. At a minimum, the Industrial/ Commercial Facilities Control Program Report shall include requirements to: (1) track, (2) inspect, and (3) ensure compliance with municipal ordinances at industrial and commercial facilities that are critical sources of pollutants in storm water runoff.

1. Inventory of Critical Sources

- (a) Describe how the critical sources are inventoried, whether via a watershed-based inventory or database or GIS. Provide a sample.
- (b) Each Permittee shall include the following minimum fields of information for each critical sources industrial and commercial facility.
  - (1) Name of facility and owner/ operator.
  - (2) Address of facility.
  - (3) Coverage under the ISWGP or other individual or general NPDES permits or any applicable waiver issued by the Regional or State Board pertaining to runoff discharges.
  - (4) A narrative description including SIC (NAICS) codes that best describe the industrial activities performed and principal products used at each facility and status of exposure to storm water.
- (c) Did each Permittee update its inventory of critical sources annually?
- (d) Critical Source Inventory Database

Did you (individually or jointly) update the Database for Critical Sources Inventory?	Yes <input type="checkbox"/>
	No <input type="checkbox"/>

Comments/ Explanation/ Conclusion:

2. Inspection Program

(a) The Permittee shall verify the following for each inspection:

- (1) The facility has a current Waste Discharge Identification (WDID) number or a current No Exposure Certification for discharging storm water associated with industrial activity?
- (2) A Storm Water Pollution Prevention Plan available on-site?
- (3) The facility is effectively implementing BMPs in compliance with County and municipal ordinances including the source control BMPs outlined in Part 4.D. of this Order
- (4) The facility needs to implement additional treatment control BMPs where the storm water from the MS4 discharges to a CWA §303(d) listed water body?



Provide the reporting data as suggested in the following table.

Category	Initial Number of Facilities at the start of cycle proposed for inspection by categories (after the initial year, the updated number based on the new data)	Number of facilities inspected in the current reporting year	% Completed at the time of this report for present cycle (from the initial value, and from the updated value after first cycle)	Total number since permit adoption
Landfills				
TSDF				
Comments/ Explanation/ Conclusion:				

- Did each Permittee perform an initial inspection at all facilities in the categories listed no later than (two years after the adoption of the Order)?
- All facilities determined as having exposure of industrial activities to storm water are subject to a second compliance inspection. Were all inspections completed?
- Was there a minimum interval of six months between the first and the second compliance inspection per site as required?

BMPs Implementation

Provide the reporting data as suggested in the following table.

Category	Number of facilities inspected by category this reporting year	Number of facilities identified as adequately implementing BMPs as specified in this reporting year	Percent adequately implementing out of total in this reporting year	Number of facilities required to implement or upgrade in this reporting year	Number of facilities inspected by category in this reporting cycle	Number of facilities identified as adequately implementing BMPs as specified in this reporting cycle	Percent adequately implementing in this reporting cycle	Number of facilities required to implement or upgrade in this reporting cycle	Total Number during this permit adequately implementing	Total Number during this permit required to implement or upgrade
Landfills										
etc...										

Comments/ Explanation/ Conclusion:

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Enforcement Activities

Provide the reporting data as suggested in the following tables.

Enforcement Actions by categories (e.g. Warning letter, NOV, referral to D.A., etc.)	Number of facilities issued enforcement actions in the current reporting year	Number of facilities (re)inspected due to enforcement actions in current reporting year	Number of facilities (re)inspected due to enforcement actions in current reporting cycle	Number of facilities brought into compliance in the current reporting year	Number of facilities brought into compliance in current reporting cycle	Total number of enforcement actions since permit adoption (by category)
NOVs						
Etc...						

Facilities by category	Number of Warning letters	Number of NOVs	Number of Referrals	Number of Other(Explain)
Landfill				
Etc...				
Comments/ Explanation/ Conclusion:				

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Nurseries and nursery centers

- (a) At nurseries subject to the agricultural waiver issued by the Regional Water Board, provide a spreadsheet with the following information:
- How many operators have enrolled under the waiver?
  - What is their identification number?
  - How many nonfilers did you notify to apply under the agricultural waiver?
- (b) Did you submit electronically semiannually to the Regional Water Board a list with the names of facilities notified to apply for the waiver?

Ensuring Compliance of Critical Sources

- (a) On how many sites did you determine that a BMP is infeasible, and require implementation of other BMPs that will achieve the equivalent reduction of pollutants in the storm water discharges?
- (b) For critical sources that discharge to ESAs or that are tributary to CWA § 303(d) impaired water bodies, does the Permittee require operators to implement additional controls to reduce pollutants in storm water runoff that are causing or contributing to exceedences of Water Quality Standards?

Investigation of Complaints Regarding Facilities – Transmitted by the RB Staff

- (a) How many investigations were conducted as a result of USEPA or Regional Water Board staff referrals of violators to the Permittee?
- (b) Was the investigation initiated within one business day of being contacted?
- (c) What were the results of each investigation?

**E. Planning and Land Development Program**

1. Low Impact Development
- (a) Did all new development and redevelopment projects integrate Low Impact Development (LID) principles into project design?
- (b) How many did?
- (c) How many did not?
- (d) If not, Why not?

**Numeric Hydromodification Mitigation Criteria**

1. Hydrologic (Flow/ Volume/ Duration) Control
- (a) Did the Permittees require all new developments and redevelopment projects to implement hydrologic control measures, to prevent accelerated downstream erosion and to protect stream habitat in natural drainage systems?
- (b) How many did?
- (c) How many did not?
- (d) Why not?
2. Post Construction Storm Water BMP Program

- (a) For each project, did each Permittee require that during the construction of a single-family hillside home, actions be taken to:
    - (1) Conserve natural areas?
    - (2) Protect slopes and channels?
    - (3) Provide storm drain system stenciling and signage?
    - (4) Divert roof runoff to vegetated areas before discharge unless the diversion would result in slope instability? and
    - (5) Direct surface flow to vegetated areas before discharge unless the diversion would result in slope instability?
  - (b) Did each Permittee require that all development projects equal to 1 acre or greater be subject to conditioning and approval of post-construction BMPs as approved by the Regional Water Board in Board Resolution No. R 00-02?
  - (c) Did each Permittee require that the following development projects be subject to conditioning and approval of post-construction BMPs?
    - (1) Retail gasoline outlets 5,000 square feet or more of surface area; How many sites?
    - (2) Restaurants (SIC 5812) 5,000 square feet or more of surface area; How many sites?
    - (3) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces; How many sites?
    - (4) Automotive service facilities (SIC 5013,5014,5541,7532-7534 and 7536-7539) [5,000 square feet or more of surface area]; How many sites? and
    - (5) Redevelopment projects in subject categories that meet Redevelopment thresholds. How many sites?
  - (d) Did each Permittee require that post construction BMPs be subject to conditioning and approval for development projects located in or directly adjacent to or discharging directly to an Environmentally Sensitive Area (ESA), where the development will:
    - (1) Discharge storm water and urban runoff that is likely to impact a sensitive biological species or habitat.
    - (2) Create 2,500 square feet or more of impervious surface area.
3. Numeric Water Quality Design Criteria

**Projects disturbing land areas less than 50 acres**

- (a) How many did the Permittee require that post-construction Treatment Control BMPs incorporate, at a minimum, a volumetric and/ or hydrologic (flow based) treatment control design standard, as identified below to mitigate (infiltrate, filter or treat) storm water runoff as specified below?
- (b) How many sites were exempted from the requirement?
- (c) Why were they exempted?

**Projects disturbing land area of 50 acres or greater**

For sites 50 acres or greater how many did the Permittee require that post-construction Treatment Control BMPs be,

- (a) Designed using an appropriate public domain hydrodynamic model (such as Storm Water Management Model (SWMM) 5 or Hydrologic Engineering Center – Hydrologic Simulation Program – Fortran (HEC-HSPF); and incorporate
- (b) Rainfall intensity based on hourly rainfall records;
- (c) An adjustment factor for within hour rainfall variability; and
- (d) Hydraulics of BMP Performance.
- (e) How many projects did this apply to?
- (f) Were there any sites that were exempted from the requirement?
- (g) How many sites were exempted?
- (h) Why were they exempted?

4. Applicability of Numerical Criteria

Did the Permittee require all projects equal to 1 acre or greater and the following additional projects to design and implement post-construction treatment controls to mitigate storm water pollution for the following?:

- (a) Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534 and 7536-7539) [5,000 square feet or more of surface area].
- (b) Retail gasoline outlets [5,000 square feet or more of impervious surface area and with projected Average Daily Traffic (ADT) of 100 or more vehicles].  
Subsurface Treatment Control BMPs which may endanger public safety (i.e., create an explosive environment) are considered not appropriate.
- (c) Restaurants (SIC 5812) [5,000 square feet or more of surface area].
- (d) Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces.
- (e) Projects located in, adjacent to or discharging directly to an ESA that meet threshold conditions identified above in 2(d).
- (f) Redevelopment projects in subject categories that meet Redevelopment thresholds.
- (g) How many projects did this apply to?
- (h) Were there any sites that were exempted from the requirement?
- (i) How many sites were exempted?
- (j) Why were they exempted?

5. Site Specific Mitigation

- (a) List how many sites did each Permittee require the implementation of a site-specific plan to mitigate post-development storm water for new development and redevelopment not identified in Section 4.E but which may potentially have

adverse impacts on post-development storm water quality, with one or more of the following project characteristics:

- (1) Vehicle or equipment fueling areas. How many?
  - (2) Vehicle or equipment maintenance areas, including washing
  - (3) and repair. How many?
  - (4) Commercial or industrial waste handling or storage. How many?
  - (5) Outdoor handling or storage of hazardous materials. How many?
  - (6) Outdoor manufacturing areas. How many?
  - (7) Outdoor food handling or processing. How many?
  - (8) Outdoor animal care, confinement, or slaughter. How many?
  - (9) Outdoor horticulture activities. How many?
- (b) Were there any sites that were exempted from the requirement?
- (c) How many sites were exempted?
- (d) Why were they exempted?
6. Redevelopment Projects
- (a) Did the Permittees apply the post construction BMP requirements, or site specific requirements including post-construction storm water mitigation to all projects that undergo significant Redevelopment in their respective categories?
  - (b) How many?
  - (c) Were there any sites that were exempted from the requirement?
  - (d) How many sites were exempted?
  - (e) Why were they exempted?
7. Maintenance Agreement and Transfer
- (a) How many developments subject to post construction BMP requirements and site specific plan requirements actually provided verification of maintenance provisions for Structural and Treatment Control BMPs, including but not limited to legal agreements, covenants, CEQA mitigation requirements, and or conditional use permits?
  - (b) How many of each verification were received?
  - (c) The developer's signed statement accepting responsibility for maintenance until the responsibility is legally transferred?
  - (d) A signed statement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance and that it meets all local agency design standards?
  - (e) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
  - (f) Written text in project conditions, covenants and restrictions (CCRs) for residential properties assigning maintenance responsibilities to the Home Owners Association for maintenance of the Structural and Treatment Control BMPs?

- (g) Written conditions in the sales or lease agreement, which requires the recipient to assume responsibility for maintenance and conduct a maintenance inspection at least once a year?
- (h) Another type of legally enforceable agreement that assigns responsibility for the maintenance of post-construction Structural or Treatment Control BMPs?
8. Development Planning Coordination and Enforcement
- (a) Did you inspect each new development and redevelopment project for post construction controls prior to approving and signing off for occupancy?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
9. Regional Storm Water Mitigation Program
- (a) Have you applied to the Regional Water Board for approval of a regional or sub-regional storm water mitigation program to substitute in part or wholly for on-site post-construction requirements?
10. Inspection and Tracking System for Post Construction Treatment BMPs
- (a) Did you implement the required Geographic Information System (GIS) or other electronic system for tracking projects conditioned for post construction treatment control BMPs?
- (b) Does include the following information? (Answer each separately)
- (1) Municipal Project ID?
  - (2) State WDID No.?
  - (3) Project Acreage?
  - (4) BMP Type and Description?
  - (5) BMP Location (GPS coordinates)?
  - (6) Date of Acceptance?
  - (7) Date of O&M Certification?
  - (8) Maintenance Records
  - (9) Inspection Date and Summary?
  - (10) Corrective Action?
  - (11) Replacement or Repair Dates?
- (c) Did you inspect all facilities to verify proper maintenance and operation of Treatment BMPs previously approved?
- (d) Did you accomplish the following?
- (e) BMP acceptance inspection to ensure proper installation?
- (1) Inspection once every two years of high priority post-construction BMPs to ensure treatment effectiveness, hydraulic function, and vector risk minimization?



## 11. Developer Technical Guidance and Information

- (a) List dates as to when the Ventura County Technical Guidance Manual for Stormwater Quality Control Measures was last updated to include the following:
- (1) Hydrologic (Peak Flow) Control criteria for volume control described herein and the interim criteria based on hydrograph matching?
  - (2) Expected BMP pollutant removal performance including consistent effluent quality and removal efficiency ranges (International BMP Database, technical reports and the scientific literature?
  - (3) Improved Correlation of BMPs with storm water POC?
  - (4) Data on Observed Local Effectiveness and performance of implemented BMPs?
  - (5) BMP Maintenance and Cost considerations?
  - (6) Criteria to facilitate integrated water resources planning and management in the selection of BMPs, including water conservation, groundwater recharge, public recreation, multipurpose parks, open space preservation, and redevelopment retrofits?

## 12. Project Review and Inter Department Coordination

- (a) Did you ensure that a detailed BMP review was performed including BMP sizing calculations, BMP pollutant removal appropriateness, for each plan submitted with a signed certification?
- (b) How many?
- (c) Were there any sites that were exempted from the requirement?
- (d) How many sites were exempted?
- (e) Why were they exempted?
- (f) Did you ensure that a clear structure for communication and delineated authority are established between and among municipal departments which have jurisdiction over project review, plan approval, project construction, and site maintenance?
- (g) Explain how?

## 13. California Environmental Quality Act (CEQA) Document Update

Did you incorporate into the CEQA process procedures for considering potential storm water quality impacts and providing for appropriate mitigation when preparing and reviewing CEQA documents? (Answer each below separately.)

- (a) Potential impact of project construction on storm water runoff?
- (b) Potential impact of project post-construction activity on Storm Water runoff?
- (c) Potential for discharge of storm water from areas from material storage, vehicle or equipment fueling, vehicle or equipment maintenance (including washing), waste handling, hazardous materials handling or storage, delivery areas or loading docks, or other outdoor work areas?
- (d) Potential for discharge of storm water to impair the beneficial uses of the receiving waters or areas that provide water quality benefit?

- (e) Potential for the discharge of storm water to cause significant harm on the biological integrity of the waterways and water bodies?
  - (f) Potential for significant changes in the flow velocity or volume of Storm Water runoff that can cause environmental harm?
  - (g) Potential for significant increases in erosion of the project site or surrounding areas?
15. General Plan Update
- (a) Was your General Plan amended, revised or updated to include watershed and storm water quality and quantity management considerations and policies when any of the following General Plan elements are updated or amended?  
(Answer each separately)
    - (1) Land Use?
    - (2) Housing?
    - (3) Conservation?
    - (4) Open Space?
  - (b) Did you provide the Regional Water Board with the draft amendment or revision when a listed General Plan element or the General Plan was noticed for comment in accordance with Cal. Govt. Code § 65350 *et seq*?
  - (c) When?

#### **F. Development Construction Program**

1. Did you implement a program to control runoff from construction activity at all construction sites within your jurisdiction to ensure that the following requirements are effectively implemented? (Answer each separately)
- (a) For construction projects within or adjacent to an environmentally sensitive area (ESAs), did you prohibit grading between October 1 and April 15?
  - (b) For construction projects, which include grading on slopes greater than 5:1, that no grading shall occur between October 1 and April 15?
  - (c) All construction projects, which directly discharge into a sedimentation/ siltation impaired water body and is listed on the CWA §303 (d) list. No grading shall be occurring between October 1 and April 15?
  - (d) If grading operations were not completed before the rainy season began, was grading halted and erosion control measures put in place to minimize erosion until grading resumes after April 15?
2. Did you require construction site operators to seek separate coverage from the Regional Water Board wherever ground water dewatering may be necessary, is anticipated, or likely?
- (a) Small Construction Sites

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- (1) For each construction site did you require and inspect to ensure that at each construction site, the minimum set of BMPs were implemented to minimize erosion and sediment loss, and prevent pollution from construction waste?
3. For each construction site 1 acre and greater:
- (a) Did you review and approve a Local Storm Water Pollution Prevention Plan (Local SWPPP), for approval prior to issuance of a grading permit for construction projects?
  - (b) Did you inspect all construction sites for storm water quality requirements during routine inspections a minimum of once during the wet season?
  - (c) Was the Local SWPPP reviewed for compliance with local codes, ordinances, and permits?
  - (d) For inspected sites that have not adequately implemented their Local SWPPP, a follow-up inspection to ensure compliance shall take place within 2 weeks?
  - (e) If compliance had not been attained, did the Permittee take additional actions to achieve compliance (as specified in municipal codes)?
  - (f) How many?
  - (g) For small construction sites one acre and greater (or part of a larger plan of development or sale), did you require, prior to issuing any grading permit, demolition permit, building permit, or construction permit [or any other municipal authorization to move soil and/ or construct or destruct that involves soil disturbance], for all projects requiring coverage under the state general permit, proof of a Waste Discharger Identification (WDID) Number for filing a Notice of Intent (NOI) for coverage under the CASGP and a certification that a SWPPP has been prepared by the project developer?
  - (h) Does your agency accept a Local SWPPP as a substitute for the State SWPPP?
  - (i) Is the Local SWPPP at least as inclusive in controls and BMPs as the State SWPPP?
  - (j) Do you require proof of an NOI and a copy of the SWPPP at any time a transfer of ownership takes place for the entire development or portions of the common plan of development where construction activities are still on-going?
  - (k) What system do you use to track grading permits issued by your agency?
4. Linear Construction
- (a) Do require for any linear construction project or projects (cumulatively) that will cause one acre or more of soil disturbance but not more than 5 acres that coverage be obtained under the Small Linear Underground/ Overhead Construction Projects General Permit?
  - (b) Do you require proof of a Waste Discharger Identification Number (WDID) for filing a Notice of Intent (NOI) for coverage under the and a certification that a SWPPP has been prepared by the project developer, prior to issuing a grading permit, demolition permit building permit, or construction permit (or other authorization to move soil and/ or construct or destruct that involves soil disturbance)?

5. CASGP Violation Referrals
  - (a) Did you make any referral of violations of the new development and redevelopment post construction requirements and municipal storm water ordinances to the Regional Water Board?
  - (b) Did you make any referral for suspected violations of the CASGP or Linear Permit coverage requirements

#### **G. Public Agency Activities Program**

1. Sewage System Maintenance, Overflow, and Spill Prevention
  - (a) Did you implement a response plan for overflows of the sanitary sewer system within their respective jurisdiction that clearly identifies agencies responsible and telephone numbers and email for any contact?
  - (b) How many overflows did you have?
  - (c) How many did you respond to?
  - (d) Do you own and/ or operate a sanitary sewer system?
  - (e) If so, did you also identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4?
  - (f) Did you implement procedures and maintenance schedules to prevent sewage spills or leaks from sewage facilities from entering the MS4?
  - (g) If you are a Permittee with septic systems in your jurisdiction, how many do you have?
  - (h) Did you implement the following for flows of septic leachate to surface waters within their respective jurisdiction, which shall consist at a minimum of the following:
    - (1) Investigation of any complaints received?
    - (2) Immediately respond to overflows for containment, upon notification?
    - (3) Notification to appropriate agencies and public health agencies when a septic system fails and flows to the MS4?
2. Public Construction Activities Management
  - (a) Did you comply with all the Development Planning Program requirements in at public construction projects?
  - (b) Did you comply with all the Development Construction Program requirements at Permittee owned or operated construction sites?
  - (c) Did you obtain coverage under the CSWGP for all construction activities for (non linear) capital improvement project(s), or contracts, that individually or cumulatively equals or surpass the 1 acre land disturbance threshold?
  - (d) Did you obtain coverage under the Statewide General Permit for Storm water Discharges Associated with Construction Activity from Small Linear Underground/ Overhead Projects (Small LUP General Permit) for Small Linear

Underground/ Overhead Projects disturbing at least 1 acre, but less than 5 acres  
(including trenching and staging areas)?

3. Vehicle Maintenance/ Material Storage Facilities/ Corporation Yards Management.

- (a) Did you implement the required BMPs for each maintenance yard and activity specified in the tables Permittee shall implement the following BMPs at all Permittee owned, leased facilities including but not limited to vehicle/ equipment maintenance facilities, material storage facilities, and corporation yards, and at any area that includes the activities as described in the tables below. Answer each separately.

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- (b) Are all of your existing facilities that are not plumbed to the sanitary sewer with vehicle and equipment washing areas:
- (1) Self-contained? How many?
  - (2) Equipped with a clarifier? How many?
  - (3) Equipped with an alternative pre-treatment device? How many?
  - (4) To be plumbed to the sanitary sewer? How many? When?
    - (A) Are all new facilities, or during redevelopment of existing facilities (including fire stations), all vehicle and equipment wash areas to be plumbed to the sanitary sewer and be equipped with a pre-treatment device in accordance with requirements of the sewer agency? If not state why.

4. Landscape and Recreational Facilities Management

Control Program for Registered Pesticides

- (a) Did you adopt and implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and the use of integrated pest management (IPM) techniques in your operations and on municipal property?
- (b) What was your previous year's pesticide use? Answer in gallons or pounds for each type used.
- (c) Using estimated projections, what is your expected use this coming fiscal year? Answer in gallons or pounds for each type used.
- (d) Do you have commitments to reduce or phase-out, and ultimately eliminate use of pesticides that cause impairment of surface waters? State for each, by when.
- (e) Describe your Integrated Pesticide Management (IPM) program.
- (f) Attach the program elements.
- (g) Did you comply with the following requirements?:
  - (1) Use a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers?
  - (2) Ensure no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?
  - (3) Ensure that no banned or unregistered pesticides are stored or applied?
  - (4) Ensure that all staff applying pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator?
  - (5) Implement procedures to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs?
  - (6) Store fertilizers and pesticides indoors or under cover on paved surfaces or use secondary containment?
    - (A) Reduce the use, storage, and handling of hazardous materials to reduce the potential for spills?
    - (B) Regularly inspect storage areas to ensure no environmental harm?



## 5. Storm Drain Operation and Management

Catch Basin Cleaning

- (a) How many catch basins did you designate as one of the following:
- Priority A: Catch basins that are designated as consistently generating the highest volumes of trash and/ or debris?
- Priority B: Catch basins that are designated as consistently generating moderate volumes of trash and/ or debris?
- Priority C: Catch basins that are designated as generating low volumes of trash and/ or debris?
- (b) Did you clean all catch basins according to the following schedule?:
- Priority A: A minimum of three times during the wet season and once during the dry season every year? How many?
- Priority B: A minimum of once during the wet season and once during the dry season every year? How many?
- Priority C: A minimum of once per year? How many?
- (c) Did you ensure that any catch basin that is at least 25% full of trash and/ or debris was cleaned out? How many?

For each type of catch basin (A, B, or C) state how much trash and debris was collected and state the units (wet tons, dry pounds, etc...)

- (1) Did you require for any special event that they arrange for temporary screens to be placed on catch basins or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain event? How many events did this apply to?
- (2) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Trash Controls

- (a) Did you install trash receptacles at transit stops as required?
- (b) How many?
- (c) How much trash and debris was collected? (wet tons, dry pounds, etc...)
- (d) Did you install trash excluders, or similar devices upon catch basins to prevent the discharge of trash to the storm drain system?
- (e) How many?
- (f) How much trash and debris was collected? (wet tons, dry pounds, etc...)

Catch Basin Labels

- (a) Did you inspect the legibility of the catch basin label by all inlets?
- (b) How many?
- (c) Were catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within 180 days of inspection?
- (d) How many were recorded?
- (e) How many were relabeled?

Storm Drain Maintenance

- (a) Did you inspect all Permittee-owned open channels and other drainage structures for debris and identify and prioritize problem areas of illicit discharge for regular inspection?
  - (b) Do your maintenance activities assure that appropriate storm water BMPs are being utilized to protect water quality?
  - (c) Did you remove trash and debris from open channel storm drains before the storm season?
  - (d) Did you minimize the discharge of contaminants during MS4 maintenance and clean outs?
  - (e) How?
  - (f) Did you properly dispose of material removed?
  - (g) How much trash and debris was collected? (wet tons, dry pounds, etc...)
  - (h) Have you obtained coverage under the CASGP for Long-term maintenance programs for flood control channels (such as vegetation removal) if one or more acres of soil are disturbed by grading, clearing or excavation activities for an individual project or as part of several projects part of the Permittee's long-term maintenance plan?
  - (i) How many projects?
  - (j) Which projects?
  - (k) Were all municipally owned treatment control BMPs as maintained as necessary to ensure optimal pollutant reduction?
  - (l) Was any pooled water shall be discharged to the sanitary sewer system?
  - (m) Was any of the pooled water treated to remove pollutants and discharged to the storm drain?
  - (n) Was every discharge monitored to ensure compliance?
6. Streets and Roads Maintenance
- (a) Did you conduct street sweeping of curbed streets in commercial areas to control trash and debris at least 2 times per month?
  - (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)
  - (c) Did you obtain coverage under the CASGP for long-term maintenance programs for roadside maintenance (such as: vegetation removal ) if 1 or more acres of soil are disturbed including: grading, clearing or excavation activities that disturb 1 or more acres of land either for an individual project or as part of a long-term maintenance plan?
7. Parking Facilities Management
- (a) Were all Permittee-owned parking lots exposed to storm water cleaned to be kept clear of debris and excessive oil buildup and cleaned no less that 2 times per month?
  - (b) How much trash and debris was collected? (wet tons, dry pounds, etc...)

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8. Public Industrial Activities Management
  - (a) Did you obtain separate coverage under the IASGP for any municipal activity subject to it for the discharge of storm water associated with industrial activity?
  - (b) For how many facilities?
  - (c) Which facilities?
  
9. Municipal Drinking Water System Discharges
  - (a) From your municipal drinking system did you maintain the system by flushing hydrants or other fixtures?
  - (b) How many gallons total were discharged in the year?
  - (c) If the discharges in an annual period were less than 100,000 gallons for the entire city did you implement a BMP or suite of BMPs to ensure that the chlorine level of the discharge is 0.1mg/L or less?
  - (d) Did you sample or take a test every time to ensure dechlorination of the water to 0.1mg/L or less?
  - (e) Did you ensure that the BMP or suite of BMPs were implemented so that no erosion is caused by the discharge of the potable water?
  - (f) What BMPs were implemented?
  
10. Emergency Procedures
  - (a) Were there any emergencies that caused the Permittee to invoke this section?  
Explain the situation.
  
11. Municipal Employee (and municipal contractor) Training
  - (a) Did you train all of your employees in targeted positions regarding the requirements of the overall storm water management program?
  - (b) Did you promote a clear understanding of the potential for activities to pollute storm water?
  - (c) Did they learn to identify opportunities to require, implement, and maintain appropriate BMPs in their work?
  - (d) Did they learn the appropriate ways of identification, investigation, termination, cleanup, and reporting of illicit connections and discharges?
  - (e) Will they ensure that the requirements of this Order are met?
  - (f) For those employees or contractors who use or have the potential to use pesticides (whether or not they normally apply pesticides as part of their work), which includes pesticides available over the counter, did you address the potential for pesticide-related surface water toxicity?
  - (g) Proper use, handling, and disposal of pesticides?
  - (h) Least toxic methods of pest prevention and control?
  - (i) Encourage the use of IPM?
  - (j) Require the quantifiable reduction of pesticide use?
  - (k) Training - All Permittees shall train all targeted employees who are responsible for on an annual basis. In public agency?

**H. Illicit Connections/ Illegal Discharge Program**

## 1. IC/ ID Program

- (a) Did you implement an IC/ ID Program?
- (b) The IC/ ID Program must be documented and available for review.
- (c) Did you map all permitted connections to the storm drain system?
- (d) Did you map all illicit connections and discharges on baseline maps?
- (e) Did you transmit this information to the Principal Permittee?
- (f) Did you use this mapping information to identify priority areas for further investigation?
- (g) Did you eliminate all known illicit connections and illicit discharges?

## 2. Public Reporting

- (a) Did you establish and maintain a phone hotline to receive illicit discharge/ connection complaints?
- (b) Did you establish and maintain an internet homepage to receive illicit discharge/connection complaints?
- (c) For all complaints received, did you document the location of the illicit discharge/ connection?
- (d) Have you documented the actions undertaken in response to all illicit discharge/ connection complaints?

## 3. Illicit Connections

Screening for Illicit Connections

- (a) Did you conduct field screening of your storm drain system for illicit connections?
- (b) For those portions of the storm drain system consisting of storm drain pipes 36 inches in diameter or greater, how many miles did you field screen this year?
- (c) Out of how many miles total?
- (d) Did you conduct field screening for high priority areas identified during the mapping of illicit connections and discharges?
- (e) How many miles were completed this year?
- (f) Out of how many miles total?
- (g) How much of the storm drain system that is 50 years or older in age did you field screen?
- (h) Out of how many miles total?
- (i) Did you submit to the Principal Permittee a GIS layer showing the location and length of underground pipes greater than 18" in diameter and channels within their jurisdiction?
- (j) Did you also include the status of suspected, confirmed, and terminated illicit connections?
- (k) Did you maintain a list containing all connections under investigation for possible illicit connection and their status?

(l) Did you attach that list to this Annual Report?

Response to Illicit Connections

- (a) Did you complete an investigation within 21 days of notice of a suspected illicit connection?
- (b) Did you determine the Source of each connection?
- (c) Did you determine the nature and volume of discharge through the connection?
- (d) Did you identify the responsible party of the connection?
- (e) How many suspected illicit connections were there this year?
- (f) Upon confirmation of the illicit nature of a storm drain connection did you terminate the connection within 180 days of completion of the investigation?
- (g) Did you document all illicit connection discoveries and your response to each?

4. Illicit Discharges

(a) Abatement and Cleanup

- (1) Did you respond and cleanup within 1 business day of discovery or of receiving a report of a suspected illicit discharge?
- (2) Did you keep records of all illicit discharge discoveries, reports of suspected illicit discharges and their response to the illicit discharges and suspected illicit discharges?
- (3) How many did you receive?
- (4) How many did you respond to?

(b) Investigation

- (1) Did you investigate illicit discharges during or immediately following containment and cleanup activities, and take enforcement action as appropriate?

**STATE OF CALIFORNIA**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**MONITORING PROGRAM - No. CI 7388**

**FOR**

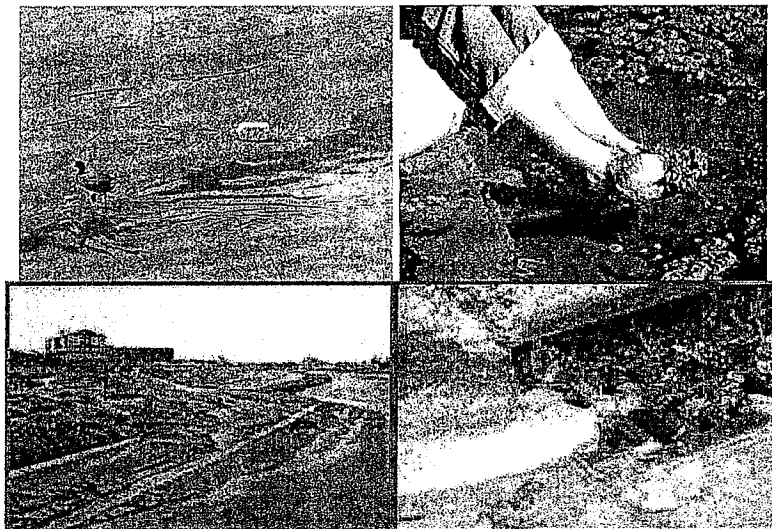
**ORDER 09-0057**

**NPDES PERMIT NO. CAS004002**

**WASTE DISCHARGE REQUIREMENTS**

**MUNICIPAL SEPARATE STORM SEWER SYSTEM DISCHARGES  
WITHIN THE  
VENTURA COUNTY WATERSHED PROTECTION DISTRICT,  
COUNTY OF VENTURA AND THE INCORPORATED CITIES THEREIN.**

May 7, 2009



**E002032**

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**MONITORING PROGRAM**

1. The primary objectives of the Monitoring Program include, but are not limited to:
  - (a) Assessing the chemical, physical, and biological impacts of municipal storm water sewer system discharges on receiving waters.
  - (b) Assessing the overall health and evaluating long-term trends in receiving water quality.
  - (c) Assessing compliance with TMDL targets and water quality objectives.
  - (d) Characterization of the quality of storm water discharges.
  - (e) Identifying sources of pollutants.
  - (f) Measuring and improving the effectiveness of measures implemented under this Order.
2. The results of the monitoring requirements outlined below shall be used to refine BMPs for the reduction of pollutant loading and the protection and enhancement of the beneficial uses of the receiving waters in Ventura County.
3. The Permittees shall implement the Monitoring Program as follows:

**CORE MONITORING****A. Mass Emissions**

- I. The Principal Permittee shall monitor mass emissions to accomplish the following objectives:
  - i. Estimate the mass emissions from the MS4 to the watershed.
  - ii. Assess trends in the mass emissions over time.
  - iii. Determine if the MS4 is contributing to exceedances of water quality objectives by comparing results to applicable water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan) and the California Toxics Rule (CTR).
1. The Principal Permittee shall monitor mass emissions from the following 3 mass emission stations:
  - (a) ME-VR2 for Ventura River
  - (b) ME-SCR for Santa Clara River
  - (c) ME-CC for Calleguas Creek



2. The Principal Permittee shall monitor the 3 mass emission stations on an annual basis as per A.3. below.
3. The Principal Permittee shall monitor each mass emission station each year as follows:
  - (a) The first storm event of the wet season that produces a 20% or greater increase in base stream flow, and 2 additional storm events; all storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rainfall) from the previously measurable storm event (0.25 inches of rain).
  - (b) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) per mass emission station.
4. Samples for mass emission monitoring may be taken with the same type of automatic sampler used under Order 00-108. . Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
5. Samplers shall be set to monitor storms that produce a 20% or greater increase in base stream flow.
6. Samples shall be flow-weighted composites, collected during the first 24 hours or for the duration of the storm if it is less than 24 hours.
7. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 and 0.24 inches of rain.
8. The flow-weighted composite sample for a storm water discharge shall be taken with a continuous sampler, or it shall be taken as a combination of a minimum of 3 sample aliquots, taken in each hour of discharge for the first 24 hours of the discharge or for the entire discharge if the storm event is less than 24 hours, with each aliquot being separated by a minimum of 15 minutes within each hour of discharge, unless the Regional Water Board Executive Officer approves an alternate protocol.
9. Flow may be estimated using U.S. EPA methods at sites where flow measurement devices are not in place.
10. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>), pH, temperature, and DO.
11. Each mass emission shall analyze for all of the Pollutants of Concern (POC) in its specific watershed listed in Attachment "B" (Calleguas Creek Watershed,

Santa Clara River Watershed, and Ventura River Watershed Pollutants of Concern).

12. Each mass emission station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels), during the first storm event of the wet season for each year sampled. If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the California Toxics Rule (CTR) for chronic criteria. If a constituent is detected exceeding a Basin Plan objective, and/ or CTR criteria then the constituent shall be analyzed for the remainder of the Order, at the mass emission station where it was detected.
13. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests.
14. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within two working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation.
  - (b) Explanation of circumstance(s) with documentation.
  - (c) Statement of corrective action for the future.
15. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "K".
16. Results of monitoring from each mass emission station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water site at [MS4stormwaterRB4@waterboards.ca.gov](mailto:MS4stormwaterRB4@waterboards.ca.gov), no later than 90 days from sample collection date, highlighting exceedances (Pollutants of Concern, POC) to the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per mass emission station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).

17. A summary of the annual mass emission monitoring results highlighting exceedances (POC) of the Basin Plan objectives and the CTR for acute criteria, with corresponding sampling dates per mass emission station, shall be included with the Annual Storm Water Report.

## **B. Major Outfalls**

- I. The Principal Permittee shall monitor major storm drain outfalls to accomplish the following objectives:
  - i. Estimate the annual pollutant load of the cumulative discharges to waters of the State.
  - ii. Estimate the event mean concentration of the cumulative discharges to waters of the State.
  - iii. Assess trends in the major outfalls over time.
  - iv. Estimate the annual pollutant load of discharges to Waters of the U.S.
  - v. Estimate the event mean concentration of discharges to Waters of the U.S.
  - vi. Assess trends in the major outfalls over time.
  - vii. Determine if the MS4 is contributing to exceedences of MALs, and water quality objectives in the Water Quality Control Plan Los Angeles Region (Basin Plan), and the California Toxics Rule (CTR).
1. The Principal Permittee shall monitor:
  - (a) End-of-pipe of major outfalls, identified in Attachment I, transporting representative discharges from each Permittee's Municipal drainage area to:
    - (1) Major outfalls listed in Attachment "I" (Storm Water Monitoring Program's Major Outfall Stations).
  - (b) The first storm event of the wet season that produces at least 0.25 inches of rain, and 2 additional storm events per year, all storm events shall be separated by 7 days of dry weather (less than 0.1 inch) from the previously measurable storm event (0.25 inches).
  - (c) A total of 4 monitoring events (3 wet-weather storm events, 1 dry-weather) shall be sampled per identified major outfall.
  - (d) In the first year after permit adoption, 4 major outfall stations shall be monitored. Thereafter, all major outfall stations listed in Attachment "I" are to be monitored annually according to the schedule above.
2. If an identified monitoring site is found to be unworkable due to immitigable factors the sampling location may be relocated upon Executive Officer's approval of another location. Best professional judgment shall be used to balance the site selection rationale and criteria to determine the most appropriate site. Due to limited potential locations of urban outfalls to be monitored, there

may be no sites that satisfy all criteria and rationale. Sites will be selected to satisfy the following criteria:

- (a) Maximize urban runoff contribution;
  - (b) Greater than 60% of catchment shall be Permittee's MS4;
  - (c) Attempt shall be made to avoid outfalls that contain discharge from extra-jurisdictional areas (e.g. agriculture land and other NPDES discharges).
  - (d) Drainage area should contain representative land uses in a ratio of use as similar as reasonably possible to that found in the Permittee's jurisdiction.
  - (e) Drainage areas with a higher percentage of the Permittee's MS4 are preferred;
  - (f) Ability to accurately measure flow
  - (g) Safety of monitoring personnel is the highest priority. Specific location of sampling collection may be upstream of the actual outfall if field safety or accurate flow measurement require it.
3. Samples shall be collected from the discharge resulting from a storm event that is 0.25 inches or greater, samples may be analyzed if a predicted storm event produces between 0.15 inches and 0.24 inches of rain.
  4. Samples shall be collected during the first 24 hours of storm water discharge or for the entire storm water discharge if it is less than 24 hours.
  5. Samples shall be flow-weighted composites and can be collected automatically or manually (see subparts A.7 and A.8) in accordance with U.S. EPA protocol or other procedure approved by the Executive Officer.
  6. Grab samples shall be taken only for pathogen indicators, hardness (as mg/L CaCO<sub>3</sub>) and pH, temperature, and DO.
  7. Major outfall samples taken within a subwatershed shall be analyzed for the biological and chemical parameters listed in the preceding subpart B.6.
  8. Each major outfall station shall screen for all constituents listed in Attachment "G" (Storm Water Monitoring Program's Constituents with Associated Minimum Levels) twice per wet season, per year, (1<sup>st</sup> storm event of the wet season and one other storm event of the wet season). If a constituent is not detected at the Method Detection Limit (MDL) for its respective test method it need not be further analyzed unless the observed occurrence shows concentrations greater than the state water quality objective, and/ or the California Toxics Rule (CTR) acute criteria. If a constituent is detected exceeding a Basin Plan objective, and/or chronic CTR criteria then the constituent shall be sampled for the remainder of the Order, at the major outfall station where it was detected.

9. At a minimum, a sufficient sample volume must be collected to perform all of the required biological and chemical tests. Sampling shall be in accordance with USEPA "NPDES Storm Water Sampling Guidance Document, EPA 833-8-92-001, July 1992" or other protocol approved by the Executive Officer.
10. When monitoring can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then within 2 working days the following shall be submitted to the Regional Water Board Executive Officer:
  - (a) Statement of situation
  - (b) Explanation of circumstance(s) with documentation
  - (c) Statement of corrective action for the future
11. Monitoring results submitted to the Regional Water Board shall include:
  - (a) Rain totals and hydrographs for monitoring events in both narrative and graphic formats.
  - (b) A narrative description of the date and duration of the storm event(s) sampled, rainfall estimates of the storm event which generated the sampled discharge and the duration between the storm event sampled and the end of the previous measurable storm event.
  - (c) All applicable Standard Monitoring Provisions listed in part "K".
12. Results of monitoring from each major outfall station conducted in accordance with the Standard Operating Procedure submitted under Standard Provision 14 of this Attachment shall be sent electronically to the Regional Water Board's Storm Water Site at [MS4stormwaterRB4@waterboards.ca.gov](mailto:MS4stormwaterRB4@waterboards.ca.gov), no later than 90 days from sample collection date, highlighting exceedances to the MALs, the Basin Plan objectives for all test results, and the CTR for acute criteria with corresponding sampling dates per major outfall station. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
13. A summary of the annual major outfall monitoring results, highlighting exceedences (pollutants of concern POC) to the MALs, the Basin Plan objectives, and the CTR for acute criteria with corresponding sampling dates per major outfall station, shall be included with the Annual Storm Water Report.

**C. Dry Weather Analytical Monitoring**

- I. The Principal Permittee shall develop and implement a monitoring program to characterize pollutant discharges from representative MS4 outfalls in each municipality and in the unincorporated County area during dry

Ventura County Municipal Separate Storm Sewer System Permit  
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weather. This monitoring program shall be implemented within each jurisdiction and shall begin within the 2010-2011 monitoring year.

1. Dry weather analytical monitoring shall include:
  - (a) Analytical monitoring, field measurements and observations at selected stations.
  - (b) Reports of analytical data in a SWAMP comparable format.
  
2. Selection of Dry Weather Analytical Monitoring stations: Based upon a review program data, the storm drain system and land uses, the Co-Permittees shall select dry weather analytical monitoring stations within their jurisdiction. At least 5 dry weather analytical monitoring stations need to be identified per Co-Permittee. The dry weather analytical monitoring stations shall be established using the following guidelines and criteria:
  - (a) Stations should be located downstream of municipal land uses where illegal or illicit activity may occur;
  - (b) Stations shall be located at accessible downstream locations within the storm drain system of each municipality or at major outfalls;
  - (c) Hydrological conditions, total drainage area of the site, traffic density, age of the structures or buildings in the area, history of the area, and land use types shall be considered in locating stations;
  - (d) Each Co-Permittee shall determine a primary station and at least 4 alternate stations to be sampled in case primary stations do not have flow in dry weather. The dry weather monitoring may utilize the same outfalls as those used for wet weather monitoring, if such outfalls are found to discharge during dry weather.
  - (e) Fact sheets of general information such as site descriptions (i.e., conveyance type, dominant watershed land uses) shall be created.
  
3. The Principal and Co-Permittees shall develop and/or update written procedures for dry weather analytical monitoring (these procedures must be consistent with 40 CFR part 136), including field observations, monitoring, and analyses to be conducted. At a minimum, the procedures must meet the following guidelines and criteria:
  - (a) Dry weather analytical monitoring shall be conducted at each identified station at least once between May 1st and September 30th of each year.
  - (b) If flow or ponded runoff is observed at a dry weather analytical monitoring station and there has been at least seventy-two (72) hours of dry weather, make observations and collect at least one (1) grab sample.
  - (c) Record general information such as site descriptions (i.e., conveyance type, dominant watershed land uses), flow estimation (i.e., width of water surface, approximate depth of water, approximate flow velocity, flow rate), and visual observations (i.e., odor, color, clarity, floatables, deposits/stains, vegetation condition, structural condition, and biology).

4. At a minimum, collect samples for analytical laboratory analysis of the following constituents:
  - (a) Total Hardness
  - (b) Total Organic Carbon or Oil and Grease
  - (c) Lead (Dissolved)
  - (d) Zinc (Dissolved)
  - (e) Copper (Dissolved)
  - (f) Total Coliform bacteria
  - (g) E. Coli bacteria
  
5. Other required field observations include:
  - (a) Flow Estimation
  - (b) Temperature
  - (c) pH
  - (d) Odor
  - (e) Color
  - (f) Turbidity
  - (g) Floatables (foam, oil sheen)
  - (h) Staining
  - (i) Algal growth
  
6. If the station is dry (no flowing or ponded runoff), make and record all applicable observations and select another station from the list of alternate stations for monitoring.
  
7. Visually assess the presence of trash in receiving waters and urban runoff. Assessments of trash shall provide information on the spatial extent and amount of trash present, as well as the nature of the types of trash present.
  
8. Develop and/or update procedures for source identification follow up investigations in the event elevated levels are found. These procedures shall be consistent with procedures required in IC/ID section.

**D. Aquatic Toxicity Monitoring**

- I. The objective of aquatic toxicity monitoring is to evaluate if storm water (wet weather) discharges are causing or contributing to chronic toxic impacts on aquatic life by the following:
  - i. Toxicity testing at mass emission and major outfall stations to assess impacts on the marine and freshwater environments.
  
1. The Principal Permittee shall collect and analyze mass emission and major outfall samples for toxicity to evaluate the extent and causes of toxicity in receiving waters. Permittees shall utilize documents such as: Ventura County's

- Technical Guidance Manual for Storm Water Quality Control Measures and U.S. EPA's National Management Measures to Control Nonpoint Source Pollution from Urban Areas to implement measures to eliminate or reduce sources of toxicity in storm water.
2. Toxicity samples may be flow-weighted composite samples or grab samples for both wet and dry event sampling (see subparts A.7 and A.8).
  3. Volume of sample shall be determined by specific test methods to be used. At a minimum it is suggested to collect 5 gallons for baseline testing, and an additional 5 gallons for TIE studies. Sufficient sample volume shall be collected to perform the required toxicity tests.
  4. All toxicity tests shall be conducted as soon as possible following sample collection. The 36-hour sample holding time for test initiation shall be targeted. However, no more than 72 hours shall elapse before initial use of a sample.
  5. When toxicity tests can not be performed to comply with the requirements of this Order due to circumstances beyond the Permittee's control, then the following shall be submitted to the Regional Water Board Executive Officer within 2 working days:
    - (a) Statement of situation
    - (b) Explanation of circumstance(s) with documentation
    - (c) Statement of corrective action for the future
  6. The Principal Permittee shall conduct critical life stage chronic toxicity tests on undiluted samples in accordance with:
    - (a) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to *West Coast* Marine and Estuarine Organisms, (EPA/600/R-95/136, 1995) for all mass emission stations, and for major outfalls discharging to marine and estuarine environments, or
    - (b) U.S. EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, October 2002 (EPA/821/R-02/013, 2002) or current version for major outfalls discharging to freshwater environments.
  7. The Principal Permittee shall analyze samples for chronic toxicity according to the schedule below:
    - (a) During the first year of the Order, 2 storm events shall be monitored at each mass emission and major outfall station. The first storm event of the wet season that produces at least 0.25 inches of rain, and 1 additional storm event. All storm events shall be separated by 7 days of dry weather (less than 0.1 inch of rain) from the previously measurable storm event.



- (1) During the first year of the Order, all 3 test species shall be used for their respective chronic toxicity test method for the 2 storm events monitored, to determine the most sensitive test species for each monitoring station (see subparts D.8 and D.9 below).
  - (b) During the next 4 years of the Order, the first storm event of the wet season that produces at least 0.25 inches of rain shall be monitored for each mass emission and major outfall station.
    - (1) During the next 4 years of the Order, the most sensitive test species determined from the first year of testing at each mass emission and major outfall station shall be used for its respective chronic toxicity test method (see subpart D.6).
8. Marine and Estuarine Species and Test Methods.
  - (a) Marine and estuarine species and short-term test methods for estimating the chronic toxicity of NPDES effluents shall be used and are found in the first edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995) and applicable water quality standards; also see 40 CFR Parts 122.41(j)(4) and 122.44(d)(1)(iv).
    - (1) The Permittee shall conduct:
      - (A) A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.01)
      - (B) A static non-renewal toxicity test with the giant kelp *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0); and
      - (C) A static non-renewal toxicity test with the purple sea urchin, *Strongylocentrotus purpuratus*, (Fertilization Test Method 1008.0)
    - (b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.
9. Freshwater Species and Test Methods.
  - (a) Species and short-term test methods for estimating the chronic toxicity of NPDES effluent shall be used and are found in the fourth edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136).
    - (1) The Permittee shall conduct
      - (A) A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0<sup>1</sup>)

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<sup>1</sup> Daily observations for mortality make it possible to calculate acute toxicity for desired exposure periods (i.e., 7-day LC50, 96-hour LC50, etc.).

- (B) A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0<sup>1</sup>); and
  - (C) A static renewal toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0)
- (b) In no case shall the preceding toxicity test species be substituted with another organism unless written authorization from the Regional Water Board Executive Officer is received.
10. The test endpoint data is analyzed using a standard t-test approach. Statistical analysis methods shall be consistent with U.S. EPA test method manuals.
  11. If significant toxicity is found then according to paragraph 10.2.6.2 of the U.S. EPA freshwater test methods manual, all chronic toxicity test results from the multi-concentration tests required by this Order must be reviewed and reported according to U.S. EPA guidance on the evaluation of concentration-response relationships found in *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR 136)* (EPA/821/B-00-004, 2000).
  12. Toxic samples shall be immediately subjected to Toxicity Identification Evaluation (TIE) procedures to identify the toxic chemical(s) if toxicity is demonstrated by the standard t-test.
  13. A TIE is to be performed to identify the causes of toxicity using the same species and test method and, as guidance, U.S. EPA test method manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993); and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).
  14. The Principal Permittee shall complete chronic Phase I (Toxicity Characterization Procedures) TIEs for all sites showing significant toxicity. For the purpose of triggering TIE (Toxicity Characterization Procedures), significant toxicity is defined as at least 50% mortality. The 50% mortality threshold is consistent with the approach recommended in guidance published by USEPA for conducting TIEs (USEPA, 1996), which recommends a minimum threshold of 50% mortality because the probability of completing a successful TIE decreases rapidly for samples with less than this level of toxicity.

- (a) The TIE shall be conducted on test species, demonstrating the most sensitive toxicity response at a sampling station. However, a TIE(s) may be conducted on an additional test species with the caveat that once the toxicant(s) has been identified then the most sensitive test species triggering the TIE event needs to be tested additionally to verify that the toxicant has been identified and addressed.
15. A TIE Prioritization Metric may be utilized to rank sites for TIEs.<sup>2</sup>
16. Toxicity Reduction Evaluation (TRE) when toxicity is identified
- (a) When the same pollutant or class of pollutants is identified through 2 consecutive TIE evaluations, a TRE shall be performed for that identified toxic pollutant.
- (b) The TRE development shall be performed by a neutral third party (retained by the Permittees), in consultation with the Regional Water Board staff.
- (c) The TRE shall include all reasonable steps to identify the source(s) of toxicity and discuss appropriate BMPs to eliminate the causes of toxicity. No later than 30 days after the source of toxicity and appropriate BMPs are identified, the Permittees shall submit the TRE Corrective Action Plan to the Regional Water Board Executive Officer for approval. At a minimum, the Plan shall include a discussion of the following items:
- (1) The potential sources of pollutant(s) causing toxicity.
  - (2) A list of municipalities and agencies that may have jurisdiction over sources of pollutant(s) causing toxicity.
  - (3) Recommended BMPs to reduce the pollutant(s) causing toxicity.
  - (4) Proposed post construction control measures to reduce the pollutant(s) causing toxicity.
  - (5) Follow-up monitoring to demonstrate that toxicity has been removed.
- (d) The TRE process shall be coordinated with TMDL development and implementation (i.e., If a TMDL for 4,4'-DDD is being implemented when a TRE for 4,4'-DDD is required, the efforts shall be coordinated to avoid overlap).
17. Results of Toxicity monitoring conducted in accordance with the Standard Operating Procedure under Standard Provision 14 of this Attachment shall be sent to the Regional Board's Storm Water Site at [MS4stormwaterRB4@waterboards.ca.gov](mailto:MS4stormwaterRB4@waterboards.ca.gov), no later than 90 days from sample collection date for the initial toxicity test and no more than 30 days from completion of each aspect of the analysis for TIEs/TREs. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).

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<sup>2</sup> Appendix 5. SMC Model Monitoring Program.

18. The Annual Storm Water Report shall include:
  - (a) A full laboratory report for all toxicity testing.
  - (b) A summary of the years' mass emission and major outfall monitoring station's toxicity test results reported according to the test methods manual chapter on report preparation and test review.
  - (c) The dates of sample collection and initiation of each toxicity test.
  - (d) All results for effluent parameters monitored concurrently with the toxicity test(s).
  - (e) TIE Phase testing (Phase I, Phase II, and Phase III) that has been or is in the process of being conducted per monitoring station.
  - (f) The development, implementation, and results for each TRE Corrective Action Plan in the Annual Storm Water Report, beginning the year following the identification of each pollutant or pollutant class causing toxicity.
  
19. When the SMC Standardized Toxicity Testing Guidance is completed, the Regional Water Board Executive Officer may direct Permittees to replace the current toxicity program with the standardized guidance procedure.

## **SPECIAL STUDIES**

### **E. Pyrethroid Insecticides Study**

- I. The Principal Permittee shall perform a Pyrethroid Insecticides study to accomplish the following objectives:
  - i. Establish baseline data for major watersheds
  - ii. Evaluate whether Pyrethroid Insecticide concentrations are at or approaching levels known to be toxic to sediment-dwelling aquatic organisms.
  - iii. Determine if Pyrethroids discovered are from urban sources.
  - iv. Assess any trends over the permit term.
  
1. The Permittees shall incorporate monitoring for Pyrethroid Insecticides within the Calleguas Creek, Santa Clara River and Ventura River Watersheds according to the following:
  - (a) No later than the second year of this Order, monitoring shall begin.
  - (b) Quality Assurance Project Plan (QAPP) to be submitted to the Regional Board for approval 12 months prior to beginning monitoring.
  - (c) In selecting sites to conduct monitoring for Pyrethroid Insecticides, Permittees shall review existing monitoring programs in the watersheds by other public and private entities, watershed coalitions, and citizen volunteers, so as to complement and not duplicate efforts.

- (d) Establish at least 2 stations along the mainstems of each major watershed river that are influenced by urban discharges.
  - (e) The study shall be repeated every third year following the year monitoring begins.
2. The Principal Permittee shall monitor Pyrethroid Insecticides stations according to the following:
- (a) The Principal Permittee shall monitor 1 sampling event per station per monitoring year.
    - (1) Monitoring shall occur after sediment has settled within the waterbody, and safe access can be assured.
  - (b) Sufficient sediment is to be collected at each station in a pre-cleaned glass jar by skimming the upper 1 cm of the sediment column with a steel scoop, and held on ice until returned to the laboratory.
  - (c) Sediment shall be homogenized in the laboratory by hand mixing, then held at 4 °C (toxicity samples) or -20 °C (chemistry samples).
  - (d) All samples taken shall be analyzed for the following Pyrethroids:
    - (1) bifenthrin
    - (2) cyfluthrin
    - (3) cypermethrin
    - (4) deltamethrin
    - (5) esfenvalerate
    - (6) lambda-cyhalothrin
    - (7) permethrin
    - (8) tralomethrin (if laboratory is capable of analyzing for it)
  - (e) Detection limits for all Pyrethroids shall be as close to 1ng/g (dry weight) as reasonably achievable.
  - (f) Each sediment sample is to measure the following:
    - (1) total organic carbon (TOC).
3. All samples shall be tested for toxicity to 7 to 10 day old *Hyalella azteca* according to standard U.S. EPA testing methods.<sup>3</sup>
- (a) Use of the approach described in *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*<sup>4</sup> for toxicity testing shall be used.
4. Analysis by a laboratory that has performed sediment toxicity testing for Pyrethroid Insecticides is preferred.

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<sup>3</sup> U.S. EPA. *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates*; EPA Publication 600/R-99/064; U.S. Environmental Protection Agency: Washington, DC, 2000; 192 pp.

<sup>4</sup> *Aquatic Toxicity Due to Residential Use of Pyrethroid Insecticides*; Weston, D.P.; Holmes, R.W.; You, J.; Lydy, M.J. *Environ. Sci. Technol.*; (Article); 2005; 39(24); 9780 pp.

5. Monitoring results from each station shall be sent electronically to the Regional Board's Storm Water Site at [MS4stormwaterRB4@waterboards.ca.gov](mailto:MS4stormwaterRB4@waterboards.ca.gov), no later than 90 days from sample collection date. The sample data transmitted shall be in the most recent update of the Southern California Municipal Storm Water Monitoring Coalition's (SMC) Standardized Data Transfer Formats (SDTFs).
6. If toxicity is attributed to Pyrethroids then consultation with staff at U.S. EPA, the California Department of Pesticide Regulations and the California Stormwater Quality Association's (CASQA) pesticides committee (UP3 Project web site), shall be required to obtain relevant information to use in developing the recommendations to mitigate Pyrethroids in the Final Report.
7. Final Report for the Pyrethroid Insecticides study shall contain the following:
  - (a) Executive summary
  - (b) Methods
  - (c) Results (including map depicting monitoring stations)
  - (d) Discussion
  - (e) Recommendations to mitigate Pyrethroids
8. The Final Report shall be completed and submitted to the Executive Officer of the Regional Water Board no later than 8 months after completion of the study.

The Pyrethroid Insecticides Study requirement may be satisfied by another tributary monitoring program within the Watershed performing a sediment Pyrethroid Insecticides Study that is monitoring to assess pyrethroid concentrations and sediment toxicity, so as to complement other ongoing programs.

#### **F. Hydromodification Control Study**

1. The Principal Permittee shall conduct or participate in special studies to develop tools to predict and mitigate the adverse impacts of Hydromodification, and to comply with hydromodification control criteria. This can be achieved by the following:
  - (a) Develop a mapping and classification system for streams based on their susceptibility to the effects of hydromodification.
  - (b) Establish protocols for ongoing monitoring to assess the effects of hydromodification.
  - (c) Develop dynamic models to assess the effects of hydromodification on stream condition.
  - (d) Develop a series of tools that managers can easily apply to make recommendations or set requirements relative to hydromodification for new development and redevelopment.

2. The Principal Permittee may satisfy this requirement by participating in the 'Development of Tools for Hydromodification Assessment and Management' Project undertaken by the SMC and coordinated by the SCCWRP.
3. The Principal Permittee shall continue to partner with the SMC and collect data or sponsor its collection for the Ventura County sites to reduce statistical uncertainty and/ or improve model predictability.
4. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they will satisfy this requirement, no later than July 7, 2009.

#### **G. Low Impact Development**

1. The Principal Permittee shall conduct or participate in a special study to assess the effectiveness of low impact development techniques in semi-arid climate regimes such as in Southern California.
2. The Principal Permittee may satisfy this requirement by participating in the SMC project titled "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practice in Southern California".
3. The Principal Permittee shall submit a letter to the Regional Water Board Executive Officer stating how they are satisfying this requirement, no later than 2 months after deciding to either conduct or participate in special study.

#### **H. Southern California Bight Project**

1. The Principal Permittee and Permittees shall participate with other government organizations regulating discharges in southern California in the collaboration to conduct a regional monitoring survey (Southern California Bight Project (SCBP)), which was started in 2008 and to be continued in successive years. The survey's primary objective is to assess the spatial extent and magnitude of ecological disturbances on the mainland continental shelf of the SCB and to describe relative conditions among different regions of the SCBP.
2. The Principal Permittee shall participate on the Steering Committee for the bight-wide monitoring project, and assist with the estuary and nearshore sampling effort requirement of the proposed monitoring project for Ventura County as defined in the SCBP plan.

#### **I. Bioassessment**

1. The Principal Permittee consents to participate in the following regional water quality program for watershed management and planning:

- (a) SMC Regional Monitoring Program
  - (1) Southern California Regional Bioassessment
    - (A) Level of effort per watershed per year
      - (i) Probabilistic sites per watershed
        - (I) Ventura River - Six
        - (II) Santa Clara River - Three
        - (III) Calleguas Creek - Six
      - (ii) Integrator sites per watershed
        - (A) Ventura River - One
        - (B) Santa Clara River - One
        - (C) Calleguas Creek - One

(b) Ventura County Bioassessment: Permittees shall conduct bioassessment at one fixed site in each of the watersheds above on an annual basis. Southern California Regional Bioassessment protocols shall be used to conduct the Ventura County Bioassessment program.

**J. Volunteer Monitoring Programs**

1. The Permittees shall provide limited assistance if requested in the development and implementation of volunteer monitoring programs in the Ventura watersheds. These include, but are not limited to the following:
  - (a) Ventura River - (Ventura Stream Team).
  - (b) Santa Clara River - (Santa Clara River Stream Team).
  - (c) Calleguas Creek - (Calleguas Creek Watershed Quality Monitoring Program).
  - (d) Malibu Creek - (Malibu Creek Watershed Quality Monitoring Program).

**K. Standard Monitoring Provisions**

- I. All monitoring activities shall meet the following requirements.
  1. Monitoring and Records [40 CFR 122.41(j)(1)]
    - (a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  2. Monitoring and Records [40 CFR 122.41(j)(2)] [CWC §13383(a)]
    - (a) The Principal Permittee and Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the Report of Waste Discharge (ROWD) and application for this Order, for a period of at least five (5) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board or U.S. EPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge.
  3. Monitoring and Records [40 CFR 122.21(j)(3)]



Ventura County Municipal Separate Storm Sewer System Permit  
Attachment F - Monitoring Program No. CI 7388

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- (a) Records of monitoring information shall include:
- (1) The date, time of sampling or measurements; exact place, weather conditions, and rain fall amount.
  - (2) The individual(s) who performed the sampling or measurements.
  - (3) The date(s) analyses were performed.
  - (4) The individual(s) who performed the analyses.
  - (5) The analytical techniques or methods used.
  - (6) The results of such analyses.
  - (7) The data sheets showing toxicity test results.
4. Monitoring and Records [40 CFR 122.21(j)(4)]
- (a) All sampling, sample preservation, and analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this Order. If a particular Minimum Level (ML) is not attainable in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure may be used instead.
5. Monitoring and Records [40 CFR 122.21(j)(5)]
- (a) The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.
6. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory:
- (a) Certified for such analyses by an appropriate governmental regulatory agency.
  - (b) Participated in 'Intercalibration Studies' for storm water pollutant analysis conducted by the SMC.<sup>5</sup>
  - (c) Which performs laboratory analyses consistent with the storm water monitoring guidelines as specified in, the *Stormwater Monitoring Coalition Laboratory Guidance Document*, 2nd Edition R. Gossett and K. Schiff (2007), and its revisions.

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<sup>5</sup> The 'Intercalibration Studies' are conducted periodically by the SMC to establish a consensus based approach for achieving minimal levels of comparability among different testing laboratories for storm water samples to minimize analytical procedure bias. Stormwater Monitoring Coalition Laboratory Document, Technical Report 420 (2004) and subsequent revisions and augmentations.

7. For priority toxic pollutants that are identified in the CTR (65 Fed. Reg. 31682), the MLs published in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California* (SIP) shall be used for all analyses, unless otherwise specified. The MLs from the SIP are incorporated into Attachment "G".
8. The Monitoring Report shall specify the analytical method used, the Method Detection Level (MDL) and the ML for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported with 1 of the following methods, as appropriate:
  - (a) An actual numerical value for sample results greater than or equal to the ML.
  - (b) "Not-detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.
  - (c) "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported. This is the concentration that results from the confirmed detection of the substance by the analytical method below the ML value.
9. For priority toxic pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to raising the ML for any constituent.
10. Monitoring Reports [40 CFR 122.41(I)(4)(ii)]
  - (a) If the Principal Permittee monitors any pollutant more frequently than required by the Order using test procedures approved under 40 CFR part 136, unless otherwise specified in the Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Annual Monitoring Reports.
11. Monitoring Reports [40 CFR 122.41(I)(4)(iii)]
  - (a) Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.
12. If no flow occurred during the reporting period, then the Monitoring Report shall, so state.

13. The Regional Water Board Executive Officer or the Regional Board, consistent with 40 CFR 122.41, may approve changes to the Monitoring Program, after providing the opportunity for public comment, either:
  - (a) By petition of the Principal Permittee or by petition of interested parties after submittal of the Monitoring Report. Such petition shall be filed not later than 60 days after the Monitoring Report submittal date, or
  - (b) As deemed necessary by the Regional Water Board Executive Officer following notice to the Principal Permittee.
  
14. The Principal Permittee must provide a copy of the Standard Operation Procedures (SOPs) for the Monitoring Program No. CI 7388 to the Regional Water Board upon request. The SOP will consist of five elements: Title page, Table of Contents, Procedures, Quality Assurance/ Quality Control (QA/ QC), and References. Briefly describe the purpose of the work or process, including any regulatory information or standards that are appropriate to the SOP process, and the scope to indicate what is covered. Denote what sequential procedures should be followed, divided into significant sections; e.g., possible interferences, equipment needed personnel qualifications, and safety considerations. Describe QA/ QC activities, and list any cited or significant references.

**L. Total Maximum Daily Load (TMDL) Monitoring**

1. TMDL monitoring is to determine compliance with the TMDL Waste Load Allocations (WLAs) and numeric targets for the MS4 Permittees that have been adopted by the Regional Water Board and have been approved by the Office of Administrative Law and the U.S. EPA.
  
2. TMDL monitoring is in accordance with approved TMDLs as discussed in part 6 of the permit. TMDL monitoring for specific watersheds is in accordance with the agreed upon monitoring plans submitted by stakeholders, including MS4 Permittees.

**M. Beach Water Quality Monitoring**

If funding from state and federal sources is not available for beach water quality monitoring the Principal Permittee shall conduct weekly year-round beach water quality sampling and analysis at a maximum of ten sites in accordance with the procedures and locations used in AB 411 monitoring and listed below:


1. Rincon Beach – 25 yards south of the creek mouth\*
2. Oil Piers Beach – south of the drain, bottom of the wood staircase
3. Faria County Park – south of the drain at the north end of the park\*
4. Solimar Beach – south (end of east gate access road)\*
5. Emma Wood State Beach – 50 yards south of first drain
6. Oxnard Beach – at J Street drain

Ventura County Municipal Separate Storm Sewer System Permit  
Attachment F - Monitoring Program No. CI 7388

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7. Surfer's Point at Seaside – end of the access path via wooden gate
  8. Promenade Park – Figueroa Street
  9. Surfer's Knoll – beach adjacent to the parking lot\*
  10. San Buenaventura Beach – south of drain at San Jon Road
- \* Not associated with MS4 discharges.

Ordered by:

  
Tracy J. Egoscue  
Executive Officer

*Chief Deputy E.O.*  
*fs*

Date: May 7, 2009

file

# California Regional Water Quality Control Board Los Angeles Region



**Linda S. Adams**  
Secretary for  
Environmental Protection

320 West Fourth Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576-6600 ♦ Fax (213) 576-6640 ♦ Internet Address: <http://www.waterboards.ca.gov/losangeles>

**Arnold Schwarzenegger**  
Governor

Reply To: **Michael J. Levy, Senior Staff Counsel**  
Office of Chief Counsel, P.O. Box 100, Sacramento, California 95812-0100  
Direct: (916) 341-5193 ♦ [mlevy@waterboards.ca.gov](mailto:mlevy@waterboards.ca.gov)  
Office: (916) 341-5161 ♦ Fax (916) 341-5199

May 29, 2009

## VIA U.S. MAIL & EMAIL

Andrew R. Henderson  
Vice President and General Counsel  
Building Industry Association of Southern California  
1330 South Valley Vista Drive  
Diamond Bar, CA 91765  
[ANDREW@biasc.org](mailto:ANDREW@biasc.org)

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2009 JUN 3 PM 2 16  
CALIFORNIA REGIONAL WATER  
QUALITY CONTROL BOARD  
LOS ANGELES REGION

Dear Mr. Henderson:

### DEMAND FROM CONSTRUCTION INDUSTRY REPRESENTATIVES FOR RECIRCULATION OF TENTATIVE PERMIT FOR THE VENTURA COUNTY MS4 SYSTEM

This letter is in response to yours of May 20, 2009, wherein you request on behalf of the Building Industry Association – Ventura County (BIA) and the Construction Industry Coalition on Water Quality (CICWQ) that the Municipal Separate Storm Sewer System (MS4) permit for Ventura County re-circulate the final version of the permit for public comment, and reconsideration by the Los Angeles Regional Water Quality Control Board (Regional Board), in view of the changes that were made to the permit during the hearing.

This will confirm my email to you of May 21, 2009, that pursuant to your request, your letter was transmitted each of the Regional Board members on that date. A copy of this response will also be transmitted to each of the Regional Board members.

Your request is based upon your claim that BIA and CICWQ members lacked adequate notice of and opportunity to respond to the changes to the permit, which you describe as “sweeping.” Please be advised that staff will not be recommending recirculation and reconsideration of the MS4 permit. While neither BIA nor staff was a party to the negotiations between the environmental organizations and representatives of the co-permittees, like staff, BIA and CICWQ representatives were aware that those negotiations had been ongoing since at least as far back as December of 2008. Like staff, BIA and CICWQ received copies of the comment letters containing the proposals on the date they were submitted (April 10, 2009). Staff was fully able to respond to the proposals, and BIA and CICWQ were afforded a half of an hour to present anything it desired at the hearing, and its presentation was after the joint presentation by the

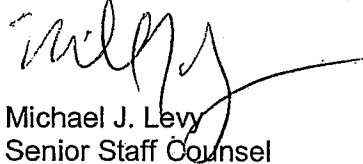
May 29, 2009

parties to the negotiated proposals in support thereof. While staff did not endorse the proposals, both staff and your principals were fully aware of their contents and were fully able to respond to them. Regardless of whether the proposals were contained in the final staff recommendation, the issues about the structure of the Municipal Action Levels (MALs) and whether they should even be included, as well as the level of effective impervious area (EIA) and other components of the low impact development (LID) provisions, have been debated vigorously by all stakeholders for the better part of two years.

Staff is confident that the changes made to the MS4 permit at the hearing are indeed a logical outgrowth of the proceeding, and their inclusion did not unfairly prejudice any stakeholder. The Regional Board's decision to include the negotiated provisions in the MS4 permit, were procedurally and substantively within the Regional Board's prerogative, during the hearing, and without recirculation. Accordingly, staff's recommendation is that the MS4 permit is and should be deemed final.

Please let me know if you have any questions regarding this matter.

Sincerely,



Michael J. Levy  
Senior Staff Counsel

cc: Tracy J. Egoscue, Executive Officer  
**[via email only]**  
Regional Water Quality Control Board  
Region 4  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Samuel Unger, Principal Engineer  
**[via email only]**  
Regional Water Quality Control Board  
Region 4  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Deborah Smith, Chief Deputy Executive Officer  
**[via email only]**  
Regional Water Quality Control Board  
Region 4  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Andrew R. Henderson

- 3 -

May 29, 2009

bc: **[via email only]**  
Michael J. Levy, OCC

MJLevy/wjw  
5/29/09

I:\Levym\Support Staff\M. Levy\Letters-Memos\Henderson BIA Ltr.doc

May 20, 2009



Via Email and U.S. Mail

Hon. Members of the Los Angeles Regional Water Quality Control Board  
c/o: Tracy Egoscue, Executive Officer  
320 W. Fourth Street, Suite 200  
Los Angeles, California 90013



Building Industry Association of Southern California

Re: Demand from Construction Industry Representatives for Recirculation of Tentative Permit for the Ventura County MS4 System.

Dear Board Members:

On May 7, 2009, the Los Angeles Regional Water Quality Board (the "Board") conducted a hearing concerning the fourth tentative draft of next MS4 permit for Ventura County (the "Fourth Tentative Draft"). The hearing was undertaken pursuant to a notice publicized on February 24, 2009, at which time the Board's staff officially released the Fourth Tentative Draft for public review and comment pursuant to California Water Code section 13167.5 and federal requirements. In response to that notice, the Construction Industry Coalition on Water Quality ("CICWQ") and the Building Industry Association of Southern California (through its Los Angeles - Ventura Chapter, "BIA/LAV") began preparing and ultimately submitted comments concerning the Fourth Tentative Draft.

At the hearing on May 7<sup>th</sup>, however, key aspects of the Fourth Tentative Draft were spontaneously *gutted and replaced* by the Board at the urging of some parties. Importantly, CICWQ and BIA/SC had limited and untimely knowledge of these alternative proposals. The alternatives resulted from confidential negotiations to which neither the LA RWQCB nor other interested stakeholders were party, and resulted in sweeping, new and unvetted proposals.

In particular, the Fourth Tentative Draft's *land use provisions* affecting all prospective development were gutted; and the Board voted to put in their place new and different provisions that - for the first time in any MS4 permit - would mandate the permanent capture, rather than treatment and release, of diffused surface waters, contrary to (i) U.S. EPA guidance, (ii) the vast weight of scientific and technical literature, and (iii) the Board staff's studied recommendation. Such a policy would have potentially radical effects on, *inter alia*, the technical and economic feasibility of development, the natural background water balance and hydrologic regime, reclaimed water market demand, and established downstream water rights. The changes thus

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGIONAL OFFICE

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- Antelope Valley Chapter
- Baldy View Chapter
- Desert Chapter
- Greater L.A./Ventura Chapter
- Los Angeles County Chapter



approved by the Board radically deviate from aspects of the Fourth Tentative Draft which are most important to CICWQ and BIA/LAV as interested regulated stakeholders. There are other spontaneous, radical changes as well which affect our interests (such as complete disregard for the recommendations of the "Blue Ribbon Panel" commissioned by the State Water Resources Control Board in 2005 to inform all Regional Boards in adopting policies and permit requirements related to municipal action levels).

Notably, even today, no final version of the adopted MS4 Permit is available because the Board's staff has not yet been able to digest and distill the new permit language into a final permit. Nor has the Board's staff yet reconciled the substituted permit provisions with the other provisions of the Permit, or with the evidence in the record, which provided no sufficient basis for the addition into the Permit of the spontaneously inserted permit conditions. We have requested both revised permit language and a copy of the transcript of the hearing; but we are informed that neither is yet available, nor are they expected to be available promptly. Therefore, at present, we cannot even be sure of exactly what the Board approved – but we know that there were very profound departures from the Fourth Tentative Draft recommended by staff and published by the Board for action in the hearing, which was the only document that was officially made available to parties and regulated stakeholders for review and comment.

The Board compounded the problem by allowing the cross-examination of the Board's staff by a lawyer from the Natural Resources Defense Council ("NRDC") during the hearing. This occurred despite the fact that Board Counsel indicated that notice of this request should have been made in advance, and told counsel for the co-permittees that no such request had been made. Interested parties, including the co-permittees, had no ability to prepare for and provide evidence to the Board concerning the examination that unfolded. This created an unbalanced and inaccurate understanding of the issues by the Board, and no doubt contributed to the resulting dramatic changes to the Fourth Tentative Draft.

Because of the sweeping nature of the gutting and replacement of entire permit provisions that took place, and the resulting departure from the Fourth Tentative Draft, CICWQ and BIA/LAV were denied the opportunity to review, understand, comment upon, and marshal evidence for placement in the record concerning the new permit conditions replacing those that were reflected in the Fourth Draft Permit.

Incorporation of such sweeping changes by the Board raises key procedural problems. The inclusion for the first time a new and limited definition of acceptable Low Impact Development BMPs and the elimination of Municipal Action Levels constitute unexpected, "fundamental policy shifts" that violates administrative due process. See *Natural Resources Defense Council v U.S. E.P.A.*, 279 F.3d 1180, 1188 (9<sup>th</sup> Cir. 2002) ("[T]here is no doubt that there was a fundamental policy shift, rather than natural drafting evolution, between the draft permit and the final permit."). Therefore, we respectfully believe that – given the Board's decision to gut and replace key aspects of

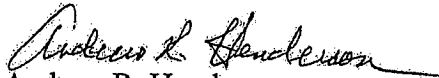
May 20, 2009

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the Fourth Tentative Permit – the new permit provisions must be formally re-circulated for public review and comment. This interpretation is consistent with the argument put forward in Region 8 by NRDC's counsel, in a request last week for recirculation of an errata sheet. (See attachment.)

Given concern for fair opportunity of interested persons to respond to permit proposals without unfair surprise, our view is that the "paradigm shifts" embraced spontaneously by the Board should require re-circulation of a new tentative MS4 permit for Ventura County. CICWQ and BIA/LAV deserve the opportunity to marshal evidence to address squarely new requirements to retain permanently diffused surface water on site. We hereby assert our right accordingly.

Respectfully,



Andrew R. Henderson

Vice President and General Counsel

Building Industry Association of Southern California

cc: Michael J. Levy, Esq.  
Samuel Unger