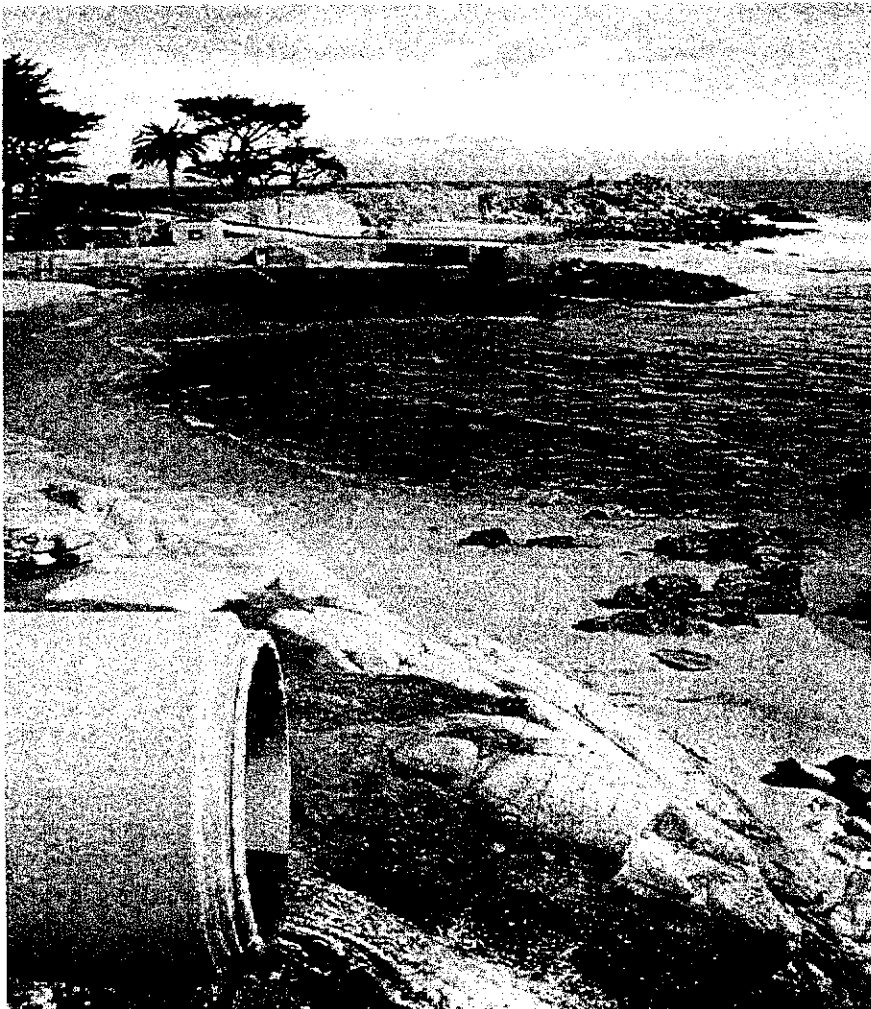


# A PRACTICAL PLAN FOR POLLUTION PREVENTION

Urban Runoff Solutions for the Monterey Region



*Prepared By*  
Anjali Jaiswal  
Sarah Newkirk

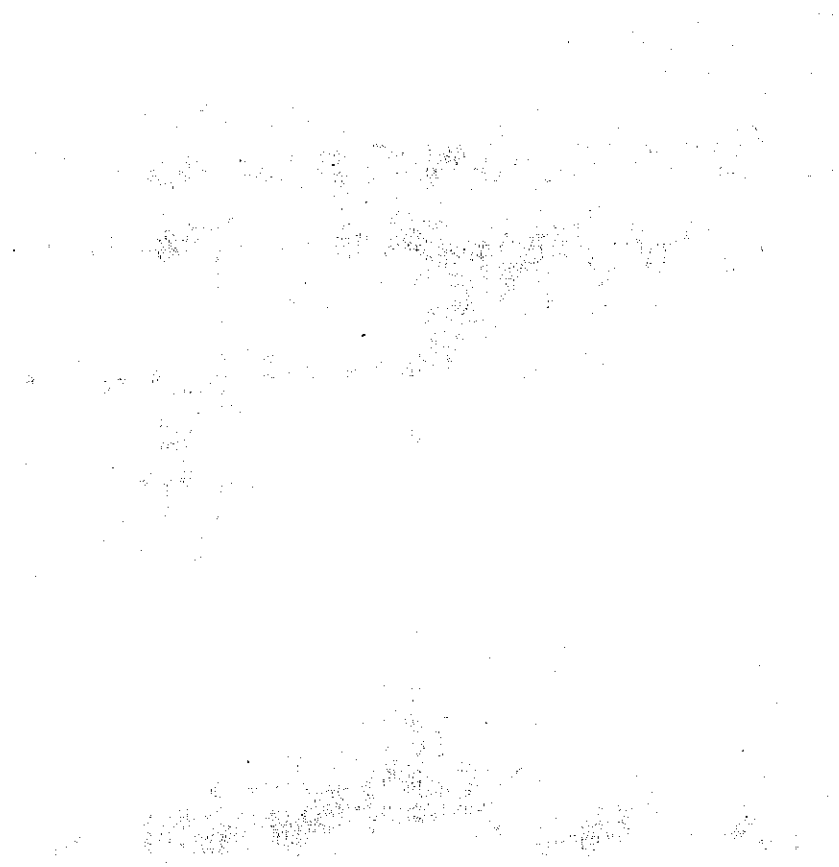
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Item No. 5 Attachment No. 2  
February 9-10, 2006 Meeting  
Monterey Regional Stormwater  
Management Plan



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## **ABOUT NRDC**

NRDC (Natural Resources Defense Council) is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1 million members and e-activists nationwide, served from offices in New York, Washington, Los Angeles and San Francisco. For more information, visit [www.nrdc.org](http://www.nrdc.org).

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## **ABOUT THE OCEAN CONSERVANCY**

The Ocean Conservancy is the oldest and largest organization dedicated to preserving the marine environment. Headquartered in Washington DC, the Conservancy has offices in Alaska, California, Florida, Maine, the U.S. Virgin Islands and Virginia.

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# EXECUTIVE SUMMARY

## *The Problem*

Communities across California are growing larger every year. Statewide, California's projected growth rate through the year 2020 is over twenty-four percent.<sup>1</sup> Increased urban development is linked with, and in many respects, drives this rapid growth rate. As a greater percentage of California becomes developed and covered with impervious surfaces that don't allow water absorption, polluted runoff increasingly threatens our precious marine ecosystems and coastal economies. This polluted storm water—and dry weather runoff from excess watering of lawns and other water uses—picks up a toxic brew of bacteria, pathogens, and metals as it flows, making it the number one source of pollution to California's coastal waters.

In most places in California, this polluted water is not treated at a sewage treatment plant or other facility. Rather, it is simply discharged in pure polluted form to the ocean, rivers, and streams. Cities nationwide and throughout California are realizing that they need to create meaningful responses to storm water problems. For over a decade under Phase I of the national effort, the federal Clean Water Act has motivated California's largest urban areas, like cities across the country, to recognize and address the severe threat that storm water pollution imposes on their water ways, public health, and economies. These large urban areas have developed and implemented Storm Water Management Programs to effectively protect their valuable resources.

Growing urban areas, like California's Central Coast, are currently in the process of developing Storm Water Management Programs under Phase II of this national effort to address polluted urban runoff. Programs that effectively prevent and control storm water pollution are critical to protecting the magnificent marine life in the area's waters—teeming with sea otters, kelp forests, and multitude species of fish—as well as the tourists and residents that use the waters. Pollution control is also vital to these coastal economies. In fact, the Central Coast, known for its unparalleled beauty and picturesque beaches, has the fastest growing ocean economy in California, one that already generates nearly \$6 billion annually.<sup>2</sup> The Monterey Region alone has a \$1.8 billion coastal economy.<sup>3</sup> With increasing population growth rates and growth from Los Angeles and Silicon Valley, large-scale development and urban sprawl are slated for the Central Coast, with the Monterey Region at the heart of the growth. The lessons from larger urban areas show that unless these growing areas, like the Monterey Region, manage their development and protect their resources as it grows, water quality in the Monterey Region will steadily worsen, resulting in beach closures, degraded marine ecosystems, and economic loss.

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<sup>1</sup> United States Census Bureau, California Statewide Projections  
U.S. Census Bureau, Population Division, Interim State Population Projections, 2005, available at  
(<http://www.census.gov/population/projections/05PyrmdCA2.pdf>).

<sup>2</sup> NOAA, *Year of the Ocean Discussion Paper: Coastal Tourism and Recreation* (1999);  
Judith Kildow and Charles S. Colgan, *California's Ocean Economy: A Report to the Resources Agency, State of California* (July 2005).

<sup>3</sup> Monterey County Convention & Visitors Bureau, available at <http://media.monterey.wego.net/?p=8464>.

*“Clean Water, Healthy Economy” Solutions*

In 2004, cities along the Monterey Peninsula submitted a Storm Water Management Program to the Regional Water Quality Control Board. Unfortunately, the initial versions of the proposed program—the Monterey Regional Storm Water Management Program (Monterey Proposal or Monterey Program)—did not contain programs that would effectively protect the region’s waters or public health at the beach. As a result, the Central Coast Regional Water Quality Control Board directed the municipalities to rewrite the program. To assist in the development of an effective program that is tailored to those issues identified by the Monterey municipalities in their draft program, the Natural Resources Defense Council (NRDC) and the Ocean Conservancy have undertaken an extensive analysis of the draft Monterey Proposal.

NRDC and the Ocean Conservancy have identified and documented in this report a wide range of programs in place throughout California that can and should be used to protect water quality on the Monterey Peninsula. This report analyzes the draft Monterey proposal in comparison to what other similarly sized cities throughout California and the nation are doing to protect their waters from storm water pollution. This report also provides a set of standard pollution prevention programs that can and should be used to cure the vague and general approach of the draft Monterey Proposal. Additional, commonplace pollution prevention actions that are missing from the Monterey Proposal are also detailed in this report. Collectively, these “Clean Water, Healthy Economy” program elements provide a practical way forward, and each of them should be adopted in the final Monterey Regional Storm Water Management Program.

NRDC and the Ocean Conservancy’s “Clean Water, Healthy Economy” program elements are largely based on management plans from existing storm water pollution prevention programs from medium and smaller municipalities (Phase II) plans as well as components of larger municipalities (Phase I) storm water management plans and permits. The report analyzes each component of the draft Monterey Proposal in the context of other existing programs, such as:

Griffin, GA Storm Water Management Plan

Model Urban Runoff Program (prepared by Region 3 and the City of Monterey)

Morgan Hill, CA Storm Water Management Plan

Los Angeles County, CA Municipal Storm Water Permit

Napa County, CA Storm Water Management Plan

Placer County, CA Storm Water Management Plan

Salinas, CA Municipal Storm Water Permit

San Bernardino County, CA Municipal Storm Water Permit

San Diego County, CA Municipal Storm Water Permit

San Joaquin, CA Storm Water Management Plan

San Francisco Public Utilities Commission, CA Storm Water Management Plan

Solana County, CA Storm Water Management Plan

The *Model Urban Runoff Program* (MURP) is one of the key programs utilized in this report in analyzing the six Minimum Control Measures. Notably, the City of Monterey and Association of Monterey Bay Area Governments were integral in preparing this “model” program. However, the differences between the MURP and the draft Monterey Proposal are astonishing. In fact, it is puzzling how a city can recommend basic—“model”—program provisions for other similarly situated cities, yet fail to adopt its own “model” program.

In Chapter 3, the report sets forth our General Principles for overall improvement to the draft Monterey Proposal. Following the General Principles, the report demonstrates how the draft Monterey Proposal so far does not include practical pollution reduction programs in use in similar communities in California that apply to each of the six “minimum control measures” covered by the draft Monterey Proposal. The six “minimum control measures” are: 1) Public Education and Outreach; 2) Public Participation/Involvement; 3) Illicit Discharge Detection and Elimination 4) Construction Site Storm Water Runoff Control; 5) Post-Construction Storm Water Management in New Development and Redevelopment; and 6) Good Housekeeping and Pollution Prevention for Municipal Operations.

#### *Federal and State Requirements Protecting Water Quality*

Because of the serious threats imposed by storm water runoff, Congress amended the Clean Water Act in 1987 with a phased schedule for implementing storm water permitting requirements across the United States.<sup>4</sup> As part of “Phase I” of the storm water permitting program, Congress required municipalities which operate a “separate storm sewer system” serving a community of over 100,000 persons to apply for a discharge permit. “Phase II” requires storm water plans for midsize communities. Both the “Phase I” and “Phase II” programs include requirements that apply to other major sources of storm water pollution — construction and industrial sources.

In 2003, the State Water Resources Control Board developed a statewide permit under the Clean Water Act for Phase II cities, such as those along the Monterey Peninsula. This permit is referred to as the “General Permit.” To obtain the required coverage under the General Permit, the operator of a regulated city must submit a Notice of Intent to comply with the terms of the General Permit and a Storm Water Management Program. The substantive requirements of the General Permit for Storm Water Management Programs closely mirror the requirements established by the federal regulations.<sup>5</sup>

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<sup>4</sup> 33 U.S.C. § 1342.

<sup>5</sup> 40 C.F.R. 122.34.

Of these, the fundamental requirement for these programs is that they shall be “designed to reduce the discharge of pollutants . . . to the Maximum Extent Practicable (MEP) and to protect water quality.” Equally important, the program must assure that discharge prohibitions are met, including the requirement to effectively prohibit non-storm water discharges; and shall further assure compliance with clean water standards set to protect coastal and inland waters (once plans are implemented).<sup>6</sup> Consequently, the elements of a storm water management program must cumulatively reduce pollutants to the maximum extent practicable; effectively comply with discharge prohibitions; and result in compliance with environmental and public health standards.

In addition to protecting water quality, one central purpose of this report is to demonstrate that the current draft Monterey Proposal unfortunately does not yet meet the Maximum Extent Practicable requirement. A comparison to other storm water management plans for similarly-sized municipalities makes this plain. The fact that the many clean water programs are in use in municipalities that are similarly situated demonstrates indisputability that they are *practicable*. This report recognizes the Monterey municipalities’ reluctance to utilize components of storm water management plans developed in larger cities and their desire to rely solely on Phase II storm water management programs. Therefore, to a large extent the analysis and the “Clean Water, Healthy Economy” programs is based on existing Clean Water Act Phase II communities. Many small cities, however, are implementing programs adopted by larger cities in the same urban areas. For example, cities such as Compton and Signal Hill, California are part of programs developed and implemented by the County of Los Angeles. For this reason, and because the Clean Water Act does not differ in discussing MEP for Phase I and Phase II municipalities, it is appropriate to also look to programs implemented in larger urban areas to determine what is practical for California communities. There can be no doubt that the Clean Water Act does not contain two definitions of “practicability”:

[Cities] shall 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.

33 U.S.C. § 1342(p)(3)(B)(iii). The definition of the term of art, Maximum Extent Practicable, is also discussed in a precedential decision issued by the State Water Resources Control Board, which makes it applicable throughout the State:

MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. The definition must include the requirement that permittees must choose effective BMPs, and

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<sup>6</sup> *Id.* at 122.34(a); *see also* State Water Resources Control Board (SWRCB) Water Quality Order No. 2003-0005 – DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS00000X, Waste Discharge Requirements for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (Municipal storm sewers), Application Requirements at D.1.



reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive.<sup>7</sup>

In this connection, the principal Phase I program relied upon in these comments is the San Diego Municipal Storm Water Permit. The San Diego Permit with its detailed programs and Best Management Practices (“BMPs”)—regulating smaller cities within San Diego County—is the best marker of what, at a minimum, constitutes MEP. California courts rejected a wide range of legal challenges to this Permit, in a decision that the California Supreme Court specifically declined to review earlier this year: *Building Industry Association v. State Water Resources Control Board* (2004) 124 Cal. App. 4th 866.

Many smaller cities operating under Phase I permits throughout California are implementing BMPs that have been proven to be effective and feasible, such as Alameda, Camarillo, Banning, Beaumont, and Lynwood.<sup>8</sup> The fact that these areas have been operating under Phase I permitting rules demonstrates that small cities are no less able to implement strong programs. There is no logical or legal reason why Beaumont, a Phase I city with a population of just over 11,000, should be held to a stricter standard than the cities along the Monterey Peninsula, several of which have populations twice or three times its size.<sup>9</sup>

Equally compelling, the Monterey Region has a projected 20.7 percent growth rate in this decade, which is similar to Phase I cities.<sup>10</sup> The economies of the Monterey Region parallel or surpass the economies of some Phase I cities.<sup>11</sup> Notably, the rapidly growing tourist industry for the Monterey Region is the eleventh largest in the State.<sup>12</sup> These comparable population and economic statistics suggest that similarly rigorous BMPs are practicable for the Monterey municipalities, and that what is a maximum practicable effort in Phase II communities—in reality—is comparable to many smaller cities complying with Phase I programs. Because there is no difference between: (1) a key standard applied to storm water management programs (MEP); (2) the need to meet environmental and public health standards; (3) the actual BMPs

<sup>7</sup> *In re Cities of Bellflower, et al.* SWRCB 2000-11 at 20.

<sup>8</sup> Compare Monterey County population 401,762, City of Monterey population 29,674, Pacific Grove population 15,522, Marina population 25,101, Seaside population 31,696 to Camarillo population 57,077, Banning population 23,562, Beaumont population 11,384, United States Census Bureau, California Statewide Projections U.S. Census Bureau, Population Division, Interim State Population Projections, 2005, available at (<http://www.census.gov/population/projections/05PyrmdCA2.pdf>)

<sup>9</sup> Under the Clean Water Act, smaller cities that are part of a municipal storm water system with larger cities are considered to be part of the Phase I program so as to not leave “donut holes” in the cleanup effort.

<sup>10</sup> California Institute of Governments Projected Growth Rate for Monterey County, available at [http://www.cicg.org/publications/profiles/monterey\\_county.pdf](http://www.cicg.org/publications/profiles/monterey_county.pdf)

<sup>11</sup> Compare Monterey County 2002-2003 budget of \$572,148,911, City of Monterey 2003-2004 budget of \$41,919,878, Seaside 2003-2004 budget of \$25,825,128 to City of Alameda 2003 budget of \$35,540,000, Camarillo 2003 budget of \$36,339,495, available at <http://www.co.monterey.ca.us/budget.htm>; <http://www.monterey.org/budget/gfrev.html>; <http://www.ci.seaside.ca.us/budget/budget03-04.pdf>; <http://www.ci.alameda.ca.us/gov/pdf/cafr2003.pdf>; <http://www.ci.camarillo.ca.us/pdfdocs/CAFR.pdf>.

<sup>12</sup> Monterey County Convention & Visitors Bureau, available at <http://media.monterey.wego.net/?p=8464>.

used in Phase I and Phase II communities; and (4) the economic capabilities of the Monterey Peninsula and other cities that are participating in Phase I programs, it is reasonable and appropriate to compare the Regional Proposal with Phase I storm water programs.

For all of these reasons, this report shows that the draft Monterey Proposal should be revised and improved so that it includes programs that are in place elsewhere in the State. Together, these "Clean Water, Healthy Economy" programs can help ensure the efficient reduction of storm water pollution in these communities in a manner consistent with applicable discharge prohibitions and receiving water limitations. The Monterey Region needs a program to address a critical source of water pollution, one that will effectively protect marine resources, public health, and coastal economy. This report is intended to help regulators and local cities put such a program in place.

## CHAPTER 1

# THE STORM WATER PROBLEM

Polluted urban storm water runoff remains the single largest source of pollution to the waterways of California.<sup>13</sup> The impacts of urban storm water runoff are many and varied. Pathogens and toxic substances can be borne by runoff into our waters, causing disease and economic losses from beach closures, as well as contamination of shellfish beds and fish tissue.<sup>14</sup> Silt and sediment carried by runoff can destroy coastal habitats and impair the feeding of some aquatic species.<sup>15</sup> Nutrients carried by storm water runoff can cause algal blooms and hypoxic conditions leading to fish kills.<sup>16</sup> Storm water discharges from mid-sized communities (Phase II municipalities) significantly contribute to the impairment of California's surface and coastal waters.<sup>17</sup>

One of the most significant impacts of storm water pollution is on one of the major recreational beneficial uses of coastal waters: swimming.<sup>18</sup> The documented presence of human pathogens in the surf zone of local beaches degrades water quality to such an extent that it is often unsafe for human contact. These unhealthy conditions, which are not limited to times when beaches are officially closed, have been traced directly to urban runoff.<sup>19</sup> A 1995 epidemiological study conducted by University of Southern California researchers examined the health effects of swimming near storm drain outfalls in Santa Monica Bay.<sup>20</sup> The study found that people who swam directly in front of these storm drains experienced substantially more fevers, chills, ear discharge, vomiting, and similar maladies than those who swam 100 or 400 yards away from the outlets.

Until we are able to successfully control bacterial pollution from contaminated storm water, swimmers and surfers will continue to get sick at California's beaches.<sup>21</sup> Moreover,

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<sup>13</sup> General Permit at 1.

<sup>14</sup> General Permit at 1; United States Environmental Protection Agency, *Report to Congress on the Phase II Storm Water Regulations* (Oct. 1999), I.3-I.6.

<sup>15</sup> General Permit at 1; EPA, *Report to Congress on the Phase II Storm Water Regulations* at I.3-I.6.

<sup>16</sup> General Permit at 1; EPA, *Report to Congress on the Phase II Storm Water Regulations* at I.3-I.6.

<sup>17</sup> See 40 C.F.R. § 123.35(b).

<sup>18</sup> *State of the Bay 1998, Executive Summary* (Santa Monica Bay Restoration Project, Mar. 17, 1998) at 2; Haile, R. et al., *An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay* at 6 (Santa Monica: Santa Monica Bay Restoration Project, 1996).

<sup>19</sup> Official Department of Health advisories to avoid ocean contact for 72 hours following a storm are often issued. See *Testing the Waters 2002: A Guide to Water Quality at Vacation Beaches* at 30-45, 50-53 (NRDC, 2002).

<sup>20</sup> Haile, R. et al., *An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay* at 6 (Santa Monica: Santa Monica Bay Restoration Project, 1996).

<sup>21</sup> See General Permit at 1; Haile, R. et al., *An Epidemiological Study of Possible Adverse Health Effects of Swimming in Santa Monica Bay* at 6 (Santa Monica: Santa Monica Bay Restoration Project, 1996).

polluted storm water does not just make people sick. A growing number of studies indicate that storm water discharge is acutely toxic to marine organisms.<sup>22</sup>

The storm water runoff that the draft Monterey Proposal seeks to address is particularly offensive in that it pollutes waters that are particularly important to California and Californians. Monterey County is home to five Areas of Special Biological Significance: the Pacific Grove Marine Gardens Fish Refuge and Hopkins Marine Life Refuge ASBS, the Carmel Bay ASBS, Point Lobos Ecological Reserve ASBS, Julia Pfeiffer Burns Underwater Park ASBS, and the Ocean Area Surrounding the Mouth of Salmon Creek ASBS. ASBS are especially rich but fragile marine ecosystems that have been specially designated because of their need for extraordinary protection. Accordingly, under the Ocean Plan, all discharges into Areas of Special Biological Significance are expressly prohibited.<sup>23</sup> Nevertheless, a recent report by the Southern California Coastal Water Research Project documented 765 drainages into the five Monterey County ASBS (2498 statewide), many of which “flow from the urban watershed and roads when it is raining.”<sup>24</sup> Consequently, storm water runoff poses a major threat to California’s most pristine ocean waters, including those in Monterey County.

The Monterey Peninsula boasts other special areas as well: the California Sea Otter Game Refuge, the Big Creek Marine Resources Protection Act Ecological Reserve, and – last but not least – the Monterey Bay National Marine Sanctuary. These areas are protected, in part, for the unique marine life they contain. However, the state also has an interest in protecting these areas for the enjoyment of visitors, and the coastal areas of the Monterey Peninsula have an especially powerful draw for tourists. The Monterey Bay Aquarium, which highlights the abundance and diversity of life in the coastal waters of the area, is among the most visited sites in California. Tourism in Monterey County is a \$1.8 billion industry, with many people coming to admire and observe the magnificent marine environment.<sup>25</sup>



Sea Otter at play. Photo: Friends of the Sea Otter.

<sup>22</sup> See, e.g., Gersberg, R.M., *Impact of Urban Runoff in Santa Monica Bay and Surrounding Ocean Waters* (1995); *State of the Bay 1998, Executive Summary* (Santa Monica Bay Restoration Project, Mar. 17, 1998); EPA, *Report to Congress on the Phase II Storm Water Regulations* at 1.3-1.6.

<sup>23</sup> Ocean Plan at III.E.1.

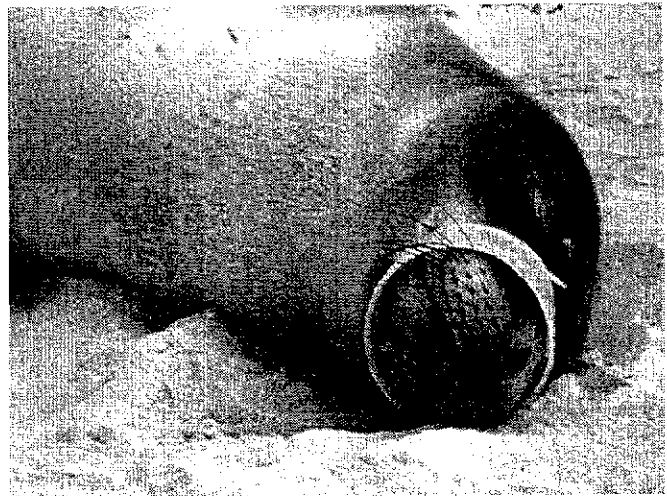
<sup>24</sup> Southern California Coastal Water Research Project, *Final Report: Discharges into State Water Quality Protection Areas* (July 2003) at 13-14.

<sup>25</sup> Monterey County Convention & Visitors Bureau, available at <http://media.monterey.wego.net/?p=8464>.

The Monterey Region is particularly susceptible to increased storm water pollution because of its accelerated population growth rate and rapid urbanization. Development and urbanization increase pollutant load, volume, and velocity in storm water. The problem begins with the fact that often natural areas that allow water to infiltrate into the ground are converted to paved, impervious surfaces such as highways, streets, buildings and parking lots. Natural areas with grass and vegetation can both absorb water and remove pollutants, which functions as an effective natural pollutant removal process. In contrast, traditional pavement and concrete does not absorb water or remove pollutants, allowing pollutants to flow directly into local waters.

The problem is compounded by new pollution sources that bring increased population, cars, sewage, pesticides, and waste. Development and urbanization especially threaten environmentally sensitive areas, such as the Areas of Special Biological Significance identified above. These areas have a much lower capacity to withstand pollutants than other ecosystems because of their complexity and fragility. Another major problem is that increased volume, velocity, and discharge duration of storm water runoff from developed areas greatly accelerates erosion and destruction of streams and creeks. Many studies show a direct correlation between the amounts of paved surfaces to impairment of receiving waters. In fact, the percentage impervious cover is a reliable indicator and predictor of potential water quality degradation expected from new development.

The storm water pollution problem also adversely impacts local and state economies. Storm water pollution is often the principal cause of beach water contamination and closures and thus, decreases the millions of annual beach visitors and the \$14 billion of direct revenue generated from California's beaches. Increased storm water pollution in the Monterey Region jeopardizes its \$1.8 billion coast economy—one that rivals Santa Monica Bay's \$2 billion coastal economy.



Pollution harms marine life. Photo: NRDC.

## CHAPTER 2

# OFF THE SHELF SOLUTIONS

Since proven Best Management Practices (“BMPs”) exist, there is no reason for the Monterey Region to “recreate the wheel” or fail to meet the unified water quality regulatory program in California. State law establishes a coordinated state-wide program of water quality control overseen by the State Board and administered by nine regional boards.<sup>26</sup>

The state board and regional boards in exercising any power granted in this division shall conform to and implement the policies of this chapter and shall, at all times, coordinate their respective activities so as to achieve a unified and effective water quality control program in this state.<sup>27</sup>

This proven toolbox of BMPs is used throughout California and the country as well as recommended by EPA to effectively control polluted urban storm water runoff. In addition to BMPs, such as education, public participation, and inspection, housekeeping techniques, and construction programs, the principal method of managing urban storm water runoff has been treating it in structural BMPs to capture pollutants before discharge to receiving waters. The main structural BMP categories are:

- Extended-detention ponds, which typically hold runoff for 48-72 hours and allow some solids settling and other treatment mechanisms to operate;
- Wet ponds, which hold water for considerably longer in a permanent or semi-permanent pool to permit more effective operation of treatment mechanisms;
- Infiltration basins and trenches, which transport runoff from at least the design storm event and often more into the ground;
- Biofiltration systems, which direct runoff over soil and through vegetation, where various treatment removal mechanisms operate, either in a channel (swale) or a thin sheet over a broad surface (filter strip); and
- Media filters, which pass runoff through a medium like sand to capture and hold pollutants.

Over time greater understanding of these practices and improved design and operation have raised their effectiveness. Research by Caltrans, reported in “BMP Retrofit Pilot Program Final Report” (CTSW-RT-01-050), demonstrated that conventional BMPs from this list reliably reduce long-term pollutant mass discharges at least by 85 percent for total suspended solids and

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<sup>26</sup> *City of Sacramento v. State Water Resources Control Bd.* (1992) 2 Cal. App. 4th 960, 964.

<sup>27</sup> Water Code 13001.

dissolved and particulate metals (copper, lead, and zinc)—and many can completely eliminate discharges.

Just as important, recent years have seen the development of a large body of new practices that prevent contamination in the first place or greatly alleviate problems, making conventional treatment by the types of BMPs described above less necessary or less challenging when used. These newer techniques often go under the broad title “low-impact development” (LID). They include:

- Conservation practices, which reserve existing vegetation and soils and maintain natural drainage patterns;
- Constructing drainage systems in a natural way, to exploit the capabilities of vegetation and soils by directing runoff to natural areas and areas rebuilt to mimic them hydrologically, thus maintaining infiltration and evaporation;
- Source controls, which are designed to reduce runoff production, prevent contact between pollutants and rainfall or runoff, or both; and
- Storm water storage, making it a resource for later use in supplying water for such uses as irrigation or toilet flushing.

These many older and newer practices represent a comprehensive toolbox of techniques that together make it feasible to effectively control polluted urban storm water runoff. Treatment BMPs have been refined and demonstrated in California to discharge flows having small fractions of most contaminants found in untreated urban runoff, thus greatly decreasing acute, chronic, and cumulative effects on aquatic organisms. A whole range of pollution prevention methods and natural drainage system alternatives have joined these older conventional practices to replace or supplement them and decrease further or even eliminate discharges and their negative effects. Hence, lack of technology does not stand as an impediment to fully protecting our coastal waters from polluted urban storm water runoff.

The draft Monterey Proposal could easily adapt any of these series of BMPs in the programs. Yet given the existence of these proven BMPs, it is unclear why the BMPs in the draft Monterey Proposal are impermissibly vague and remain “a program to create a program.” The draft Monterey Proposal seems to ignore the existence of these model programs and existing storm water permits and programs entirely by proposing programs that are incomplete, poorly defined, and accomplish little toward the stated goal of effectively controlling polluted storm water runoff.

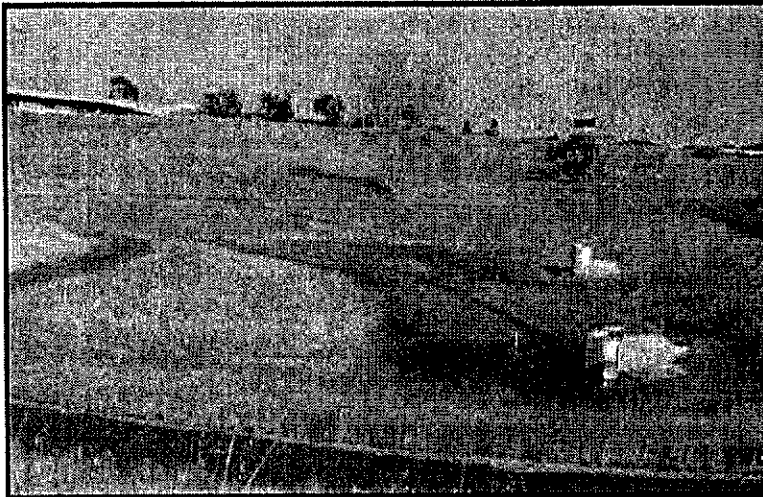
In addition to these permits, other model documents have long existed that describe the effectiveness of BMPs for each minimum control measure. Scores of effective BMPs are discussed in:

- United States Environmental Protection Agency, Environmental Management System, available at [www.epa.gov/performance/track/program/ems.htm](http://www.epa.gov/performance/track/program/ems.htm).

- United States Environmental Protection Agency, National Menu of Best Management Practices for Storm Water Phase II.
- United States Environmental Protection Agency, Storm Water Phase II Final Rule: Public Education and Outreach Minimum Control Measure, EPA Publication No. 833-F00-005 (January 2000), available at <http://www.epa.gov/npdes/pubs/fact2-3.pdf>.
- United States Environmental Protection Agency, Measurable Goals Guidance for Phase II Small Municipal storm sewers available at [www.epa.gov/npdes/pubs/measurablegoals.pdf](http://www.epa.gov/npdes/pubs/measurablegoals.pdf).

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### Highlighted BMP: Extended Detention Basin



#### Targeted Constituents

- Sediment ▲
- Nutrients ●
- Trash ■
- Metals ▲
- Bacteria ▲
- Oil and Grease ▲
- Organics ▲
- Oxygen Demanding ▲

#### Legend (Removal Effectiveness)

- Low ■ High ▲ Medium

Dry extended detention ponds (a.k.a. dry ponds, extended detention basins, detention ponds, extended detention ponds) are basins whose outlets have been designed to detain the storm water runoff from a water quality design storm for some minimum time (e.g., 72 hours) to allow particles and associated pollutants to settle. Unlike wet ponds, these facilities do not have a large permanent pool. They can also be used to provide flood control by including additional flood detention storage.

Source: California Stormwater Quality Association, Municipal BMP Handbook

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In addition to these EPA documents, the following reference materials exist for BMPs and programs for each control measure:

- City of Monterey, et al., Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities (Feb. 2002), available at <http://www.swrcb.ca.gov/stormwtr/murp.html>.

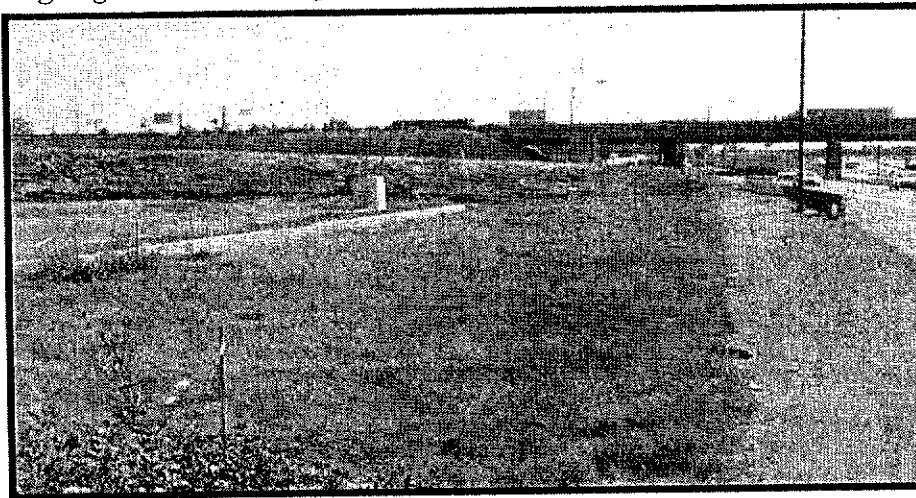


- California Handbooks (<http://www.cabmphandbooks.com/>)  
*Storm Water Best Management Practice (BMP) Handbooks*  
The California Storm Water Best Management Practice Handbooks have provided excellent guidance to the storm water community since their publication by the Storm Water Quality Task Force (SWQTF) in 1993. The SWQTF became the California Storm Water Quality Association (CASQA) in 2002 and in 2003 CASQA published an updated and expanded set of four BMP Handbooks. These Handbooks reflect the current practices, standards, and significant amount of knowledge gained since the early '90s about the effectiveness of BMPs. These specific manuals focus on: New Development and Redevelopment; Construction; Industrial and Commercial; Municipal Programs
- Los Angeles County ([http://ladpw.org/wmd/NPDES/table\\_contents.cfm](http://ladpw.org/wmd/NPDES/table_contents.cfm))  
*Development Planning for Storm Water Management*  
A Manual for the Standard Urban Storm water Mitigation Plan (SUSMP) September 2002 Revision
- Los Angeles County ([http://ladpw.org/wmd/NPDES/planning\\_TC.cfm](http://ladpw.org/wmd/NPDES/planning_TC.cfm))  
*Development Planning for Storm Water Management*  
This document focuses on: Development Planning; Developer Information Program; Recommended BMPs for Site Planning, Post-Construction, and Redevelopment/Infill; BMP Selection Criteria; Standard Urban Storm Water Mitigation Plan; Guidelines for General Plan Modification; Storm Water Quality Management Program, Developer Information for Project; Developer Information for Project Planning and Design; Developer Information for Project Construction
- Washington State  
*Storm Water Management Manual for Western Washington* (revised 2001)  
([http://www.ecy.wa.gov/programs/wq/storm\\_water/manual.html](http://www.ecy.wa.gov/programs/wq/storm_water/manual.html))
- State of New Jersey ([http://www.njstormwater.org/bmp\\_manual2.htm](http://www.njstormwater.org/bmp_manual2.htm))
  - *New Jersey Storm Water Best Management Practices Manual (BMP manual)*  
The BMP manual is developed to provide guidance to address the standards in the proposed Storm Water Management Rules, N.J.A.C. 7:8. The BMP manual provides examples of ways to meet the standards contained in the rule.
  - Technical information regarding updates of the New Jersey Storm Water Best Management Practices Manual will be available at [www.njstormwater.org](http://www.njstormwater.org).
  - These documents focus on: Impacts of Development on Runoff discusses the impact of development on the quality and quantity of storm water runoff; Low Impact Development Techniques provides information how to use structural and nonstructural to provide lower impact development; Regional and Municipal Storm Water Management Plans present guidance on the development of regional and municipal storm water management plans; Storm Water Pollutant Removal Criteria provides guidance on how to meet the water quality performance standards; Computing Storm Water Runoff Rates and Volumes presents the mathematical methods for the storm water runoff rates, volumes, and the storm water quality and quantity design storms; Groundwater Recharge discusses the

groundwater recharge methodology, the groundwater recharge design storm, and the details of the New Jersey Groundwater Recharge Spreadsheet (NJGRS); Landscaping provides information on vegetation and landscaping for storm water management measures; Maintenance and Retrofit of Storm Water Management Measures provides information to be included and considered in a maintenance plan, and discusses retrofit of storm water management facilities; Structural Storm Water Management Measures also provide for efficient pollutant removal.

- Prince Georges County, MD Low Impact Development Manual, available at (<http://www.epa.gov/owow/nps/lid/lidnatl.pdf>).  
*Low-Impact Development Design Strategies: An Integrated Design Approach* (1999)
- Puget Sound Action Team Low Impact Development Manual, available at ([http://www.psat.wa.gov/Publications/LID\\_tech\\_manual05/lid\\_index.htm](http://www.psat.wa.gov/Publications/LID_tech_manual05/lid_index.htm))  
Low Impact Development Technical Guidance Manual for Puget Sound January 2005

### Highlighted BMP: Vegetated Buffer Strip



#### General Description

Grassed buffer strips (a.k.a. vegetated filter strips, filter strips, and grassed filters) are vegetated surfaces that are designed to treat sheet flow from adjacent surfaces. Filter strips function by slowing runoff velocities and allowing sediment and other pollutants to settle and by providing some infiltration into underlying soils. Filter strips were originally used as an agricultural treatment practice and have more recently evolved into an urban practice. With proper design and maintenance, filter strips can provide relatively high pollutant removal. In addition, the public views them as landscaped amenities and not as storm water infrastructure. Consequently, there is little resistance to their use.

Source: California Stormwater Quality Association, Municipal BMP Handbook

#### Targeted Constituents

- Sediment ■
  - Nutrients ●
  - Trash ▲
  - Metals ■
  - Bacteria ●
  - Oil and Grease ■
  - Organics ▲
  - Oxygen Demanding ▲
- Legend (Removal Effectiveness)**  
● Low ■ High ▲ Medium

## CHAPTER 3

# GENERAL PRINCIPLES

**The draft Monterey Proposal must assure that the program, when implemented, will assure that discharges do not cause or contribute to a violation of an applicable water quality standard.** As mandated by the Clean Water Act, the General Permit directs the program to be designed to protect water quality, require discharge prohibitions, and meet receiving water limitations that require compliance with water quality standards. The draft Monterey Proposal must design its BMPs and programs to ensure the protection of water quality and meet the MEP standard.

**The draft Monterey Proposal must explicitly incorporate Receiving Water Limitations language in Attachment 4 for all municipalities:**

### RECEIVING WATER LIMITATIONS

1. Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable RWQCB Basin Plan.
2. The permittees shall comply with Receiving Water Limitations A.1 through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the storm water management program and other requirements of this permit including any modifications. The storm water management program shall be designed to achieve compliance with Receiving Water Limitations A.1. If exceedance(s) of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the storm water management program and other requirements of this permit, the permittees shall assure compliance with Receiving Water Limitations A.1 by complying with the following procedure:
  - a. Upon a determination by either the permittees or the RWQCB that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to the RWQCB 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 incorporated in the annual update to the storm water management program unless the RWQCB directs an earlier submittal. The report shall include an implementation schedule. The RWQCB may require modifications to the report.
  - b. Submit any modifications to the report required by the RWQCB within 30 days of notification.
  - c. Within 30 days following approval of the report described above by the RWQCB, the permittees shall revise the storm water management program

and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, implementation schedule, and any additional monitoring required.

- d. Implement the revised storm water management program and monitoring program in accordance with the approved schedule.

So long as the permittees have complied with the procedures set forth above and are implementing the revised storm water management program, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the RWQCB to develop additional BMPs.

**The draft Monterey Proposal must assure that the programs are “designed to reduce the discharge of pollutants . . . to the Maximum Extent Practicable (MEP).”** (33 U.S.C. § 1342; 40 C.F.R. § 122.34.) Each BMP as well as groups of BMPs must be based on the Maximum Extent Practicable standard. The draft Monterey Proposal must contain a definition and description of the MEP standard as adopted by the State Water Resources Control Board. As defined in State Board precedent order 2000-11, “MEP requires permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs would not be technically feasible, or the cost would be prohibitive. The definition must include the requirement that permittees must choose effective BMPs, and reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive.”<sup>28</sup>

**The draft Monterey Proposal must assure that the program reflects the baseline provisions as set forth in the MURP.** In 1998, City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, and the Central Coast Regional Water Quality Control Board—many of the same entities that are responsible for the draft Monterey Proposal—prepared the *Model Urban Runoff Program* (MURP). The MURP by its own definition is “*A How-To Guide for Developing Urban Runoff Programs for Small Municipalities*. Yet, the differences between the MURP and the draft Monterey Proposal are astonishing. In fact, it is puzzling how a city can recommend basic—“model”—program provisions for other similarly situated cities, yet fail to adopt its own “model” program. As such, the programs and provisions in the draft Monterey Proposal must be revised to reflect the provisions as set forth in the MURP.

**The draft Monterey Proposal must include a section addressing priority pollutants of concern.** This section must include pollutants causing impairment of water bodies, as well as pollutants generated by priority target industries and activities, such as automotive maintenance, restaurants, and landscaping. For example, Solano County, another Phase II area, includes such a list of “Pollutants of Concern” in its storm water management program, and commits to improving its list as new information becomes available.<sup>29</sup>

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<sup>28</sup> *In re Cities of Bellflower, et al.* SWRCB 2000-11 at 20.

<sup>29</sup> Solano County, Storm Water Management Plan for the National Pollutant Discharge Elimination System (NPDES) Phase II: A Guideline for Implementation of Solano County’s Phase II Storm Water Management Plan (February 23, 2003) (“Solano County storm water management program”) at 17.

**The draft Monterey Proposal must schedule its BMP implementation using monthly, rather than just yearly, timeframes.** A more detailed delineation of how long an implementation activity is likely to take will facilitate timely implementation and prevent delay. Numerous California Phase II programs, including those of Placer County and San Joaquin, delineate their activities monthly or quarterly rather than just annually.<sup>30</sup>

**The draft Monterey Proposal must address Areas of Special Biological Significance.** The draft Monterey Proposal must include provisions identifying any and all receiving waters that are designated Areas of Special Biological Significance. The draft Monterey Proposal must also comply with any and all State Water Resources Control Board orders and resolutions for compliance with the California Ocean Plan with respect to Areas of Special Biological Significance.

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<sup>30</sup> Placer County, County of Placer Storm Water Management Plan 2003-2008 (June 29, 2004) ("Placer County storm water management program") at 19, *et seq.*; San Joaquin County, Storm Water Management Program (September 30, 2003) ("San Joaquin County storm water management program") at 6, *et seq.*

CHAPTER 4

## SIX MINIMUM CONTROL MEASURES

In analyzing the Six Minimum Control Measures for Storm Water Programs, NRDC and the Ocean Conservancy have identified and documented in this report a wide range of programs in place throughout California that can and should be used to protect water quality on the Monterey Peninsula. This report analyzes the draft Monterey proposal in comparison to what other similarly sized cities throughout California and the nation are doing to protect their waters from storm water pollution. This report also provides a set of standard pollution prevention programs that can and should be used to cure the vague and general approach of the draft Monterey Proposal. Additional, commonplace pollution prevention actions that are missing from the Regional Proposal are also detailed in this report. Collectively, these "Clean Water, Healthy Economy" program elements provide a practical way forward, and each of them should be adopted in the final Monterey Regional Storm Water Management Program.

NRDC and the Ocean Conservancy's "Clean Waters, Healthy Economy" program elements are largely based on management plans from existing storm water pollution prevention programs from medium and smaller municipalities (Phase II) plans as well as components of larger municipalities (Phase I) storm water management plans and permits. The report analyzes each component of the draft Monterey Proposal in the context of other existing programs from:

MURP	Griffin, GA
Los Angeles County, CA	Morgan Hill, CA
Napa County, CA	Placer County, CA
Salinas, CA	San Bernardino County, CA
San Diego County, CA	San Joaquin, CA
Solana County, CA	San Francisco Public Utilities Commission

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### *What is the MURP?*

In 1998, City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, and the Central Coast Regional Water Quality Control Board—many of the same entities that are responsible for the draft Monterey Proposal—prepared the *Model Urban Runoff Program (MURP)*. The MURP by its own definition is "A *How-To Guide for Developing Urban Runoff Programs for Small Municipalities*. Yet, the differences between the MURP and the draft Monterey Proposal are astonishing. In fact, it is puzzling how a city can recommend basic—"model"—program provisions for other similarly situated cities, yet fail to adopt its own "model" program.

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## **Minimum Control Measure #1 – Public Education and Outreach**

Monterey Proposal Contents:

- Develop Education Program;
- Revise Education Program.

“Clean Water, Healthy Economy” Action Items:

- Revise program intent to tie in to objectives and measurable outcomes;
- Expand program to target a more diverse set of audiences, including tourists;
- Revise program topics to include a broader range of issues;
- Include some tool to facilitate future revision and improvement of the program;
- Develop and incorporate basic education commitments for years 2-5.

## Minimum Control Measure #1: Public Education and Outreach

### MONTEREY'S PROGRAM: WHAT IT DOES

*Education Program BMP Intent:*

Provide public education to increase awareness of what constitutes poor stewardship of storm water as a resource. The education and outreach plan will focus on topics such as reducing pollution from lawn and gardening activities, improper disposal of household hazardous wastes, illegal disposal activities, pet wastes, improper handling and disposal of trash, restaurant activities, and automotive activities. Increased education will ultimately result in decreased pollution.

### "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

BMP Intent must be revised to be more closely tied to measurable outcomes and consistent with the objectives of the NPDES Phase II program. In contrast to the draft Monterey Proposal, the *MURP (Model Urban Runoff Program)* and *San Diego Permit* contain stronger provisions. For example, a statement modeled after the San Diego Permit is:

Each permittee shall implement an Education Component using all media as maximally practicable to (1) measurably increase the knowledge of the target communities regarding municipal storm sewers, impacts of urban runoff on receiving waters, and potential BMP solutions for the target audience; and (2) to measurably change the behavior of target communities and thereby reduce pollutant releases to Municipal storm sewers and the environment.<sup>31</sup>

The intent must also articulate the objective of understanding the public's perceptions and attitudes regarding the problem of storm water pollution, as discussed in the MURP:

- Understand public perceptions and attitudes towards the problem of urban runoff.
- Get the message out and raise public awareness about urban runoff pollution and its impact on the community's water resources to the maximum extent practicable.
- Educate the community about specific pollutant sources and on what they can do to reduce urban runoff pollution (alternative pollution prevention solutions) to the maximum extent practicable.
- Foster participation through community-based projects or volunteer activities focused on pollution prevention to the maximum extent practicable.<sup>32</sup>

<sup>31</sup> See California Regional Water Quality Control Board – San Diego Region, Order No. 2001-01 (NPDES No. CAS0108758): Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (Municipal storm sewers) Draining to the County of San Diego and Incorporated Cities of San Diego County and the San Diego Unified Port District (February 21, 2001) ("San Diego Permit") at F.4.

<sup>32</sup> See MURP at 4-6.



## MONTEREY'S PROGRAM: WHAT IT DOES

### *BMP:*

Educate the audience about the causes of storm water pollution and the things they can do to reduce this pollution. (See Appendix E for Public Education and Outreach Program, including detailed list of Measurable Goals for BMP 1-1.a.)

### *BMP Implementation:*

- Develop and implement a comprehensive Education & Outreach Plan for the entire region targeting all ages, classes, and ethnic groups (Year 1);
- Review and revise "Year 1 Public Education & Outreach Plan" to maximize efficiency in audience reached, and address current contaminants impacting water quality. Changes will be based on input from the public, volunteer monitoring network data, budgetary constraints, and contaminants of concern or audiences not covered as in depth in prior years (Years 2-5).

## "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The draft Monterey Proposal must be more specific about "the audience," and must broaden its education plan to include actions targeted to specific audiences, rather than "all ages, classes, and ethnic groups."** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. In the draft Monterey Proposal, the education and outreach plan developed for Year 1 (Appendix E to the draft Monterey Proposal) contains a list of 17 program activities, 15 of which are targeted at the General Public. The target audiences need to be expanded to include, at a minimum, the residential community, the commercial and business sector, the industrial sector, the development community, the construction sector and the government, as discussed in the *MURP*.<sup>33</sup> Programs targeted to these specific audiences must be tailored to address specific problems associated with that audience, and can communicate these messages more effectively than programs targeted to the "General Public." For example, the San Diego permit, like the *MURP*, requires the following to be included among its target audiences: Municipal Departments and Personnel, Construction Site Owners and Developers, Industrial Owners and Operators, Commercial Owners and Operators, Residential Community, General Public, School Children, and Quasi-Governmental Agencies/Districts (i.e., educational institutions, water districts, sanitation districts, etc.).<sup>34</sup> The draft Monterey Proposal's Public Education program must include activities that specifically target these high priority audiences.

<sup>33</sup> City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde Consultants, Central Coast Regional Water Quality Control Board, Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities (July 1998; Revised February 2002 by the California Coastal Commission) ("MURP") at 4.2.

<sup>34</sup> San Diego Permit at F.4; MURP at 4-13-4-14.

**The draft Monterey Proposal must include an educational component targeted specifically toward tourists.** The *San Francisco Public Utilities Commission Program* and *MURP* contain stronger provisions. For example, the San Francisco Public Utilities Commission Program, a Phase II Program, contains such a "Visitor Education" program.<sup>35</sup> Tourist storm water education is incredibly important for the Monterey Bay area, which draws millions of tourists a year. The draft Monterey Proposal must adopt a visitor education program modeled after the San Francisco PUC Program.

**The topics covered in the educational program must be revised to be broader in scope.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. Currently, in the draft Monterey Proposal, the Year 1 Public Education and Outreach Program covers only the following topics:

- Basic storm water knowledge for elementary schoolchildren
- Land-sea connection via "EnviroScape" models
- Integrated pest management
- Topics for restaurants: mat washing, cleaning up spills, water and energy conservation, waste reduction and recycling
- Storm drain connection to streams
- BMPs for select commercial and construction industries, and home maintenance and repair.

In comparison, the San Diego permit covers the topics above, plus a broad range of additional relevant topics:

- State and Federal water quality laws
- Requirements of local municipal permits and ordinances (e.g., storm water and grading ordinances and permits)
- Impacts of urban runoff on receiving waters
- Distinction between Municipal storm sewers and sanitary sewers
- Pollution prevention and safe alternatives
- Household hazardous waste collection
- BMP maintenance
- Pet and animal waste disposal
- Proper solid waste disposal (e.g., garbage, tires, appliances, furniture, vehicles)
- Equipment and vehicle maintenance and repair
- Public reporting mechanisms
- Green waste disposal
- Native vegetation
- Proper disposal of boat and recreational vehicle waste
- Traffic reduction, alternative fuel use
- Water conservation<sup>36</sup>

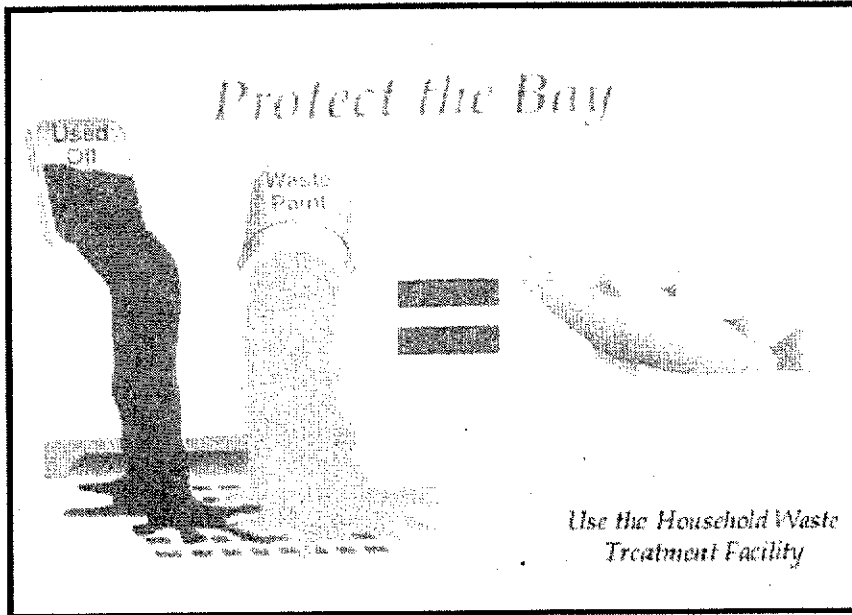
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<sup>35</sup> City and County of San Francisco, San Francisco Public Utilities Commission Storm Water Management Plan (2003-2004) (January 2004) ("SF PUC storm water management program") at 23.

<sup>36</sup> San Diego Permit at F.4.a.

All of the topics listed above are critical if the public is to develop a complete understanding of how its everyday activities impact storm water pollution as well as meet MEP and protect water quality. The draft Monterey Proposal must contain a commitment to implement BMPs for each of the listed topics by the end of the permit term. Messages regarding these topics can be easily conveyed using the mechanisms already proposed by the draft Monterey Proposal: tabling, radio advertisements, brochures and trainings.

**Highlighted BMP: Education on Non-Storm Water Discharges**



**Targeted Constituents**

- Sediment
- Nutrients
- Trash
- Metals
- Bacteria
- Oil and Grease
- Organics
- Oxygen Demanding

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**Description**

Non-storm water discharges are those flows that do not consist entirely of storm water. For municipalities non-storm water discharges present themselves in two situations. One is from fixed facilities owned and/or operated by the municipality. The other situation is non-storm water discharges that are discovered during the normal operation of a field program. Some nonstorm water discharges do not include pollutants and may be discharged to the storm drain. These include uncontaminated groundwater and natural springs. There are also some nonstorm water discharges that typically do not contain pollutants and may be discharged to the storm drain with conditions. These include car washing, and surface cleaning. However, there are certain non-storm water discharges that pose environmental concern. These discharges may originate from illegal dumping or from internal floor drains, appliances, industrial processes, sinks, and toilets that are connected to the nearby storm drainage system. These discharges (which may include: process waste waters, cooling waters, wash waters, and sanitary wastewater) can carry substances (such as paint, oil, fuel and other automotive fluids, chemicals and other pollutants) into storm drains. The ultimate goal is to effectively eliminate nonstorm water discharges to the storm water drainage system through implementation of measures to detect, correct, and enforce against illicit connections and illegal discharges.

Source: California Stormwater Quality Association, Municipal BMP Handbook

**The draft Monterey Proposal must provide a mechanism to adapt its educational program in the future.** In contrast to the draft Monterey Proposal, the *MURP*, *Napa County Program* and *San Diego Permit* contain stronger provisions. For example, the Napa County storm water management program includes a survey element as part of the Public Education Component.<sup>37</sup> This survey will collect data characterizing the public in terms of age, language spoken, and knowledge of storm water pollution, permitting the County to improve its storm water messages over time. The draft Monterey Proposal must contain a similar mechanism facilitating the updating of the educational program.

**The storm water management program must include a detailed Public Education and Outreach program for Years 1-5, rather than just Year 1.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. The Monterey Proposal must have a comprehensive approach as to whom their program will reach, and what messages are necessary to meet MEP and protect water quality. This information must be explicitly incorporated into the storm water management program (rather than in an appendix) for all five years in order to assure a definitive commitment to implement this program.

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<sup>37</sup> Napa County, Storm Water Management Program For Fiscal Years 2003/2004 through 2007/2008 (December 12, 2003) ("Napa County storm water management program") at 42.

## **Minimum Control Measure #2 – Public Participation/Involvement**

### Monterey Proposal Contents:

- Public involvement workshops;
- Support Coastal Cleanup Day and First Flush programs;
- Participate in Citizen Water Quality Monitoring Network.

### “Clean Water, Healthy Economy” Action Items:

- Revise program to include additional detail and to make specific commitments for years 2-5;
- Revise objectives to focus on public input and feedback, rather than education;
- Provide more time for public review of annual reports before workshops;
- Modify format of second public workshop to facilitate collection of ideas and public input mid-year, at a time when the municipalities can take action;
- Promote public participation in Coastal Cleanup Day and First Flush by providing advertising and incentives for participation, in addition to financial support;
- Add a watershed stewardship program component;
- Add comprehensive watershed-based monitoring program;
- Add a Citizens Advisory Committee component.

## Minimum Control Measure #2: Public Participation/Involvement

### MONTEREY'S PROGRAM: WHAT IT DOES

#### *PUBLIC MEETINGS*

##### *BMP Intent:*

Increase public awareness of what constitutes poor stewardship of storm water as a resource and increase public actions such as reporting of problems to authorities. This ultimately will result in decreased pollution.

### "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The Monterey Regional Program must include a detailed Public Participation and Outreach Program that covers the entire permit term.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. The details of the program in later years may need to be revised and improved as program needs come to light, but the basic parameters of the program – including the basic commitments made by the members of the Monterey Regional Storm Water Group – should remain essentially the same. Most importantly, there should be no allowance for a decreasing commitment to implementation of BMPs over the lifetime of the permit. This information must be explicitly incorporated into the storm water management program (rather than in an appendix) for all five years in order to assure a definitive commitment to implement this program.

**The Objectives of the Public Participation and Outreach Program must be reoriented toward program development and implementation, rather than education.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. Program development and implementation are what distinguish this Minimum Control Measure from the Public Education and Outreach component. The *MURP* discusses the following objectives for the Public Participation and Outreach program:

Raise public awareness about urban runoff pollution through involvement in the municipal URP. Involve the public in the development and implementation process to secure "buy in" and generate public support for municipal water quality protection efforts.<sup>38</sup>

In comparison, the objectives laid out by the draft Monterey Proposal appear to be aimed at educating the public, rather than involving the public in program development and implementation. The draft Monterey Proposal must revise this BMP intent to be more consistent with the objectives articulated in the *MURP*.

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<sup>38</sup> *MURP* at 4.1.

### MONTEREY'S PROGRAM: WHAT IT DOES

*BMP:*

Encourage general public and stakeholder involvement in identifying and solving storm water management problems by holding two publicly advertised "Public Involvement Workshops" per year. Public advertisement will be via local newspapers, city websites, community calendars, and/or draft Monterey Proposal email list serve.

(See Appendix F for Public Participation and Involvement Program)

*BMP Implementation:*

- Draft annual report will be posted on website and in city offices 1 week prior to Workshop No. 1 for review by public.

### "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The draft annual report must be posted on the website and in city offices at least one month prior to the first workshop.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. The proposed "one week" is insufficient and inadequate for a comprehensive public review, even in preparation for a workshop.

### MONTEREY'S PROGRAM: WHAT IT DOES

- Workshop #1 to be held annually in July/August prior to Annual Report submission to explain the Phase II Permit objectives and solicit public input on the success of the current BMPs and Measurable Goals. (Note: In year one no draft annual report will have been prepared for review at Workshop #1, as year one will have just begun). Consequently this Workshop in year one will focus on general overview of Phase II requirements, and BMPs selected to increase overall awareness and knowledge of Phase II program by the general public.
- Workshop #2 to be held in March/April annually: (Note: Workshop in year one will either focus on general overview of Phase II requirements, and BMPs selected to increase overall awareness and knowledge of Phase II program by the general public, or will focus on a specific target audience and associated contaminants of concern). The decision on the focus for this year one Workshop will be based on knowledge and experience gained by the Permittees from carrying out the draft Monterey Proposal up to the time this Workshop is scheduled.

### "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**Public Workshop #2 must provide an opportunity for the public to provide mid-year input on the status of the program and the effectiveness of BMPs.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. Based on those program, if Workshop #1 is aimed at gathering public input regarding the status of the program and effectiveness of BMPs prior to the publication of the annual report, Workshop #2 must focus on gathering similar information at a stage in which the municipalities would be positioned to

take action mid-year. Such workshops must be formatted as roundtable discussions and opportunities for the gathering of information by the municipalities.

**MONTEREY'S PROGRAM: WHAT IT DOES**

- Workshop #2 to be held in March/April annually: Workshop in years 2-5 will focus on a specific target audience and associated contaminants of concern. Topic/audience will be chosen each year based on historical contaminants of concern for industries common to permit jurisdiction area, volunteer monitoring network data, and topic/audience not chosen the prior year. Priority will be given to Attachment 4 listed industries.

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**Public Workshop #2 must provide an opportunity for the public to provide mid-year input on the status of the program and the effectiveness of BMPs.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. Based on those programs, if Workshop #1 is aimed at gathering public input regarding the status of the program and effectiveness of BMPs prior to the publication of the annual report, Workshop #2 must focus on gathering similar information at a stage in which the Monterey entities would be positioned to take action mid-year. Such workshops must be formatted as roundtable discussions and opportunities for the gathering of information by the Monterey entities.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*Coastal Cleanup and Monitoring BMP:*

Encourage general public participation in programs and activities designed to promote understanding and awareness of storm water pollution, such as cleanup events and restoration activities. (See Appendix F for Public Participation and Involvement Program).

*BMP Implementation:*

- Provide financial sponsorship support for Annual Coastal Cleanup Day in Monterey County or other local beach clean up efforts.
- Recruit volunteers through municipal employee base for Annual Coastal Clean Up Day or other local clean up efforts.
- Provide support for, or assistance with storm drain stenciling through providing supplies, volunteer recruitment & dedicating draft Monterey Proposal allocated hours by MBNMS staff.
- Provide financial support for, and assistance with volunteer monitoring programs such as: Urban Watch, First Flush, or other storm water quality protective programs.



**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

This BMP must be revised to include mechanisms for engaging the general public in these activities, in addition to providing financial support. In contrast to the draft Monterey Proposal, the *MURP*, *Napa County Program*, *Placer County*, and *San Diego Permit* contain stronger provisions. Although it admirable for the Monterey entities to commit to providing financial support for Coastal Cleanup Day, citizen monitoring efforts, and storm drain stenciling activities of other groups, this program must be tailored not only toward the support of these activities, but to engaging the public in them by providing advertising and incentives for public participation. The majority of programs across the county do more than provide financial support. Rather, they have actual programs for engaging the public.

**MONTEREY’S PROGRAM: WHAT IT DOES**

*BMP:*

Become an active participant in the Citizen Water Quality Monitoring Network.

*BMP Implementation:*

A representative from the Monterey Region municipalities will attend each monitoring network meeting and report back to permit holder group. Permit holders will also recruit volunteers through employee and citizen group channels, websites, and / or newsletters to participate in volunteer network monitoring activities.

**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must provide for the development of watershed steward programs, and the establishment of a Citizen’s Advisory Committee on storm water issues. In contrast to the draft Monterey Proposal, the *MURP*, *Napa County*, *Placer County*, and *San Diego Permit* contain stronger provisions. For example, the Napa County storm water management program provides for stream stewardship programs, in which citizens take responsibility for studying and maintaining some portion of the watershed.<sup>39</sup> This program provides the basis for a similar program in the draft Monterey Proposal. Several California Phase II storm water management programs provide for the creation of a Citizens Advisory Committee to make recommendations on storm water quality issues, program priorities, and to provide feedback on the storm water management program (See, e.g., Placer County’s storm water management program).<sup>40</sup> These programs also provide the basis for a similar program in the draft Monterey Proposal.

As part of its watershed steward program, the draft Monterey Proposal must include a watershed-based monitoring and reporting program. A monitoring program is essential to assessing compliance with the Monterey Program and the General Permit; 2) measuring the effectiveness of the Monterey Regional Program; 3) assessing the chemical, physical, and

<sup>39</sup> Napa County storm water management program at 45.

<sup>40</sup> Placer County storm water management program at 24.

biological impacts to receiving waters resulting from urban runoff; and 4) assessing the overall health and evaluating long-term trends in receiving water quality.

In order to maximize efficiency, the Monterey Region municipalities can jointly conducted monitoring through a single contractor with countywide coordination implementing a watershed-based approach. Monitoring results shall be assessed and reported on a watershed basis as a single report by the municipalities consisting of one common section and watershed sub-sections.

In this connection, it is important for the Monterey Region municipalities to assess previous, current and future monitoring practices. Within 180 days of the approval of the Monterey Proposal, the municipalities must prepare a report, which at a minimum:

- A. Summarizes the cumulative findings of all previous wet and dry weather monitoring;
- B. Identifies detectable trends in water quality data and receiving water quality, based on the cumulative previous monitoring findings;
- C. Interprets the cumulative previous monitoring findings;
- D. Draw conclusions regarding the cumulative previous monitoring findings;
- E. Provide recommendations for future monitoring activities; and
- F. Include an executive summary, introduction, conclusion, and summary of recommendations.

Based on the findings of this report, the Monterey Region municipalities shall collaborate to develop, submit, conduct, and report on a year round watershed-based *Receiving Waters Monitoring Program*. The goals of both the Receiving Waters Monitoring Program shall be clearly stated. The Receiving Waters Monitoring Program goals shall focus on assessing compliance with the General Permit and the approved Monterey Proposal, achieving water quality objectives, protecting beneficial uses, and assessing the overall health and long-term water quality trends of receiving waters. Implementation of the Receiving Waters Monitoring Program shall begin within 180 days of approval of the Monterey Proposal.

The Receiving Waters Monitoring Program shall include, at a minimum, the following components:

- A. Urban Stream Bioassessment Monitoring
- B. Long-term Mass Loading Monitoring
- C. Coastal Storm Drain Outfall Monitoring
- D. Ambient Bay, Lagoon, and Coastal Receiving Water Monitoring
- E. Toxic Hot Spots Monitoring

A. *Urban Stream Bioassessment Monitoring*

1. The Monterey Region municipalities shall collaborate to develop and implement an urban stream bioassessment monitoring program. At a minimum, the program shall consist of station identification, sampling, monitoring, and analysis of data for 20 bioassessment stations in order to determine the biological and physical integrity of urban streams within the county. In addition to the urban stream bioassessment stations, three

reference bioassessment stations shall be identified, sampled, monitored, and analyzed. The selection, sampling, monitoring, and analysis of bioassessment stations shall meet the following requirements:

- a. Each urban stream bioassessment station shall be selected using the following criteria. Each urban stream bioassessment station shall:
  - (1) be located within the jurisdiction of a Monterey Region municipality;  
or
  - (2) be located within one of the watersheds within the Monterey Region;  
and
  - (3) be representative of urban stream conditions within one of the watersheds in the Monterey Region;
  - (4) meet the physical criteria of the California Stream Bioassessment Procedure; and
  - (5) to the extent feasible, coincide with the location of any already existing monitoring station used by the California Department of Fish and Game or other Ambient Bioassessment Program.
  
- b. Each bioassessment station shall be monitored twice annually, in May and October of each year. A minimum of three replicate samples shall be collected at each station during each sampling event.
  
- c. Sampling, laboratory, quality assurance, and analysis procedures shall follow the standardized procedures set forth in the California Department of Fish and Game. California Stream Bioassessment Procedure (CSBP). Analysis procedures shall include comparison between station mean values for various biological metrics. Sampling, laboratory, quality assurance, and analytical procedures shall follow the standardized Non-Point Source Bioassessment Sampling Procedures for professional bioassessment set forth in the CSBP. In the event that the CSBP is performed in place of the Non Point Source Bioassessment Sampling Procedure, justification and documentation of the procedure shall be submitted with the report. Results of the Urban Stream Bioassessment Monitoring shall be reported annually as part of the overall Receiving Waters Monitoring and Reporting Program for the General Permit. Reporting of the bioassessment data shall include:
  - (1) All physical, chemical and biological data collected in the assessment;
  - (2) Photographic documentation of assessment and reference stations;
  - (3) Documentation of quality assurance and control procedures;
  - (4) Analysis that shall include calculation of the metrics used in both the CSBP and any other previous reports.
  - (5) The report shall provide interpretation for comparisons of mean biological and habitat assessment metric values between assessment and reference stations.
  - (6) Utilize a regional index of biological integrity as part of the analysis.

(7) Electronic data formatted to California Department of Fish and Game Aquatic Bioassessment Laboratory specifications for inclusion in the Statewide Access Bioassessment database.

d. A professional environmental laboratory shall perform all sampling, laboratory, quality assurance, and analytical procedures. While valuable, data collected by volunteer monitoring organizations shall not be submitted in place of professional assessments.

e. Reference stations shall be selected based on scientific reports and previous monitoring.

2. The Monterey Region municipalities shall design and implement a program to conduct standardized toxicity testing at urban stream bioassessment stations where the bioassessment data indicates significant impairment. When findings indicate the presence of toxicity, a Toxicity Identification Evaluation (TIE) shall be conducted to determine the cause(s) of the toxicity.

*B. Long-term Mass Loading Monitoring*

For purposes of evaluating long-term trends, the Monterey Region municipalities shall monitor long-term mass loading stations, as identified by the Monterey Region municipalities and the Regional Board. When findings indicate the presence of toxicity, a Toxicity Identification Evaluation (TIE) shall be conducted to determine the cause(s) of the toxicity.

*C. Coastal Storm Drain Outfall Monitoring*

The Monterey Region municipalities shall collaborate to develop and implement a monitoring program for discharges of urban runoff from coastal storm drain outfalls. The program shall meet the following requirements:

1. The program shall include rationale and criteria for selection of storm drain outfalls to be monitored.
2. The program shall include collection of samples for analysis of total coliform, fecal coliform, and enterococci, in addition to any other indicators or pathogens identified by the municipalities.
3. Samples shall be collected at both the storm drain outfall and in the surf zone (at ankle to knee water depths) directly in front of the outfall.
4. Samples shall be collected during both dry and wet weather periods.
5. Exceedances of public health standards for bacteria must be reported to the County Department of Public Health as soon as possible by the municipalities.

*D. Ambient Bay, Lagoon, and Coastal Receiving Water Monitoring*

The Monterey Region Municipalities shall collaborate to develop and implement a program to assess the overall health of the receiving water and monitor the impact of urban runoff on ambient receiving water quality. This monitoring shall include Monterey Bay, Carmel Bay, Pacific Ocean coastline, coastal lagoons and estuaries, and

all Clean Water Act section 303(d) water bodies, Areas of Special Biological Significance or other environmentally sensitive areas.

*E. Toxic Hot Spots Monitoring*

The Monterey Region municipalities shall collaborate to develop and implement a program to assess the relative contribution of urban runoff on Toxic Hot Spots.

*Submittal of Receiving Waters Monitoring Annual Reports*

The Monterey Region municipalities shall submit the Receiving Waters Monitoring Annual Report to the Regional Board on January 31 of each year, beginning the year that the Monterey Proposal is approved.

*Monitoring Annual Report Requirements*

- A. Monitoring reports shall provide the data/results, methods of evaluating the data, graphical summaries of the data, and an explanation/discussion of the data for each monitoring program component listed above.
- B. Monitoring reports shall include an analysis of the findings of each monitoring program component listed above. The analysis shall identify and prioritize water quality problems. Based on the identification and prioritization of water quality problems, the analysis shall identify potential sources of the problems, and recommend future monitoring and BMP implementation measures for identifying and addressing the sources. The analysis shall also include an evaluation of the effectiveness of existing control measures.
- C. Monitoring reports shall include identification and analysis of any long-term trends in storm water or receiving water quality.
- D. Monitoring reports shall provide an estimation of total pollutant loads (wet weather loads plus dry weather loads) due to urban runoff for each of the watersheds.
- E. Monitoring reports shall for each monitoring program component listed above, include an assessment of compliance with applicable water quality standards.
- F. All monitoring reports shall use a standard report format and shall include the following:
  1. A stand alone comprehensive executive summary addressing all sections of the monitoring report;
  2. Comprehensive interpretations and conclusions; and
  3. Recommendations for future actions.
- G. All monitoring reports submitted to the Regional Board shall contain the certified perjury statement.
- H. All monitoring reports shall be reviewed prior to submittal to the Regional Board by a committee (consisting of no less than three members). All review comments shall also be submitted to the Regional Board.
- I. All monitoring reports shall be submitted in both electronic and paper formats.
- J. All monitoring reports shall describe monitoring station locations by latitude and longitude coordinates, frequency of sampling, quality assurance/quality control procedures and sampling and analysis protocols.

### Minimum Control Measure #3 – Illicit Discharge Detection and Elimination

Monterey Proposal Contents:

- Create call-in number;
- Develop storm drain system map;
- Develop inventory of businesses to be monitored for illicit discharge;
- Inspect some percentage of inventoried businesses;
- Adopt ordinance to prevent illicit discharges, including definitions, requirements for certain activities, and penalties for violations;
- Inspection program for boats and RVs.

“Clean Water, Healthy Economy” Action Items:

- Add commitment to respond to and eliminate 100% of illicit discharges or connections detected as a result of the call-in number;
- Add recordkeeping and reporting requirements for use of call-in number;
- Map storm drain **now**, or at a minimum, within 1 year of storm water management program approval;
- Inventory and prioritize businesses **now**, or at a minimum, within 1 year of storm water management program approval;
- Add dry-weather screening program to cover entire municipal storm sewer system;
- Commit to a follow-up/enforcement program for all illicit discharges detected;
- Add a sewage spill response program, aimed at preventing entry of sewage into the storm sewer to the maximum extent practicable;
- Add comprehensive program for inspections of existing development (commercial, industrial, residential);
- Complete storm water ordinance **now**, based on existing model ordinances;
- Ensure that storm water ordinance contains specific enforcement provisions;
- Add provisions to facilitate household hazardous waste disposal.

### **Minimum Control Measure #3: Illicit Discharge Detection and Elimination**

#### **MONTEREY'S PROGRAM: WHAT IT DOES**

##### *CALL-IN NUMBER*

##### *BMP Intent:*

Promote the reporting of illicit discharges by having a system for receiving such reports.

##### *BMP:*

Create a unified place for the public to call in to report potential illicit discharges.

#### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**This BMP must include an explicit commitment to respond to and eliminate 100% of all illicit discharges and/or connections detected as a result of the call-in program.**

#### **MONTEREY'S PROGRAM: WHAT IT DOES**

##### *BMP Implementation:*

- Create agreement with 1800CLEANUP as single call-in center to report illicit discharges by zip code.
- Advertise call-in number on draft Monterey Proposal generated media and educational materials
- Each permit holder will create an internal protocol for handling reports of potential illicit discharges within their zip code. Calls into 1800CLEANUP will be directed by zip code to a phone number for a specific permit holder response contact person. There will be both a "during work hours" and "after hours" phone number for each permit holder. Callers will be instructed to call 911 in the case of any immediate hazards. Each permit holder will be responsible for logging, investigating, and responding to each call. Documentation will be kept on the response and outcome of the reported incident.
- Using protocol developed under BMP 3-1.c, investigate and take appropriate action on each report that is received.

#### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The storm water management program must include the requirement that municipalities report on the use of the hotline in their annual reports.** In contrast to the draft Monterey Proposal, the *MURP*, *San Diego Permit*, and *Los Angeles Permit* contain stronger provisions. For example, the San Diego permit requires that "[a]ll reported incidents, and how each was resolved, shall be summarized in each municipality's individual jurisdictional MURP Annual Report."<sup>41</sup> This reporting is essential for any analysis of the success of the program, and for evaluating whether there are additional public reporting needs that are not being met.

<sup>41</sup> San Diego Permit at F.5.g.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*Storm Drain Map BMP Intent:*

Have accurate storm drain maps to help locate illicit discharges/dischargers.

*BMP:*

Storm water system mapping.

*BMP Implementation:*

- Develop a storm drain system map showing the location of all outfalls and the names and locations of all waters of the state and other Municipal storm sewers that receive discharges from those outfalls.
- Update maps annually to include new facilities as appropriate.

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must require the completion of the storm drain map within Year 1.** In contrast to the draft Monterey Proposal, the *MURP, San Francisco Public Utilities Program, Griffin, Georgia Program, and San Diego Permit* contain stronger provisions. The draft Monterey Proposal inexplicably gives the entities 5 full years to complete the storm drain system map. This is an unreasonable delay. For example, the San Francisco PUC completed a GIS-generated base map of its storm sewer system prior to the approval of its storm water management program.<sup>42</sup> Similarly, the City of Griffin, GA – a Phase II municipality – completed its storm drain system map prior to the approval of its storm water management program.<sup>43</sup> There is no legitimate reason that the Monterey Region municipalities cannot complete its map in one year.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*INVENTORY OF BUSINESSES*

*BMP Intent:*

Reduce pollution from illicit connections and/or discharges

*BMP:*

Inventory of businesses and industries to be monitored for illicit connections and/or discharges.

*BMP Implementation:*

Create inventory of all Attachment 4 listed businesses and industries to be monitored for potential illicit connections and/or discharges.

<sup>42</sup> SF PUC storm water management program at 33.

<sup>43</sup> State of Georgia Department of Natural Resources Environmental Protection Division, Georgia Notice of Intent GAG 610000 for Small Municipal Separate Storm Sewer Systems, City of Griffin ("Griffin storm water management program") at Appendix C.



**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must promptly complete its inventory according to the timeframe discussed in the “Inspections of Existing Development” section, below.** In contrast to the draft Monterey Proposal, the *MURP* and *Griffin, Georgia Program* contain stronger provisions. Other Phase II cities completed their lists prior to the approval of their storm water management program. For example, Griffin, GA has a complete list of all businesses connected to its storm sewer system, which was completed prior to the issuance of the storm water management program.<sup>44</sup> Such an inventory is useful for education, as well as inspection, and Griffin uses its list to send targeted mailings to businesses with storm water related messages.

**This BMP must include a requirement for prioritizing those businesses that are known, from observation in the municipality or from other programs, to result in illicit discharges (See MURP).** In contrast to the draft Monterey Proposal, the *MURP*, *San Bernardino Permit*, and *San Diego Permit* contain stronger provisions. For example, many other California Phase II Municipal storm sewers, including San Bernardino County, have already identified priority targets prior to the approval of their storm water management program.<sup>45</sup> This prioritization must be completed in Year 1.

**MONTEREY’S PROGRAM: WHAT IT DOES**

*INSPECTION PROGRAM*

*BMP Intent:*

Reduce pollution from illicit connections and/or discharges.

*BMP:*

Revise current inspection programs to include determination of the existence of illicit connections and/or discharges, i.e. sewer overflows, fluid dumping in catch basins, etc.

*BMP Implementation:*

- Develop inspection checklist.
- Develop protocol for taking action against identified illicit connectors / dischargers.
- Create specific illicit connection training program & materials for municipal employees and inspectors.
- Inspect businesses for illicit connections through existing municipal inspections and employee awareness.

<sup>44</sup> Griffin storm water management program at Appendix C.

<sup>45</sup> San Bernardino storm water management program at 4-3 – 4-4.

**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must contain a commitment to inspect a minimum of 20% of inventoried businesses annually.** The draft Monterey Proposal currently provides for the inspection of only 5% of these businesses. This is too few to meet the Maximum Extent Practicable standard. The entities can prioritize their inspections to the prioritization recommended above.

**MONTEREY’S PROGRAM: WHAT IT DOES**

- Create hotline for public reporting of illicit connections
- Develop protocol for responding to reported illicit connections
- Take action as necessary to eliminate 100% of the illicit connections that are identified in this year

**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must include a program of field investigation.** In contrast to the draft Monterey Proposal, the *MURP*, *San Joaquin* and *San Diego Permit* contain stronger provisions. The *MURP* outlines such a program, which suggests that site inspections are but one component of this program. Specifically, the *MURP* states: “[m]ost municipalities have utilized outfall/manhole inspection programs and site inspections to detect illicit connections as well as illicit discharges. The **outfall/manhole inspection program** (called the field screening program in Phase I regulations) utilizes the ‘belowground’ approach, which involves tracking dry-weather flows from the outfalls or manholes to their source.”<sup>46</sup> The *San Joaquin* storm water management program has a dry weather screening program, implemented on a **monthly** basis, that will detect and address non-storm water discharges and illegal dumping to the storm sewer system.<sup>47</sup> These programs serve as the basis for such a program in the draft Monterey Proposal to meet MEP and water quality standards.

**The draft Monterey Proposal must include a program for monitoring the entire municipal storm sewer system.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. According to the *MURP*: “[s]ince illicit connections are the main source of bacteria and pathogens in urban runoff, a systematic survey of the city’s entire storm drain system to check for illicit connections is very valuable and recommended, especially for those municipalities (such as coastal towns/cities) where storm drain outfalls discharge into coastal waters used for swimming.”<sup>48</sup> The *San Diego* permit contains just such a requirement:

Each Municipality shall conduct dry weather analytical monitoring of municipal storm sewer system outfalls within its jurisdiction to detect illicit discharges and connections in accordance with Attachment E of this Order.<sup>49</sup>

<sup>46</sup> *MURP* at 4.21

<sup>47</sup> *San Joaquin County* storm water management program at 15.

<sup>48</sup> *MURP* at 4-21.

<sup>49</sup> *San Diego Permit* at Attachment E.

Similarly, the MURP states that one of the objectives of the illicit discharge/connection program should be to “[c]ontrol illicit discharges by conducting methodical field surveys/investigations of the storm drain system to identify and eliminate existing improper physical connections.”<sup>50</sup> The draft Monterey Proposal must base a monitoring program on existing programs. Such monitoring can supplement a program of inspections by providing forensic data on illicit connections and/or discharges that the targeted inspection program is not targeting.

**The draft Monterey Proposal must explicitly provide for follow-up investigation of any monitoring that suggests the presence of illicit discharges or connections.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. For example, the San Diego permit requires:

[e]ach Municipality shall investigate and inspect any portion of the Municipal Storm Sewer System that, based on dry weather analytical monitoring results or other appropriate information, indicates a reasonable potential for illicit discharges, illicit connections, or other sources of non-storm water (including non-prohibited discharge(s) identified in Section B. of this Order). Each Municipality shall establish criteria to identify portions of the system where such follow-up investigations are appropriate.<sup>51</sup>

Similarly, the MURP has fairly detailed provisions that could form the basis of an inspection/follow-up program.<sup>52</sup> These programs prove the basis of such a follow-up requirement in the draft Monterey Proposal.

**The draft Monterey Proposal must contain commitments by the municipalities to respond to all sewage spills from all sources, and prevent the entry of sewage into the Municipal Storm Sewer System.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. This is particularly important for Monterey area municipalities, several of which have a history of failing sewage systems. According to the MURP, one of the objectives of the illicit discharge/connection program should be to: “Contain and clean up accidental spills using proper methods of cleanup and disposal.”<sup>53</sup> The San Diego permit requires:

[e]ach Municipality shall prevent, respond to, contain and clean up all sewage and other spills that may discharge into its Municipal Storm Sewer System from any source (including private laterals and failing septic systems). Spill response teams shall prevent entry of spills into the Municipal Storm Sewer System and contamination of surface water, ground water and soil to the maximum extent practicable. Each Municipality shall coordinate spill prevention, containment and response activities throughout all appropriate departments, programs and agencies to ensure maximum water quality protection at all times.<sup>54</sup>

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<sup>50</sup> MURP at 4-16.

<sup>51</sup> San Diego Permit at F.5.c.

<sup>52</sup> MURP at 4-23.

<sup>53</sup> MURP at 4-16.

<sup>54</sup> San Diego Permit at F.5.f.

The draft Monterey Proposal must be revised to contain similar language.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*STORM WATER ORDINANCE*

*BMP Intent:*

Reduce pollution from illegal disposal activities

*BMP:*

Adopt an ordinance with standards for storm water pollution prevention. Ordinance to include definitions of illegal disposal activities, including requirements pertaining to mat wash downs, hood cleaning, etc., and requiring firms to notify Public Works of all such cleaning activities, with penalties for violations. Ordinance will also outline responsibility for any clean up determined necessary. Develop illegal disposal definitions and policies and procedures guidance document.

*BMP Implementation:*

- The intention is to develop a single template ordinance which will be adopted by each municipality and will cover all aspects of storm water pollution and prevention associated with illegal disposal activities. For Municipal Storm Sewer System urban areas meeting the Phase II Permit Attachment 4 criteria, their final adopted ordinance will have to meet subject criteria.
- Develop template guidance document for illegal disposal activity policies and procedures.
- Adopt guidance document revised to be specific to each permit holder's needs by each permit holder.
- Adopt ordinance revised to be specific to each permit holder's needs through appropriate City Council procedures.
- Train appropriate staff on the adopted ordinance.
- Implement ordinance.

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must complete its review of existing storm water ordinances for compliance with Phase II requirements prior to the approval of the draft Monterey Proposal.** In contrast to the draft Monterey Proposal, the *MURP*, *Griffin Program* and *San Diego Permit* have done this. For example, Griffin, GA's municipal code was reviewed and determined to effectively prohibit illicit discharges, and included the authority to eliminate illicit discharges and enforce against violators.<sup>55</sup>

<sup>55</sup> Griffin storm water management program at Appendix C.

**The draft Monterey Proposal must provide for adoption a template ordinance, based on existing templates, and modify it to be municipality-specific within the first year of permit coverage.** In contrast to the draft Monterey Proposal, the *MURP*, *Griffin Program*, *Eugene, OR, Program* and *San Diego Permit* contain stronger provisions. The draft Monterey Proposal already provides a template ordinance, which it calls "Example Model Ordinance," at Appendix H. This document is flawed in several regards (described below), but even so it is unclear why – given that such a template already exists – the draft Monterey Proposal municipalities have allowed themselves until the second permit year to adopt a municipality-specific version. In addition, all relevant training materials and guidance document development must be completed within the first year.

**The draft Monterey Proposal must immediately develop a policy outlining what discharges are permitted into the Municipal Storm Sewer System and what discharges will be considered illicit.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. This policy must be included in the draft Monterey Proposal. The *MURP* discusses that: "[y]our municipality needs to establish a policy specifying the flows or discharges that it will allow to be discharged to the storm drain system and those that it will control via its illicit connection/discharge program."<sup>56</sup> Furthermore, the Phase II regulations already provide a great deal of guidance on what constitutes an illicit discharge or connection. The *MURP* outlines the discharges that a minimally acceptable program would need to address:

NPDES Phase II regulations note that the illicit connection/discharge program would need to eliminate certain types of non-storm water discharges if found to be significant contributors of pollutants. The regulations list the following types of discharges as those non-storm water discharges that the municipality should examine to determine if they are a significant source and then either ban their discharge or require implementation of controls — *water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water.*<sup>57</sup>

The draft Monterey Proposal's model ordinance specifically **declines** to ban the discharge of these substances, unless they are determined (by some unspecified process) to cause a violation of the Porter-Cologne Act, Clean Water Act, or local storm water ordinance. The Monterey municipalities must perform the evaluation as discussed in the *MURP*, and specifically determine whether these non-storm water discharges are, in fact, a significant source of storm water pollution.

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<sup>56</sup> *MURP* at 4-17.

<sup>57</sup> *Id.*

The template and municipality-specific ordinances must provide for enforcement against illicit activities. The MURP discusses a process for this that includes two steps. First, the municipality would issue a warning letter outlining a timeframe for remediation of the illicit connection/discharge activity. Second, the municipality would take administrative or legal action against an entity that continues its illicit activity past the deadline for compliance. The municipality must escalate its level of enforcement until compliance is achieved.<sup>58</sup> The ordinance must explicitly provide for severe fines for violators.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*RV/BOAT PROGRAM*

*BMP Intent:*

Reduce pollution from recreational vehicles and boats.

*BMP:*

Inspection program to ensure compliance from RVs and boats.

*BMP Implementation:*

- Create list of all RV & boat storage and launch areas where discharges potentially could take place.
- Create inspection list for use when inspecting RV & boat storage and launch areas.
- Inspect each RV and boat storage and launch area annually, and take action to correct any observed violations of the discharge ordinance.

*BMP Intent:*

Inform employees, businesses and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.

*BMP:*

Implement a permit boundary-wide education program addressing the negative effects on water quality through illegal discharges, improper waste disposal and other non-storm water discharges.

*BMP Implementation:*

See BMP 1-1.a and Appendix E for Public Education and Outreach Program.

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<sup>58</sup> *Id.* at 4-20 – 4-21.

**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must supplement its educational effort with mechanisms to facilitate proper disposal to meet MEP and water quality standards. In contrast to the draft Monterey Proposal, the *MURP and Morgan Hill Program* contain stronger provisions. The MURP states that one of the objectives of the program is to: “[p]revent improper disposal of wastes through a program that combines public education with provision of alternative disposal options and incentives.”<sup>59</sup> For example, the City of Morgan Hill’s storm water management program includes a curbside recycling program that provides for biweekly collection of used oil and filters. The City also participates in a Countywide Household Hazardous Waste Program, through which residents can bring their hazardous wastes to certain locations for collection several days per month.<sup>60</sup> As currently drafted, the draft Monterey Proposal does not provide for alternative disposal options and incentives. It must be revised to include them.

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<sup>59</sup> *Id.* at 4-16.

<sup>60</sup> City of Morgan Hill, Storm Water Management Plan Fiscal Years 2004-2009 (November 1, 2004) (“Morgan Hill storm water management program”) at 12.

## Minimum Control Measure #4 – Construction Site Storm Water Runoff Control

### Monterey Proposal Contents:

- Adopt ordinance with standards for construction sites;
- Develop construction site BMP policy and procedures guidance document;
- Develop and implement procedures for site plan review;
- Develop and implement procedures for site inspections and BMP enforcement;
- Develop and implement procedures for review of public input on storm water impacts of construction activities.

### “Clean Water, Healthy Economy” Action Items:

- Adopt construction site ordinance **now**, based on existing model ordinances, and incorporating Attachment 4 Receiving Water Limitations;
- Include General Construction, Spill Prevention Planning, Vehicle Maintenance Area, and Inspection BMPs from EPA’s National Menu of BMPs;
- Expressly include requirement of reducing storm water pollution to MEP and complying with water quality standards as part of site plan review process;
- Revise program to provide for construction site inspections beginning immediately;
- Revise inspection program to provide for weekly inspections of **all** construction sites.



## **Minimum Control Measure #4 – Construction Site Storm Water Runoff Control**

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP Intent:*

Reduce pollution from construction sites by developing guidelines and standards for construction site runoff. These will address erosion and sediment controls, and shall contain requirements for construction site operators to: implement appropriate erosion and sediment control BMPs; and control wastes that have the potential to impact water quality such as discarded building materials, concrete truck washout, paint and plastering wash down, chemicals, litter, and sanitary waste at the construction site.

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

The BMP intent must state that the Monterey entities will develop and implement a program to reduce pollutants to the MEP and assure compliance with water quality standard through the implementation components: 1) ordinance adoption; 2) construction site BMP policies and procedures guidance document; 3) site plan review; 4) site inspection and enforcement; 5) education focused on construction activities; 6) pollution prevention. In contrast to the draft Monterey Proposal, the *MURP*, *Griffin*, *Georgia Program*, *San Diego Permit*, and *Los Angeles Permit* have stronger provisions.

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Adopt an ordinance with standards for storm water pollution prevention associated with construction activities. Ordinance to include standards for general construction site waste management for construction activities as defined by the General Construction Storm Water Permit.

*BMP Implementation:*

Intention is to develop a single template ordinance, which will be adopted by each municipality and will cover all aspects of storm water pollution and prevention associated with construction activities. (Referencing Attachment H). For Municipal Storm Sewer System urban areas meeting the Phase II Permit Attachment 4 criteria, their final adopted ordinance will have to meet subject criteria.

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must adopt a template ordinance, based on existing templates, and modify it to be municipality-specific within the first year of draft Monterey Proposal's adoption. In contrast to the draft Monterey Proposal, the *MURP*, *Griffin Program*, *Eugene Program*, and *San Diego Permit* contain stronger provisions. Although the current draft Monterey Proposal includes a model ordinance at Attachment H. This model ordinance is inadequate to meet the MEP standard or meet water quality standards because it is impermissibly

vague and provides for no requirements, but rather indicates the municipalities "may" adopt certain measures. Rather, the Monterey municipalities must:

*Adopt ordinances within the first year of the draft Monterey Proposal's adoption.* For example, The City of Griffin, GA – another Phase II municipality – evaluated its municipal code for compliance with Phase II's requirements **prior to** the issuance of the storm water management program.<sup>61</sup> Model ordinances abound, and the MURP – which both Monterey and the Regional Board participated in the development of – provides one. Even if the municipalities inexplicably decide to develop a template construction from whole cloth, it should not take a year to do and the necessary guidance should be developed hand-in-hand with the ordinance.

*Provide specific instruction regarding the content of the construction ordinance in the draft Monterey Proposal.* The MURP includes the Construction Site Ordinance of the City of Eugene, OR, as a model of this type of ordinance. According to the MURP, Eugene's ordinance addresses the five guiding principles for these programs: (1) Use of good site planning; (2) Minimization of soil movement; (3) Capture of sediment to the greatest extent possible; (4) Good housekeeping practices; and (5) Minimization of impacts of post-construction storm water discharges.<sup>62</sup> The storm water management program must explicitly require the template ordinance to cover these principles. To meet MEP and assure compliance with water quality standards, the construction ordinance must also provide specific instructions regarding the following specific elements (similar to Eugene, OR; San Diego; and Griffin, GA):

- Erosion prevention;
- Seasonal restrictions on grading;
- Slope stabilization requirements;
- Phased grading;
- Revegetation as early as possible;
- Preservation of natural hydrologic features;
- Preservation of riparian buffers and corridors;
- Maintenance of all source control and structural treatment BMPs; and
- Retention and proper management of sediment and other construction pollutants on site.<sup>63</sup>

*Must commit to compliance with Attachment 4 receiving water limitations for ALL permittees in the model ordinance and in the draft Monterey Proposal.* The General Permit requirement states:

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<sup>61</sup> Griffin storm water management program at Appendix D.

<sup>62</sup> MURP at 4-36, Appendix 4N.

<sup>63</sup> See e.g. MURP Ordinance (Eugene, OR) at 2-4; San Diego Permit at 22; Griffin, GA storm water management program at Appendix D.

Discharges shall not cause or contribute to an exceedance of *water quality standards* contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable RWQCB Basin Plan.<sup>64</sup>

Accordingly, the draft Monterey Proposal's template ordinance must include the following language:

All persons conducting construction activities shall employ, to the maximum extent practicable, erosion prevention and construction site management practices that result in the following outcome: no discharges that cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule, or the applicable RWQCB Basin Plan.<sup>65</sup>

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Develop construction site BMP policies and procedures guidance document.

*BMP Implementation:*

- 4-1.b Develop template construction site BMP policies and procedures guidance document (2);
- 4-1.c Adopt guidance document revised by each permit holder to be specific to each permit holder's needs (3);
- 4-1.d Adopt ordinance revised to be specific to each permit holder's needs through appropriate City Council procedures (3);
- 4-1.e Train appropriate staff on the adopted ordinance (3-5);
- 4-1.f Implement ordinance and guidance document (3).

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must: 1) inventory existing construction projects; 2) require specific construction site BMPs; and 3) designate additional BMPs based on review EPA's Menu of BMPs that are MEP and assure compliance with water quality standards. In contrast to the draft Monterey Proposal, the *MURP*, *Salinas Permit*, *San Bernardino Permit*, and *San Diego Permit* contain stronger provisions. These existing storm water management programs and permits, among others, require an inventory of construction sites, specific construction BMPs as well as designation of additional BMPs. Based on those plans, the draft Monterey Proposal must include:

<sup>64</sup> State Water Resources Control Board, Water Quality Order No. 2003-0005-DWQ: National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, Waste Discharge Requirements for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (April 30, 2003) ("General Permit"), Attachment 4 at A.1.

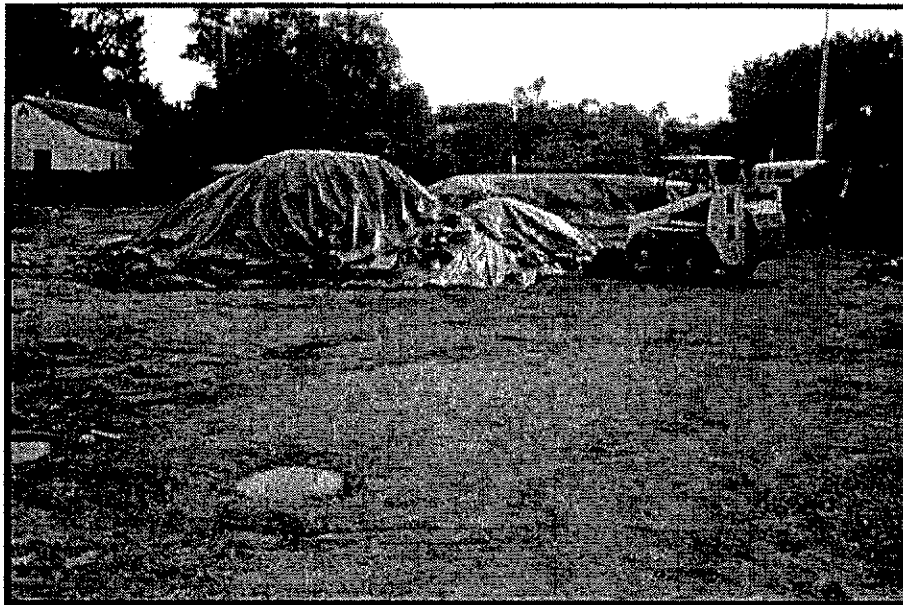
<sup>65</sup> See section R-6.645-D of the Eugene Ordinance from the MURP

- *Inventory of Construction Sites:* Within the first year of the adoption of the draft Monterey Proposal, the Monterey Region municipalities shall develop and implement an effective system to track grading permits and active construction projects. The system shall identify basic site information (including *inter alia* owner, location, contractor, etc.), status (active, complete), size in acres, proximity to natural and man-made hydrologic features, required inspection frequency, project start and anticipated completion dates. The Monterey Region municipalities shall update this inventory as new projects within its jurisdiction are initiated or on a monthly basis. Outputs from the system shall be available to Regional Board upon request.
- *Required Construction BMPs:* All construction projects shall implement the following BMPs unless the BMP is not practicable. If a BMP is not practicable, a detailed justification shall be included with the approved SWPPP.
  - Stabilized construction entrance
  - Scheduling of grading activities to minimize bare graded areas during the rainy season
  - Downslope sediment controls (e.g., sediment logs)
  - Concrete truck washouts
  - Storm drain inlet protection
  - Protection of slopes and channels
  - Good housekeeping practices (e.g., trash management, proper material storage, etc.).
- *Designation of Additional BMPs:* The Monterey Region municipalities shall:
  - Designate a set of minimum BMPs for construction sites. The municipality shall revise and distribute within 1 year of permit adoption a brochure describing the minimum construction BMPs to be implemented at construction sites. This brochure shall be distributed during the SWPPP review stage and during inspections, if necessary. The BMPs shall be categorized based on the projects threat to water quality (high, medium, low). Within the first year of the draft Monterey Proposal's adoption, the municipalities must classify each construction site as high, medium, or low threat to water quality by evaluating: (1) soil erosion potential; (2) site slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; and (7) any other relevant factors.
  - Implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each construction site within its jurisdiction year round. If particular minimum BMPs are infeasible at any specific site, each municipality shall implement, or require the implementation of, other equivalent BMPs. Each municipality shall also implement or require any additional site specific BMPs as necessary to comply with this draft Monterey Proposal, General Permit, and BMPs which are more stringent than those required under the statewide General Construction Permit.
  - Implement, or require the implementation of, BMPs year round; however, BMP implementation requirements can vary based on wet and dry seasons.
  - Implement, or require implementation of, additional controls for construction sites tributary to Clean Water Act section 303(d) water bodies impaired for sediment as

necessary to comply with the draft Monterey Proposal, General Permit. Each municipality shall implement, or require implementation of, additional controls for construction sites within or adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas as necessary to meet MEP and assure compliance with water quality standards.

- Review and select construction BMPs from, *inter alia*, EPA's National Menu of BMPs for General Construction Site Waste Management; Spill Prevention and Control Plans; Vehicle Maintenance and Washing Areas; and BMP Inspection and Maintenance by Contractor.

**Highlighted BMP: Outdoor Storage of Raw Materials**



**Description**

Raw materials, by-products, finished products, containers, and material storage areas exposed to rain and/or runoff can pollute storm water. Storm water can become contaminated when materials wash off or dissolve into water or are added to runoff by spills and leaks. Improper storage of these materials can result in accidental spills and the release of materials. To prevent or reduce the discharge of pollutants to storm water from material delivery and storage, pollution prevention and source control measures, such as minimizing the storage of hazardous materials on-site, enclosing or covering materials, storing materials in a designated area, installing secondary containment, conducting regular inspections, preventing storm water runoff and runoff, and training employees and subcontractors must be implemented.

*Source: California Stormwater Quality Association, Municipal BMP Handbook*

**Targeted Constituents**

- Sediment
- Nutrients
- Trash
- Metals
- Bacteria
- Oil and Grease
- Organics
- Oxygen Demanding

## MONTEREY'S PROGRAM: WHAT IT DOES

### *BMP:*

Develop and implement procedures for site plan review, including consideration of potential water quality impacts

### *BMP Implementation:*

- Develop site plan review procedures using reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks for revisions to plans.
- 4-2.b Train appropriate staff of procedures;
- 4-2.c Implement new site plan review procedures

## "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

The draft Monterey Proposal must develop a construction and grading review/approval process of construction plans to ensure that pollutant discharges be reduced to the Maximum Extent Practicable and assure compliance with water quality standards. In contrast to the draft Monterey Proposal, the *Griffin Program*, *Salinas Program*, and *San Diego Permit* contain stronger provisions. As such, the draft Monterey Proposal must specify:

- *Ordinances:* All construction grading and construction activities will be in compliance with applicable ordinances (e.g., storm water, grading, construction, etc.) and other applicable requirements, including the draft Monterey Proposal and General Permit.
- *Construction and Grading Project Requirements:* Include construction and grading project requirements in local grading and construction permits to ensure that pollutant discharges are reduced to the maximum extent practicable and water quality objectives are not violated during the construction phase. Such requirements shall include the following requirements or their equivalent:
  - Project proponent must develop and implement a plan to manage storm water and non-storm water discharges from the site at all times;
  - Project proponent must minimize grading during the wet season and coincide grading with seasonal dry weather periods to the maximum extent practicable. If grading does occur during the wet season, require project proponent to implement additional BMPs for any rain events which may occur, as necessary for compliance with the draft Monterey Proposal and General Permit to meet MEP and assure compliance with water quality standards;
  - Project proponent must emphasize erosion prevention as the most important measure for keeping sediment on site during construction;
  - Project proponent must utilize sediment controls as a supplement to erosion prevention for keeping sediment on-site during construction, and never as the single or primary method;
  - Project proponent must minimize areas that are cleared and graded to only the portion of the site that is necessary for construction;
  - Project proponent must minimize exposure time of disturbed soil areas;
  - Project proponent must temporarily stabilize and reseed disturbed soil areas as rapidly as possible;

- Project proponent must permanently revegetate or landscape as early as maximally practicable;
- Project proponent must stabilize all slopes; and
- Project proponents subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities, (hereinafter General Construction Permit), must provide evidence of existing coverage under the General Construction Permit.<sup>66</sup>
- *Verification of permits and plans.* Prior to issuing a grading or building permit for a construction site one acre or more, each municipality shall:
  - Require proof that a Notice of Intent (NOI) for coverage under the General Construction Permit has been submitted, if applicable.
  - Require submittal of a storm water pollution prevention program (SWPPP) to the regulating municipality that contains, at a minimum, the following:
    - A vicinity map showing nearby roadways, the construction site perimeter, and the geographic features and general topography surrounding the site;
    - A site map showing the construction project in detail, including the existing and planned paved areas and buildings; general topography both before and after construction; drainage patterns across the project area; and anticipated storm water discharge locations (i.e., the receiving water, a conduit to receiving water, and/or drain inlets);
    - A detailed, site-specific listing of the potential sources of storm water pollution;
    - A description of the type and location of erosion and sediment control BMPs to be employed at the site;
    - The name and telephone number of the qualified person responsible for implementing the SWPPP; and
    - Certification/signature by the landowner or an authorized representative.
  - Review the SWPPP for compliance with the municipality's ordinances and the draft Monterey Proposal and General Permit.

#### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Develop and implement procedures for site inspection and enforcement of BMP control measures.

*BMP Implementation:*

- Develop ranking criteria and site inspection procedures
- Train appropriate staff on procedures
- Create progressive enforcement protocol
- Inspect the construction sites subject to the storm water pollution prevention ordinance per ranking criteria and procedures developed in BMP 4-3.a, and take appropriate action to have any observed violations corrected

<sup>66</sup> See Salinas Permit Attachment 4 at 2; Griffin, GA storm water management program at Appendix D; San Diego Permit at 23.

**“CLEAN WATER, HEALTHY ECONOMY” PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must develop and implement a construction site inspection program that meets MEP and assures compliance with water quality standards.** In contrast to the draft Monterey Proposal, the *MURP*, *Salinas Program*, *Griffin Program*, and *San Diego Permit* contain stronger provisions. The current draft of the draft Monterey Proposal is impermissibly vague as to the commitment and details of the program. Consistent with other storm water management plans and permits defining MEP (Salinas, San Diego, MURP, Griffin, GA), the draft Monterey Proposal must:

- *Begin construction site inspections immediately upon adoption of the construction site ordinance by the municipalities:* There is no reason that development of site ranking, inspection procedures, and enforcement protocols cannot be accomplished hand-in-hand with the development of the ordinance.
- *Provide training for specific types of staff.* As discussed in the MURP, Salinas Permit, San Diego Permit, and Griffin storm water management programs, training of the following types of personnel is required: site inspectors, developer/contractor staff, and municipal personnel for city projects. Specifically, the Monterey Region municipalities shall implement an annual training education program to ensure that its construction, building, and grading review staffs and inspectors have an understanding of:
  - Federal, state, and local water quality laws and regulations applicable to construction and grading activities;
  - The connection between construction activities and water quality impacts (i.e., impacts from land development and urbanization);
  - How erosion can be prevented;
  - How impacts to receiving water quality resulting from construction activities can be minimized (i.e., through implementation of various source control and structural BMPs);
  - Applicable topics listed in the construction section of the draft Monterey Proposal and General Permit.
- *Rank criteria, frequency of inspections and mode of enforcement.* Specifically:
  - The Monterey Region municipalities shall conduct construction site inspections for compliance with its ordinance (grading, storm water, etc.), permits (construction, grading, etc.), and the draft Monterey Proposal. Inspections shall include review of site erosion control and BMP implementation plans;
  - Frequencies and priorities shall be established based on the threat to water quality, and the permit provides specific criteria on which to base the prioritization. All sites that either: (1) are 50 or more acres in size; or (2) are five or more acres in size and will discharge to a 303(d) listed, environmentally sensitive waterbody, or Area of Special Biological Significance, are to be assigned high priority, although other sites may also be assigned high priority.
  - During the wet season (i.e., October 1 through April 30 of each year), each municipality shall inspect, at a minimum, each High Priority construction site, either: (1) Weekly; or (2) monthly for any site that the responsible municipality certifies in a written statement to the Central Coast RWQCB all of the following:



- Municipality has record of construction site's Waste Discharge Identification Number (WDID#) documenting construction site's coverage under the statewide General Construction Permit; and
- Municipality has reviewed the construction site's Storm Water Pollution Prevention Plan (SWPPP); and
- Municipality finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
- Municipality finds that the SWPPP is being properly implemented on site.

At a minimum, Medium and Low Priority construction sites shall be inspected by municipalities twice during the wet season. All construction sites shall be inspected by the municipalities as needed during the dry season (i.e., May 1 through September 30 of each year).

Alternatively, the municipalities (based on Griffin, GA plan) can put aside the need to prioritize sites and conduct inspections of all construction sites **on a weekly basis**.<sup>67</sup>

- Based upon site inspection findings, each municipality shall implement all follow-up actions necessary to comply with this Order.
- *Include enforcement requirements.* Each municipality shall enforce applicable ordinances and permits at all construction sites as necessary to maintain compliance with the draft Monterey Proposal. The Monterey Region municipalities shall develop and implement a written escalating enforcement policy to ensure construction sites are brought into compliance. The municipalities' ordinances or other regulatory mechanisms shall contain sanctions to ensure compliance. Sanctions may include the following or their equivalent: Non-monetary penalties, stop work orders, fines, bonding requirements, and/or permit denials or suspension for non-compliance.
- *Non-Compliant Sites:* Each municipality shall provide oral notification to the Central Coast RWQCB of non-compliant sites that are determined to pose a threat to human or environmental health within its jurisdiction within 24 hours of the discovery of noncompliance. Each municipality shall develop and submit criteria by which to evaluate events of noncompliance to determine whether they pose a threat to human or environmental health. These criteria shall be submitted in the Annual Report for Central Coast RWQCB review. Such oral notification shall be followed up by a written report to be submitted to the Central Coast RWQCB within 5 days of the incidence of non-compliance. Sites are considered non-compliant when one or more violations of local ordinances, permits, plans, the draft Monterey Proposal or General Permit exist on the site.

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<sup>67</sup> Griffin storm water management program at Appendix D.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Develop and implement procedures for receipt and consideration of information submitted by the public regarding storm water runoff impacts associated with construction projects. (See Appendix E for Public Education and Outreach Program)

*BMP Implementation:*

- Develop procedures for receipt of information from public
- Establish internal protocol for how information received will be considered, handled, and responded to.
- Educate public on the procedures for reporting potential impacts by construction projects on run off.

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**In addition to the comments on Minimum Control Measure #1: Public Education and Outreach, the Monterey entities shall develop and implement within the first year of the draft Monterey Proposal's adoption, a construction education program for project applicants, contractors, developers, property owners, and other responsible parties.** Each entity shall implement an education program to ensure that project applicants, contractors, developers, property owners, and other responsible parties have an understanding of the topics outlined construction education portions of the draft Monterey Proposal.

## **Minimum Control Measure #5 – Post-Construction Storm Water Management in New Development and Redevelopment**

### Monterey Proposal Contents:

- Adopt ordinance with standards for storm water pollution prevention from new development and redevelopment;
- Develop and implement procedures for review of construction plans;
- Develop and implement procedures for post-construction inspection and enforcement of storm water control systems.

### “Clean Water, Healthy Economy” Action Items:

- Explicitly incorporate Attachment 4 receiving water limitations and design standards into the storm water management program, and require compliance by all municipalities;
- Revise storm water management program to incorporate criteria for prioritizing developments, as well as several pre-determined high priority categories of development;
- Adopt ordinance **now**, based on existing model ordinances, and include development principles adapted directly from Attachment 4;
- Revise site plan review guidance to include a revised CEQA checklist and criteria for determining appropriate controls;
- Add provisions for inspections by municipal staff, in addition to inspection and self-certification by facility owner;
- Revise program to provide for inspections beginning immediately.

## Minimum Control Measure #5 – Post-Construction Storm Water Management in New Development and Redevelopment

*Overall statement for Minimum Control Measure #5:* All of the municipal entities in the Monterey Region must meet the Design Standards Requirements for New Development and Redevelopment under Attachment 4 of the General Permit.<sup>68</sup> The very existence of a Monterey Regional Water Pollution Control Agency demonstrates that the relevant Municipal Storm Sewer System (the “system of conveyances”) that transports storm water in the area is unitary and serves more than 50,000 people. Moreover, from a policy perspective, if the participating entities wish to take advantage of the convenience of the exercising the joint application option, and to capitalize of the existence of resources of working together in this process—as they admit throughout the draft Monterey Proposal—they must be prepared to fulfill, in the aggregate, the requirements of a individual entity in their position. In this connection, it makes no sense to have different development requirements in a single region given the relatively uniform land use practices—as admitted in the draft Monterey Proposal—and identical storm water impacts. Further, it is highly likely that Design Standards will be required of all municipalities in the region in the next draft of the General Permit, given the growth rate and significant water resources in the area that are threatened by polluted urban storm water runoff.

Equally important, design standards have been adopted throughout California for both Phase I and Phase II municipalities (e.g., San Diego, San Bernardino, Los Angeles, Napa, Salinas, Placer County, Morgan Hill, Salono County). Critically, the draft Monterey Proposal cannot escape these requirements because they are explicitly mandated by the General Permit for inclusion in storm water management plans.

### MONTEREY’S PROGRAM: WHAT IT DOES

*BMP Intent:*

Reduce post-construction pollution by developing post-construction guidelines and standards for storm water runoff from new development and redevelopment. These will address such pollutants as sediments, chemicals, oils and grease, metals, and nutrients, as well as erosion and flooding.

*BMP Implementation:*

- The intention is to develop a single template ordinance which will be adopted by each municipality and will cover all aspects of storm water pollution and prevention associated with new developments and redevelopment. For Municipal Storm Sewer System urban areas meeting the Phase II Permit Attachment 4 criteria, their final adopted ordinance will have to meet subject criteria (Year 1).
- Develop template post-construction BMP policies and procedures guidance document (Year 2).

<sup>68</sup> Attachment 4 also requires compliance with Receiving Water Limitations. The application of this provision is discussed in the General Comments section.

*BMP Implementation continued:*

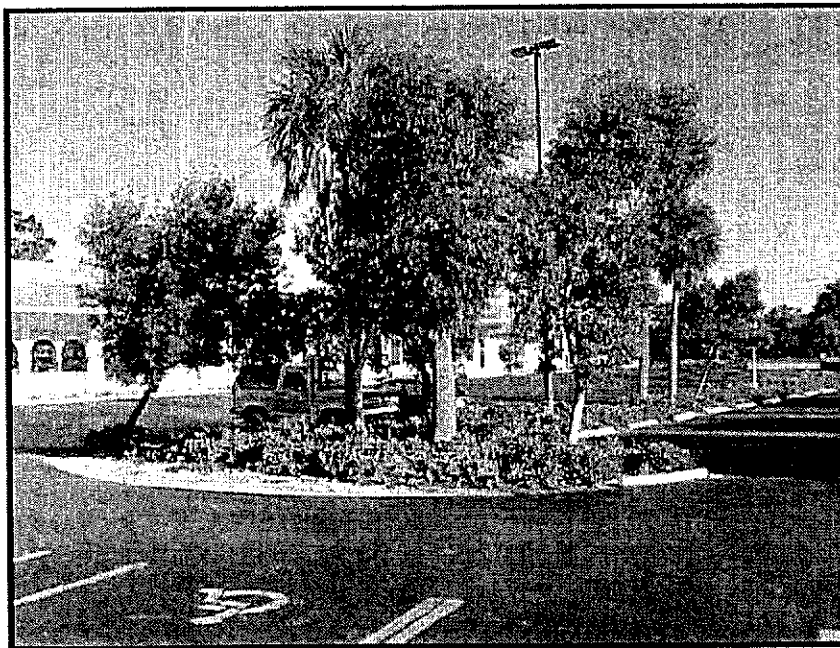
- Adopt guidance document revised to be specific to each permit holder's needs by each permit holder (year 2).
- Adopt ordinance revised to be specific to each permit holder's needs through appropriate City Council procedures (year 2).
- Train appropriate staff on the adopted ordinance (years 3-5).
- Implement ordinance and guidance document (year 3).

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must specify the required contents of a municipal ordinance or other document to ensure implementation of design standards. The current draft of the draft Monterey Proposal included Attachment H. However, Attachment H is woefully inadequate because it does not even include the explicitly required provisions mandated by the General Permit. The draft Monterey Proposal must state that the entities shall within the first year of the draft Monterey Proposal's adoption:

- Adopt an ordinance to implement design standards

**Highlighted BMP: Parking/Storage Area Maintenance**



**Targeted Constituents**

- |                  |                                     |
|------------------|-------------------------------------|
| Sediment         | <input checked="" type="checkbox"/> |
| Nutrients        | <input checked="" type="checkbox"/> |
| Trash            | <input checked="" type="checkbox"/> |
| Metals           | <input checked="" type="checkbox"/> |
| Bacteria         | <input checked="" type="checkbox"/> |
| Oil and Grease   | <input checked="" type="checkbox"/> |
| Organics         | <input checked="" type="checkbox"/> |
| Oxygen Demanding | <input checked="" type="checkbox"/> |

**Description**

Parking lots and storage areas can contribute a number of substances, such as trash, suspended solids, hydrocarbons, oil and grease, and heavy metals that can enter receiving waters through stormwater runoff or non-stormwater discharges. The following protocols are intended to prevent or reduce the discharge of pollutants from parking/storage areas and include using good housekeeping practices, following appropriate cleaning BMPs, and training employees.

*Source: California Stormwater Quality Association, Municipal BMP Handbook*

The following types of development and redevelopment projects are to be subject to the ordinance:

- Single-family hillside residences;
- 100,000 square foot commercial developments;
- automotive repair shops;
- retail gasoline outlets;
- restaurants;
- home subdivisions with 10 or more housing units;
- parking lots 5,000 square feet or more with 25 or more parking spaces and potentially exposed to storm water runoff.
- Provide for design standards applicable to all categories:
  - Peak storm water discharge rates not to exceed pre-development rate, where increased potential for downstream erosion exists;
  - Implement the following, consistent with general plan or LCP:
    - Concentrate development on portions of site, leaving remaining land undisturbed;
    - Minimize clearing and grading of native vegetation;
    - Plant trees and other vegetations, esp. native and drought tolerant;
    - Use parking lot islands and other landscaping;
    - Preserve riparian and wetland areas.
  - Minimize, to the maximum extent practicable, pollutants of concern, including those exhibiting the following characteristics:
    - Current loadings or historic deposits are impacting beneficial uses or receiving water;
    - Elevated levels are found in sediments of receiving water or have the potential to bioaccumulate;
    - Detectable inputs of pollutant are at concentrations potentially toxic to humans or flora and fauna.
  - Protect slopes and channels with BMPs to:
    - Convey runoff safely from tops of slopes and stabilize disturbed slopes;
    - Utilize natural drainage systems to MEP;
    - Stabilize permanent channel crossings;
    - Vegetate slopes with native or drought tolerant vegetation;
    - Use energy dissipaters at outlets of new outlets.
  - All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language and/or graphical icons;
  - Use the following BMPs for outdoor material storage areas:
    - Materials with potential to contaminate storm water must be placed in an enclosure and protected by secondary containment such as berms, dikes or curbs;
    - Storage area must be paved and sufficiently impervious to contain leaks and spills;
    - Must have roof or awning to minimize collection of storm water within secondary containment area.

- Use the following BMPs for trash storage areas:
  - Areas must have drainage from roofs and pavement diverted around the area;
  - Container areas must be screened or walled off to prevent offsite transport of trash.
- Applicants for building permits must provide verification of BMP maintenance, including developers' signed statement accepting responsibility for BMP maintenance. Transfer of the property must include conditions requiring recipient to assume responsibility of BMP maintenance, including obligation to inspect at least once per year.
- Post-construction treatment control BMPs must incorporate either volumetric or flow-based treatment control design standards:
  - Volumetric: either 85th percentile 24-hour runoff event; or volume of annual runoff to achieve 80 percent or more treatment; or volume of runoff produced from a historic 24-hour rainfall criterion that achieves approximately the same reduction in pollutants as that achieved by the 85th percentile 24-hour runoff event.
  - Flow-based: either flow produced from rain event equal to at least two-times the 85th percentile hourly rainfall intensity; or the flow produced from a rain event that will result in treatment of the same portion of runoff as volumetric methods.
- Individual priority project categories:
  - 100,000 square foot commercial developments:
    - properly design loading/unloading docks (cover and connect to storm drains);
    - properly design repair/maintenance bays (must be either inside or designed so that run-on does not contact and must capture all washwater);
    - properly design vehicle/equipment wash areas (must be self-contained, covered, or equipped with a clarifier and properly connected to a sanitary sewer.
  - Restaurants:
    - Properly design equipment/accessory wash areas (must be self-contained, equipped with grease trap, and connected to sanitary sewer, and if located outdoors, covered, have secondary containment).
  - Retail gasoline outlets:
- Properly design fueling areas. Must have the following BMPs:
  - Fuel dispensing area must be covered with an overhanging structure with dimensions equal to or greater than dispensing area. Must not drain into dispensing area, and downspouts must not be routed across the fueling area;
  - Must be paved with Portland cement – no asphalt;
  - Dispensing area must have 2% to 4% grade to prevent ponding;
  - Dispensing area must extend 6.5 feet from corner of each dispenser.

- Automotive repair shops:
  - Properly design fueling areas: same as gasoline outlets, above.
  - Properly design repair/maintenance bays, must include:
    - Must be indoors or designed so that run-on does not contact;
      - Capture all washwater, leaks and spills;
      - Properly design vehicle/equipment wash areas (must be self-contained, covered, or equipped with a clarifier and properly connected to a sanitary sewer).
      - Properly design loading/unloading dock area (see 100,00 foot area plans, above).
- Parking lots:
  - Parking areas: reduce impervious land coverage of parking areas, and infiltrate or treat runoff.
  - Limit oil contamination: treat to remove oils from parking lots that are heavily used, and maintain treatment systems.<sup>69</sup>

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:* Develop and implement procedures for review of construction plans.

*BMP Implementation:*

- Develop plan review procedures using reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks for revisions to plans (year 2).
- Review 100% of project plans subject to the post-construction storm water pollution prevention ordinance for compliance with this ordinance during design and construction (years 3-5).

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must specify the procedures for review of construction plans.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. Within the first year of the adoption of the draft Monterey Proposal, the municipalities will adopt a plan for review of construction projects that requires each proposed project to implement measures to ensure that pollutants and runoff from the development will be reduced to the maximum extent practicable and will not cause or contribute to an exceedance of water quality standards. As part of the plan, each municipality will ensure that all development will be in compliance with applicable storm water ordinances, local permits, other applicable ordinances and requirements, the draft Monterey Proposal, and the General Permit. In order to obtain approval, each construction plan must ensure that pollutant discharges and runoff flows from development are reduced to the maximum extent practicable and that receiving water quality standards are not violated throughout the life of the project. The construction plan must include, at a minimum:

<sup>69</sup> General Permit at Attachment 4.



- Implement all applicable BMPs as identified in Attachment 4 of the General Permit.
- Implement source control BMPs for all applicable development projects.
- Implement site design/landscape characteristics where feasible which maximize infiltration, provide retention, slow runoff, and minimize impervious land coverage for all development projects.
- Implement buffer zones for natural water bodies, where feasible. Where buffer zone implementation is infeasible, require project proponent to implement other buffers such as trees, lighting restrictions, access restrictions, etc.
- For industrial applicants subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Industrial Activities (Except Construction), (hereinafter General Industrial Permit), the applicant must provide evidence of coverage under the General Industrial Permit.
- Ensure grading or other construction activities meet the provisions specified in the construction program of the draft Monterey Proposal.
- Provide proof of a mechanism which will ensure ongoing long-term maintenance of all structural post-construction BMPs.

#### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:* Develop and implement procedures for post-construction site inspection and enforcement of storm water pollution control systems.

*BMP Implementation:*

- Develop site inspection procedures and guidance document for self-certification by facility owners (year 2).
- Develop agreement to be signed by all facility owners that they will comply with inspection & self-certification requirements to ensure post-construction BMP compliance (year 2).
- Require annual inspection and self-certification by facility owner (years 2-5).

#### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must require self-certification.** As the exact language of the *General Permit* requires, for self-certification, the entities shall require:

- Applicants provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.<sup>70</sup>
- For all properties, the verification will include the developer's signed statement, as part of the project application, accepting responsibility for all structural and treatment control BMP maintenance until the time the property is transferred and, where applicable, a signed agreement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance. The transfer of property to a private or public

<sup>70</sup> Exact language from General Permit, Attachment 4.

owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. For residential properties where the Structural or Treatment Control BMPs are located within a common area which will be maintained by a homeowner's association, language regarding the responsibility for maintenance must be included in the project's conditions, covenants and restrictions (CC&Rs). Printed educational materials will be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, signs that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Municipality can provide. The transfer of this information shall also be required with any subsequent sale of the property.<sup>71</sup>

- If Structural or Treatment Control BMPs are located within a public area proposed for transfer, they will be the responsibility of the developer until they are accepted for transfer by the County or other appropriate public agency. Structural or Treatment Control BMPs proposed for transfer must meet design standards adopted by the public entity for the BMP installed and should be approved by the County or other appropriate public agency prior to its installation.<sup>72</sup>

**The draft Monterey Proposal must provide for inspections commencing immediately upon the implementation of the ordinance.** In contrast to the draft Monterey Proposal, the *MURP*, *Salinas Permit*, and *San Diego Permit* contain stronger provisions. Procedure and guidance document development should occur simultaneously with the development of the ordinance. The agreement with facility owners to comply with inspection and self-certification requirements should already be developed and should be incorporated into the draft Monterey Proposal. Based on key program elements from other storm water management plans (*MURP*, the *San Diego Permit*, and the *Salinas Permit*) the draft Monterey Proposal must include site visit/inspections to meet MEP and protect water quality. The site visit/inspections are categorized as: 1) commercial facilities program; 2) industrial facilities program; 3) and residential program.

#### Commercial Facilities Program

*Identify Commercial Facilities of Concern:* Coastal communities, like the Monterey Region, have numerous restaurants, fast-food establishments, hotels, motels, and gas stations. In more rural areas of the region, there may be a concentration of businesses that deal in farm and garden machinery rental and repair, farm supplies, lumber and building materials, agricultural chemicals, and small unregulated animal feedlots. The first step to establishing a program (as detailed in the Model storm water management program, *Salinas Permit*, and *San Diego Permit*) is for the Monterey Region municipalities to develop and update annually an inventory of the

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<sup>71</sup> Exact language from General Permit, Attachment 4.

<sup>72</sup> Exact language from General Permit, Attachment 4.

following high threat to water quality commercial sites in each municipality within the first year of the draft Monterey Proposal:

- a. Automobile mechanical repair, maintenance, fueling, or cleaning;
- b. Airplane mechanical repair, maintenance, fueling, or cleaning;
- c. Boat mechanical repair, maintenance, fueling, or cleaning;
- d. Equipment repair, maintenance, fueling, or cleaning;
- e. Automobile and other vehicle body repair or painting;
- f. Mobile automobile or other vehicle washing;
- g. Automobile (or other vehicle) parking lots and storage facilities;
- h. Retail or wholesale fueling;
- i. Pest control services;
- j. Eating or drinking establishments;
- k. Mobile carpet, drape or furniture cleaning;
- l. Cement mixing or cutting;
- m. Masonry;
- n. Painting and coating;
- o. Botanical or zoological gardens and exhibits;
- p. Landscaping;
- q. Nurseries and greenhouses;
- r. Golf courses, parks and other recreational areas/facilities;
- s. Cemeteries;
- t. Pool and fountain cleaning;
- u. Marinas;
- v. Port-a-Potty servicing;
- w. Other commercial sites/sources that the municipality determines may contribute a significant pollutant load to the Municipal Storm Sewer System;
- x. Any commercial site or source tributary to a Clean Water Act section 303(d) impaired water body, where the site or source generates pollutants for which the water body is impaired; and
- y. Any commercial site or source within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within an environmentally sensitive area or area of special biological significance.

The inventory shall include the facility's or activity's name, address, nature or activity, SIC codes that best reflect the principal facility product or serve and principle contact. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required. In addition, the municipal license department, Dunn and Bradstreet (commercial database provider), and local yellow pages are some sources from which these lists can be developed.

The inventory shall be updated by the end of the third year of the draft Monterey Proposal, and annually thereafter. The update may be accomplished through collection of new information obtained during field activities or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits).

Establishment of Minimum BMPs: Within the second year of the draft Monterey Proposal, the Monterey Region municipalities shall:

- designate a set of minimum BMPs for the high priority threat to water quality commercial sites/sources (listed above). The designated minimum BMPs for the high threat to water quality commercial sites/sources shall be site- and source-specific, as appropriate.
- implement, or require the implementation of, the designated minimum BMPs at each high priority threat to water quality commercial site/source within its jurisdiction. If particular minimum BMPs are infeasible for any specific site/source, each municipality shall implement, or require the implementation of, other equivalent BMPs. Each municipality shall also implement or require any additional site-specific BMPs as necessary to meet MEP and protect water quality.
- implement, or require implementation of, additional controls for commercial sites or sources tributary to Clean Water Act section 303(d) impaired water bodies (where a site or source generates pollutants for which the water body is impaired) as necessary to meet MEP and protect water quality. Each municipality shall implement, or require implementation of, additional controls for commercial sites or sources within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas or areas of special biological significance.

Conduct Site Visits/Inspections: Visit all targeted businesses to all businesses (100 percent) at least once in the second year to check on the status of BMP implementation. Use existing inspection programs and expand them to include urban runoff concerns.

- During these site visits (and through outreach materials) inform businesses that the main objective of the visit is to check how the BMPs are being implemented and to suggest improvements where possible; another objective is to use the information gathered during the visit as a basis of awarding the business recognition under an incentive program, if such a program exists. Inform businesses of the municipality's program for addressing urban runoff, and actions needed by the business.
- Train inspection staff and develop BMP checklist forms that inspectors/municipal staff can effectively use during site visits.
- Develop forms for record keeping and reporting on this program in an annual report, i.e., progress made relative to the measurable goals

Notably, the MURP states:

The City of Monterey adapted a model commercial facilities runoff control program to its local conditions and needs. The City decided that it would target a few selected businesses each year and included a provision in its Urban Runoff Ordinance that would allow the Public Works Director to identify target businesses for the upcoming fiscal years and a provision that would allow the City to adopt a BMP series for the targeted business sector. The BMP series would contain high-, medium-, and low-priority BMPs for the targeted business sector, with implementation of high-priority BMPs required by a certain date. The City plans to meet with the targeted sector and discuss the BMPs and their implementation schedule.

It proposes to achieve BMP implementation through consultation and cooperation with the affected businesses (voluntary implementation of high-priority BMPs by a certain date). If businesses do not cooperate, the City would enforce the compliance procedures per its new urban runoff ordinance.<sup>73</sup>

Accordingly, the City of Monterey's Program, already provides a basis for establishing a program for the draft Monterey Proposal.

### Industrial Facilities Program

*Develop A Municipal Database of Industries:* By the end of the first year of the draft Monterey Proposal, the draft Monterey Region municipalities shall develop an inventory of all industrial facilities and activities that discharge to its Municipal Storm Sewer System. At a minimum, the inventory shall include:

- Municipal landfills (open and closed);
- Hazardous waste recovery, treatment, storage and disposal facilities;
- Facilities subject to Section 313 of the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. 11023;
- Facilities subject to the statewide General Industrial Permit;
- Industrial facilities tributary to a Clean Water Act Section 303(d) impaired water body, where a facility generates pollutants for which the water body is impaired; or discharges into an area of special biological significance; and
- Any other industrial facility that either the municipality or the Regional Board determines is contributing a substantial pollutant loading to the Municipal Storm Sewer System.

The inventory shall include the facility's name, address, nature of business or activity, SIC code(s) that best reflect the principal facility product or service, principle storm water contact, and whether statewide General Industrial Permit coverage has been obtained. The use of an automated database system, such as Geographical Information System (GIS) is highly recommended, but not required. In addition, a comprehensive list of industries can be developed by using Dunn and Bradstreet, or fire department, planning department, or wastewater treatment plant, which likely have their own lists.

The inventory shall be updated annually. The update may be accomplished through collection of new information obtained during field activities or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits).

*Assign/Identify SIC Codes:* If SICs are not already identified for the industrial facilities on the list, identify the codes using the Standard Industrial Classification Manual developed by the U.S. Office of Management and Budget (1997). Obtain a List of NOI Filers from the RWQCB and Compare with Municipal List of Industrial Facilities. Obtain from the RWQCB a list of industries in your municipality that have filed NOIs. Compare with the municipal list of

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<sup>73</sup> MURP at 4-53.

industrial facilities to check if all regulated facilities have filed NOIs. If discrepancies are noted, inform both the RWQCB and the industrial facility owners/operators.

*Interview nonfilers to check for correctness of SICs.* Since industrial facilities assign the SIC to themselves, the use of the wrong code may be responsible for the facility not being designated for a General Industrial permit.

**BMP Implementation:** The draft Monterey Region municipalities shall designate a set of minimum BMPs either for all identified industrial facilities or for those industrial sites identified as high, medium, and low threat to water quality. The designated minimum BMPs for high threat to water quality industrial sites shall be industry- and site-specific so as to meet MEP and protect water quality. The draft Monterey Region municipalities shall:

- implement, or require the implementation of, the designated minimum BMPs (based upon the site's threat to water quality rating) at each industrial site within its jurisdiction. If particular minimum BMPs are infeasible at any specific site, each municipality shall implement, or require implementation of, other equivalent BMPs. Each municipality shall also implement or require any additional site-specific BMPs as necessary to meet MEP and protect water quality, including BMPs that are more stringent than those required under the statewide General Industrial Permit.
- implement, or require implementation of, additional controls for industrial sites tributary to Clean Water Act section 303(d) impaired water bodies (where a site generates pollutants for which the water body is impaired) to meet MEP and protect water quality. Each municipality shall implement, or require implementation of, additional controls for industrial sites within, directly adjacent to, or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas or Areas of Special Biological Significance.

*Develop and Implement a Site Visit Program for All Regulated Industries:*

Conduct site visits and inspections at all regulated industrial sites once a year, commencing in the first permit year. Coordinate with or assign the task to the municipality's or county's hazmat program or the wastewater treatment plant's pretreatment program (both programs involve inspections of industrial facilities). This site visit should focus on the following actions:

- Check to see if a SWPPP is in place and is being implemented.
  - Municipality has record of industrial site's Waste Discharge Identification Number (WDID#) documenting industrial site's coverage under the statewide General Industrial Permit; and
  - Municipality has reviewed the industrial sites Storm Water Pollution Prevention Plan (SWPPP); and
  - Municipality finds SWPPP to be in compliance with all local ordinances, permits, and plans; and
  - Municipality finds that the SWPPP is being properly implemented on site.
  - If no SWPPP is available and/or is not being implemented, inform owner/operator of potential violation and the need to rectify the situation.

- Provide guidance on appropriate BMPs for industrial sites. (BMPs for Industrial Storm Water Pollution Control, and the California Storm Water Best Management Practice Handbook - Industrial/Commercial prepared by the Storm Water Quality Task Force).
- Develop an internal policy on whether the municipality should inform the RWQCB immediately or allow the operator/owner time to rectify the violation. If the owner/operator fails to bring the facility into compliance, inform the RWQCB.
- Use the first year's site visits to prioritize industries for follow-up site visits in the following year.

*Prepare General Information Materials for New Industries:* Prepare informational materials and maintain them at the permit counters for new facilities. This material should inform new industries of the General Industrial Permit process, and the municipality's own program for industrial facilities.

*Training and Records:* Inspectors shall be trained to readily identify deficiencies, assess potential impacts to receiving waters, and evaluate the appropriateness and effectiveness of deployed BMPs and SWPPPs, if applicable. Inspectors shall use a checklist, or equivalent, and photographs to document the site and BMP conditions. Records of all inspections shall be maintained a minimum of three years. Information that should be reported includes progress made relative to the measurable goals.

Enforcement of commercial/industrial discharge management program. The Monterey Region municipalities shall enforce all appropriate ordinances and permits at all commercial and industrial facilities as necessary to meet MEP and assure compliance with water quality standards. The Monterey Region municipalities shall develop and implement a written progressive enforcement policy to ensure facilities are brought into compliance. The Monterey Region municipalities' ordinances or other regulatory mechanisms shall contain sanctions to ensure compliance. Sanctions may include the following or their equivalent: Non-monetary penalties, fines, bonding requirements, and/or permit denials or suspension for non-compliance. A copy of the progressive enforcement policy shall be included with the draft Monterey Proposal.

#### Residential Program

*Develop a municipal database of activities:* The Monterey Region municipalities shall identify high priority residential areas and activities. At a minimum, these shall include:

- Automobile repair and maintenance;
- Automobile washing;
- Automobile parking;
- Home and garden care activities and product use (pesticides, herbicides, and fertilizers);
- Disposal of household hazardous waste (e.g., paints, cleaning products);
- Disposal of pet waste;
- Disposal of green waste;
- Any other residential source that the municipality determines may contribute a significant pollutant load to the Municipal Storm Sewer System;

- Any residence tributary to a Clean Water Act section 303(d) impaired water body, where the residence generates pollutants for which the water body is impaired; and
- Any residence within or directly adjacent to or discharging directly to a coastal lagoon or other receiving waters within an environmentally sensitive area or Area of Special Biological Significance.

*BMP Implementation:* The Monterey Region municipalities shall:

- designate a set of minimum BMPs for high threat to water quality residential areas and activities. The designated minimum BMPs for high threat to water quality municipal areas and activities shall be area- or activity-specific.
- require implementation of the designated minimum BMPs for high threat to water quality residential areas and activities. If particular minimum BMPs are infeasible for any specific site/source, each municipality shall require implementation of other equivalent BMPs. Each Municipality shall also implement, or require implementation of, any additional BMPs that are necessary to meet MEP and water quality standards.
- implement, or require implementation of, any additional controls for residential areas and activities tributary to Clean Water Act Section 303(d) impaired water bodies (where a residential area or activity generates pollutants for which the water body is impaired) as necessary to meet MEP and water quality standards.
- implement, or require implementation of, additional controls for residential areas within or directly adjacent to or discharging directly to coastal lagoons or other receiving waters within environmentally sensitive areas or Areas of Special Biological Significance.

*Residential Enforcement:* The Monterey Region municipalities shall enforce its storm water ordinances for all residential areas and activities to meet MEP and assure compliance with water quality standards.



## **Minimum Control Measure #6 – Good Housekeeping and Pollution Prevention for Municipal Operations**

### Monterey Proposal Contents:

- Develop and implement education and training program for municipal employees;
- Develop and implement inspection program for municipal hazardous material storage facilities;
- Develop and implement procedures for proper disposal of used motor oil;
- Develop and implement a program for landscaping and lawn maintenance;
- Develop and implement procedures for dechlorinating swimming pools prior to discharge to storm sewer;
- Conduct street sweeping on a frequent and regular basis;
- Develop and implement a program to prevent pollutants from automotive activities from entering storm drains;
- Develop and implement a program to prevent pollutants from municipal vehicle washing from entering storm drains;
- Develop and implement a program to prevent pollutants from bridge and street maintenance activities from entering storm drains;
- Develop and implement a program of regular storm drain cleaning.

### “Clean Water, Healthy Economy” Action Items:

- Revise program to provide for training of specific categories of municipal employees immediately: street sweeping operators, street maintenance crews, park maintenance crews, and municipal construction crews;
- Adopt ordinance for hazardous materials storage that incorporates existing guidelines for such storage and simultaneously develop guidance;
- Revise storm water management program to provide for development of procedures for used motor oil disposal within one year;
- Include a fully developed landscaping and lawn care program, based on existing principles articulated in the MURP or commit to developing program within one year based on these principles;
- Explicitly provide for dechlorination of swimming pools prior to disposal, based on techniques outlined in the MURP;
- Commit to development of street sweeping program within one year, that is specific regarding frequency and timing of sweeping, access for street sweepers, and disposal of collected waste;
- Explicitly incorporate BMPs for automotive activities from the MURP;
- Explicitly incorporate BMPs for vehicle washing activities from the MURP;
- Include a Municipal Storm Sewer System maintenance program providing for inspection, maintenance, documentation, and disposal of waste materials;
- Explicitly incorporate BMPs for inspection and cleaning of storm drains from the MURP.

## **Minimum Control Measure #6 – Good Housekeeping and Pollution Prevention for Municipal Operations**

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP Intent:*

Minimize pollution from improper discharge or disposal of materials.

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

This BMP intent must be revised to explicitly refer to municipal operations. **The MURP provides that the objective of this Minimum Control Measure should be to:**

Identify, develop and implement BMPs/good housekeeping procedures to address urban runoff pollution associated with municipal operations.<sup>74</sup>

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Develop and implement an education and training program for employees about the impacts of storm water pollution from municipal activities and hazardous materials disposal, and how to implement the selected BMPs to reduce these impacts.

*BMP Implementation:*

- Develop template municipal activities training program for municipal employees (Year 1);
- Train appropriate municipal employees (years 2-5).

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must commit to training specific categories of employees, including – at a minimum – those referred to in the MURP.** According to the MURP, several specific types of employees should be targeted for training:

- Street-sweeping equipment operators;
- Street maintenance crews (tree trimming, median work);
- Park maintenance crews;
- Municipality's construction crews (minor street repair).<sup>75</sup>

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<sup>74</sup> MURP at 4-27.

<sup>75</sup> MURP at 4-33.

## MONTEREY'S PROGRAM: WHAT IT DOES

*BMP:*

Inspection program of municipal hazardous materials storage facilities.

*BMP Implementation:*

- Develop proper inspection procedures and guidelines for proper hazardous materials storage using reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks for revisions to plans (year 2);
- Train appropriate staff on proper inspection procedures (years 3-5);
- Implement inspection program (years 3-5).

## "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The draft Monterey Proposal must be revised to include the specific hazardous material storage BMPs recommended by the MURP, and require that these be incorporated into an ordinance, to be adopted in year 1 of the program. Compliance with this ordinance should be an express requirement of the draft Monterey Proposal.** The MURP provides the following BMPs for hazardous waste storage:

- Store hazardous materials and wastes in secondary containment where they are protected from rain and in a way that prevents spills from reaching the sanitary sewer or storm drain.
- Keep lids on waste barrels and containers, and store them indoors or under cover to reduce exposure to rain.
- All hazardous wastes must be labeled according to hazardous waste regulations. Consult the Fire Department or your local hazardous waste agency for details.
- Keep wastes separate to increase your waste recycling/ disposal options and to reduce your costs.
- Never mix waste oil with fuel, antifreeze, or chlorinated solvents.
- Double-contain all bulk fluids and wastes to prevent accidental discharges to the sewer and storm drain.
- Keep storage areas clean and dry. Conduct regular inspections so that leaks and spills are detected as soon as possible.
- When receiving vehicles to be parted or scavenged, park them on a paved surface and immediately drain and collect gasoline and other fluids properly.
- Drain all fluids from components, such as engine blocks, which you may store for reuse or reclamation. Keep these components under cover and on a drop pan or sealed floor.
- Store new batteries securely to avoid breakage and acid spills during earthquakes.
- Shelving should be secured to the wall. Store used batteries indoors and in plastic trays to contain potential leaks. Recycle old batteries to catch leaking fluids.
- Wood products treated with chromated copper arsenate, ammonical copper zinc arsenate, creosote, or pentachlorophenol should be covered with tarps (or stored indoors).<sup>76</sup>

<sup>76</sup> MURP at 4J-11 – 4J-12.

Guidance documents and inspection procedures should be developed simultaneously with the ordinance, with inspections to begin no later than year 2 of the program.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Develop and implement procedures for proper disposal of used motor oil.

*BMP Implementation:*

- Develop procedures for proper disposal of used motor oil (year 1);
- Train appropriate staff on proper inspection procedures (years 2-5);
- Implement inspection program (year 2).

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must provide for a program for disposal of used motor oil to be developed and implemented within the first year of the permit. In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions.

**MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:*

Develop and implement a program that effectively manages landscaping and lawn care activities to minimize the potential for storm water pollution.

*BMP Implementation:*

- Perform spraying during times where rain is not predicted (years 1-5);
- Protect all stock piled materials from erosion such as covering, placing away from all watercourses and storm drain inlets, etc. (years 1-5).
- Implement procedures to minimize irrigation runoff such as using automatic timers, drip irrigation, pop up sprinkler heads, irrigating slowly, inspecting sprinklers while running and adjusting, using drought tolerant plants, etc. (years 1-5).
- Utilize integrated pest management (IPM) techniques whenever feasible for fertilizer, pesticide, and vegetation management (years 1-5);
- Train appropriate staff on proper lawn care management techniques to prevent storm water pollution (years 1-5).

**"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

The draft Monterey Proposal must incorporate additional landscaping and lawn maintenance BMPs as recommended by the *MURP*. In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. These include:

Erosion Control

- Maintain vegetative cover on medians and embankments to prevent soil erosion.
- Apply mulch or leave clippings in place to serve as additional cover.

- Do not use disking as a means of vegetation management because the practice results in erodable barren soil.
- Provide energy dissipaters (e.g., riprap) below culvert outfalls to minimize potential for erosion.

#### Vegetation Management/Irrigation

- When conducting vegetation pruning/removal, remove clipped or pruned vegetation from gutter, paved shoulder and area around storm drain inlet.
- When conducting mechanical or manual weed control, avoid loosening the soil which could erode into stream or storm drain.
- Inspect irrigation system periodically to ensure that the right amount of water is being applied and that excessive runoff is not occurring. Minimize excess watering, and repair leaks in the irrigation system as soon as they are observed.
- When bailing out muddy water, do not put it in the storm drain; pour over landscaped areas.

#### Pesticides (Diazinon, Chlorpyrifos, and other Similar Products)

- Follow federal, state, and local laws governing the use, storage, and disposal of pesticides/herbicides.
- Use pesticides only if there is an actual pest problem (not on a regular preventative schedule).
- Avoid use of copper-based pesticides if possible. Use the least toxic pesticide for the job if alternatives are available.
- Do not mix or prepare pesticides for application near storm drains.
- Use the minimum amount needed for the job.
- Use up pesticides. Rinse containers, and use rinse water as product. Dispose of unused pesticide as hazardous waste.

#### Herbicides

- Replace existing vegetation with fire-resistant and native vegetation to reduce the need for herbicides.
- Do not use herbicides if rain is expected.

#### Fertilizers

- Minimize use of chemical fertilizers.
- Calibrate the distributor to avoid excessive application.
- Check irrigation system to ensure that over-watering and runoff of fertilizer does not occur. Clean pavement and sidewalk if fertilizer is spilled on these surfaces before applying irrigation water.<sup>77</sup>

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<sup>77</sup> MURP at 4J-5 – 4J-6.

### MONTEREY'S PROGRAM: WHAT IT DOES

*BMP:*

Develop and implement procedures to ensure the dechlorination and/or debromination of pool water prior to discharge to the storm water system.

*BMP Implementation:*

- Develop procedures for pool water discharge (year 2).

### "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**Explicit procedures for dechlorination and debromination of pool water should be incorporated into the draft Monterey Proposal and applied within the first year of the permit.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. The *MURP* provides two means of dechlorinating or debrominating swimming pool water prior to discharge. These are: (1) ceasing chlorination or bromination with sufficient time allowed for natural dissipation of these chemicals prior to discharge; or (2) chemically neutralize the water prior to discharge. The *MURP* even provides a list of various chemical neutralizers, and the amount that would be required to achieve dechlorination.<sup>78</sup> The guidance in the *MURP* should provide the basis for the procedures in the draft Monterey Proposal.

### MONTEREY'S PROGRAM: WHAT IT DOES

*BMP:*

Conduct sweeping on a frequent and regular basis and focus sweeping schedule on high impact/dry weather sites.

*BMP Implementation:*

Conduct sweeping on a regular basis (years 1-5).

### "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The draft Monterey Proposal must provide some sort of commitment with respect to the frequency and timing of street sweeping, as well as what criteria will guide the determination of priorities for street sweeping. Furthermore, the draft Monterey Proposal should contain a more comprehensive street sweeping program that should commit to providing access for sweepers, equipment maintenance, and procedures for disposal of waste collected.** In contrast to the draft Monterey Proposal, the *MURP* and *San Diego Permit* contain stronger provisions. In this regard, the *MURP* provides the following guidelines:

- Sweeping Frequency and Timing
  - Establish street sweeping frequency for your municipality, or portions of it, based on factors such as traffic volume, land use, field observations of sediment and trash

<sup>78</sup> *MURP* at 4J-7 – 4J-8.

accumulation, proximity to water courses, etc. In general, the following frequencies are recommended:

- Sweep weekly in high traffic downtown areas
  - Sweep twice a month for moderate traffic collector streets, and
  - Sweep monthly in residential, low traffic areas.
- One way to determine the areas that should be swept more frequently is to collect data on the total volume or weight of materials collected per mile of road swept. Use this data to prioritize areas to be swept more frequently.
    - Where there is a pronounced dry and wet season, sweep streets just before onset of the wet season.
    - Establish and maintain a consistent sweeping schedule.
    - Avoid wet cleaning or flushing of street, and utilize dry methods where possible.
    - If wet cleaning or flushing is absolutely necessary, sweep and remove debris before flushing; plug storm drain inlet and direct washwater to the sanitary sewer. Alternately, allow washwater to drain to the storm drain and collect it downstream at a manhole or storm drain cleanout.
  - Maximum Access for Sweepers
    - Institute restrictive parking policy to allow sweepers better access to areas close to the curb and storm drain inlets.
    - Post permanent street sweeping signs. If installation of permanent signs is not possible, use temporary signs.
    - Develop and distribute flyers notifying residents of street sweeping schedules.
  - Equipment
    - Maintain cleaning equipment in good working condition.
    - Use your most effective sweepers in the high sediment and trash areas (typically industrial/commercial).
    - Replace old sweepers with new technologically advanced sweepers.
    - Clean sweepers at a wash rack that drains to the sanitary sewer.
  - Residuals Disposal
    - Dispose of street sweeping debris and dirt at a landfill.
    - Do not leave street sweeping debris and dirt in piles along the side of the road or by a riparian area.
    - If dewatering of dirt collected is necessary, the water should be discharged to a sanitary sewer.<sup>79</sup>

These BMPs must be explicitly incorporated into the draft Monterey Proposal.

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<sup>79</sup> MURP at 4J-2 – 4J-3.

## MONTEREY'S PROGRAM: WHAT IT DOES

*BMP:* Develop and implement a program to prevent pollutants from automotive activities, such as vehicle fluids, from entering storm drains.

*BMP Implementation:*

- Provide designated area for all vehicle maintenance (years 1-5);
- Move maintenance and repair activities indoors or under a covered area whenever possible (years 1-5);
- Stencil all storm drain inlets in corporate yard area (years 1-5);
- Collect all leaking or dripping fluids in drip pans or containers and dispose/recycle properly (years 1-5);
- Store materials and wastes under cover whenever possible (years 1-5);
- Do not dispose of oil filters in trash cans. Contact oil supplier or recycler for recycle bin (years 1-5);
- Train all employees repairing municipal vehicles on proper pollution prevention techniques (years 2-5).

## "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The draft Monterey Proposal must incorporate additional BMPs for automotive activities, as recommended by the MURP.** The MURP recommends the following:

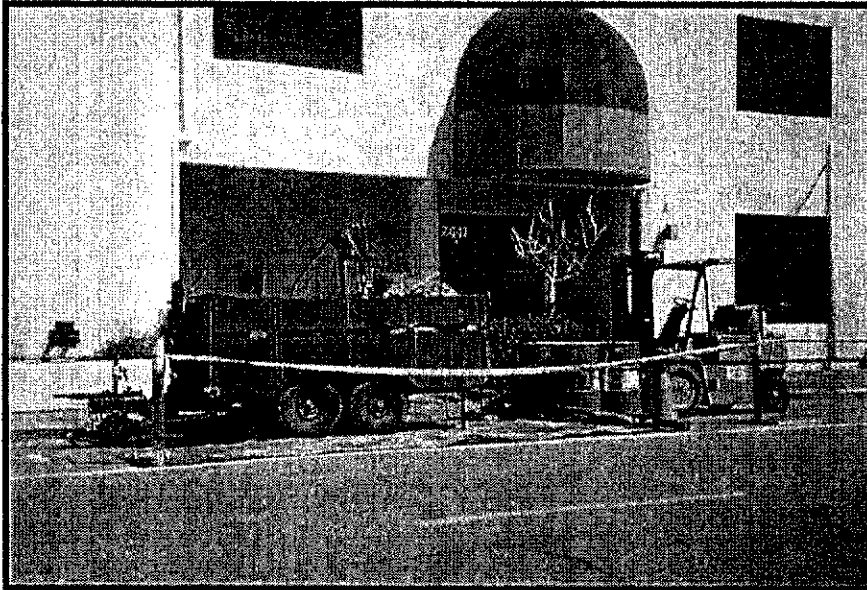
- Keeping a Clean Shop
  - Use drip pans under leaking vehicles to capture fluids.
  - Regularly sweep or vacuum the shop floor and other paved surfaces at your facility. Use mopping as an alternative to hosing down or washing work areas. If mopping is used to clean shop floors:
    - 1) Spot clean any spilled oil or fluids using absorbents or rags.
    - 2) Use dry cleanup methods: Sweep the floor using absorbents.
    - 3) After steps 1 and 2 above (if mopping is still needed), mop and dispose of mop water to the sanitary sewer.
    - 4) Do not pour mop water into the paved areas, street, gutter, or storm drain.
  - Remove unnecessary hoses to discourage washing down floors and outside paved areas.
  - Collect all metal filings, dust, and paint chips from grinding, shaving, and sanding, and dispose of the waste properly. Never discharge these wastes to the storm drain or sanitary sewer.
  - Collect all dust from other activities (e.g. brake pad dust) and dispose of the waste in compliance with local requirements. Never discharge these wastes to the storm drain or sanitary sewer.
  - Recycle cleaning rags through an industrial laundry.
  - Inspect and clean if necessary, storm drain inlets and catch basins within the facility boundary before October 1 each year.
  - Label storm drains with "No Dumping – Discharges to Ocean".



- Storage
  - Store hazardous materials and wastes in secondary containment where they are protected from rain and in a way that prevents spills from reaching the sanitary sewer or storm drain.
  - Keep lids on waste barrels and containers, and store them indoors or under cover to reduce exposure to rain.
  - All hazardous wastes must be labeled according to hazardous waste regulations. Consult the Fire Department or your local hazardous waste agency for details.
  - Keep wastes separate to increase your waste recycling/ disposal options and to reduce your costs.
  - Never mix waste oil with fuel, antifreeze, or chlorinated solvents. Consult your hazardous waste hauler for details.
  - Double-contain all bulk fluids and wastes to prevent accidental discharges to the sewer and storm drain. Consult the Fire Department for details.
  - Keep storage areas clean and dry. Conduct regular inspections so that leaks or spills are detected as soon as possible. Document all inspections.
  - When receiving vehicles to be parted or scavenged, park them on a paved surface and immediately drain and collect gasoline and other fluids properly. Place drip pans to catch leaking fluids.
  - Drain all fluids from components, such as engine blocks, which you may store for reuse or reclamation. Keep these components under cover and on a drop pan or sealed floor.
  - Store new batteries securely to avoid breakage and acid spills during earthquakes. Shelving should be secured to the wall. Store used batteries indoors and in plastic trays to contain potential leaks. Recycle old batteries.
- Spill Control
  - Maintain and keep current, as required by other regulations, a spill response plan and ensure that employees are trained on the elements of the plan.
  - Minimize the distance between waste collection points and storage areas.
  - Contain and cover all solid and liquid wastes – especially during transfer.
  - Purchase and maintain absorbent materials in accordance with local regulations and procedures for containment and cleanup of different spills, and make sure they are easily accessible anywhere in the shop. Saturated absorbents generally must be disposed of as hazardous waste.
  - “Spot clean” leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
  - Check floor drains to ensure that they are not connected to or discharge to the storm drain system.
- Outdoor Waste Receptacle Areas
  - Spot clean leaks and drips routinely to prevent runoff of spillage.
  - Minimize the possibility of pollution from outside waste receptacles by doing at least one of the following:

- (1) Use only watertight waste receptacle(s) and keep the lid(s) closed, or grade and pave the waste receptacle area to prevent run-on of storm water, and install a low containment berm around the waste receptacle area, or
- (2) Install a roof over the waste receptacle area.

**Highlighted BMP: Spill Prevention, Control & Cleanup**



**Targeted Constituents**

Sediment	
Nutrients	<input checked="" type="checkbox"/>
Trash	
Metals	<input checked="" type="checkbox"/>
Bacteria	
Oil and Grease	<input checked="" type="checkbox"/>
Organics	<input checked="" type="checkbox"/>
Oxygen Demanding	<input checked="" type="checkbox"/>

**Description**

Spills and leaks, if not properly controlled, can adversely impact the storm drain system and receiving waters. Due to the type of work or the materials involved, many activities that occur either at a municipal facility or as a part of municipal field programs have the potential for accidental spills and leaks. Proper spill response planning and preparation can enable municipal employees to effectively respond to problems when they occur and minimize the discharge of pollutants to the environment.

*Source: California Stormwater Quality Association, Municipal BMP Handbook*

- Education and Training
  - Train all employees upon hiring - and annually thereafter - on personal safety, chemical management, and proper methods for handling and disposing of waste. Make sure that all employees understand storm water discharge prohibitions, wastewater discharge requirements, and these best management practices. Use a training log or similar method to document training.
  - Post instructional/informational signs around your shop for customers and employees. Put signs above all sinks prohibiting discharges of vehicle fluids and wastes. Put signs on faucets (hose bibbs) reminding employees and customers to conserve water and not to use water to clean up spills.

- Label drains within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an on-site treatment device, directly to the sanitary sewer, or to a storm drain. Labels are not necessary for plumbing fixtures directly connected to the sanitary sewer.
- Post emergency telephone numbers of the wastewater treatment plant and the fire department.
- Changing Oil and Other Fluids
  - Whenever possible, change vehicle fluids indoors and only on floors constructed of non-porous materials. Avoid working over asphalt and dirt floors – surfaces that absorb vehicle fluids.
  - If vehicle fluids must be removed outdoors, always use a drip pan. Prevent spills from reaching the street or storm drain by working over an absorbent mat and covering nearby storm drains, or working in a bermed area. If necessary, you can use absorbent socks to create a bermed area.
  - When draining fluids into a drain pan, place a larger drip pan (e.g., 3' x 4') under the primary drain pan to catch any spilled fluids.
  - Transfer fluids drained from vehicles to a designated waste storage area as soon as possible. Drain pans and other open containers of fluids should not be left unattended unless they are covered and within secondary containment.
  - Store waste containers of antifreeze and oil within secondary containment. Antifreeze and waste oil should be stored separately and recycled, or disposed of as hazardous waste.
  - Never pour vehicle fluids or other hazardous wastes into sinks, toilets, floor drains, outside storm drains, or in the garbage. These substances should be kept in designated storage areas until recycled or safely disposed of.
  - Drain fluids from leaking or wrecked vehicles as soon as possible, to avoid leaks and spills.
- Cleaning Engines and Parts, and Flushing Radiators
  - Eliminate discharges from engine cleaning and flushing of radiators to the sanitary sewer and storm drains. Use a licensed service to haul and recycle or dispose of wastes.
  - Steam cleaning of engines must be done in a closed-loop water recycling system. No steam cleaning water may be discharged to the sanitary sewer or the storm drain.
  - Designate specific areas or service bays for engine, parts, or radiator cleaning. Do not wash or rinse parts outdoors.
  - Use self-contained sinks and tanks when working with solvents. Keep sinks and tanks covered when not in use.
  - Inspect degreasing solvent sinks regularly for leaks, and make necessary repairs immediately.
  - Avoiding soldering over drip tanks. Sweep up drippings and recycle or dispose as hazardous waste.
  - Rinse and drain parts over the solvent sink or tank, so that solvents will not drip or spill onto the floor. Use drip boards or pans to catch excess solvent solutions and divert them back to a sink or tank.
  - Allow parts to dry over the hot tank. If rinsing is required, rinse over the tank as well.

- Collect and reuse parts cleaning solvent solutions and water used in flushing and testing radiators. When reuse is no longer possible, these solutions are hazardous wastes unless otherwise determined, and must be disposed of properly.
- Never discharge cleaning solutions used for engines or parts into the sewer sanitary system without adequate treatment. Most facilities have these solutions hauled off-site as hazardous waste because of the permits necessary for on-site treatment.
- Rinsewater may only be discharged to the sanitary sewer after adequate treatment and approval by the sewage treatment plant.
- Never discharge wastewater from steam cleaning, or engine/parts cleaning to a street, gutter, storm drain, or sanitary sewer.
- **Body Repair and Painting**
  - Whenever possible, conduct all body repair and painting work indoors or under cover.
  - When receiving damaged vehicles, inspect for leaks. Use drip pans if necessary.
  - When cleaning auto body parts before painting, do not use hose-off degreasers. Brush off loose debris and use rags to wipe down parts.
  - Use dry cleanup methods such as vacuuming or sweeping to clean up dust from sanding metal or body filler. Debris from wet sanding can be allowed to dry overnight on the shop floor, then swept and vacuumed. Liquid from wet sanding should not be discharged to the storm drain.
  - Minimize waste paint and thinner by carefully calculating paint needs based on surface area and using the proper sprayer cup size.
  - Do not use water to control overspray or dust in the paint booth unless you collect this wastewater. This water should be treated before discharge into the sanitary sewer system.
  - Clean spray guns in a self-contained cleaner. Recycle the cleaning solution when it becomes too dirty to use. Never discharge cleaning waste to the sanitary sewer or storm drain.
- **Fuel Dispensing**
  - Maintain fuel dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Fueling areas should never be washed down unless dry cleanup has been done and the wash water is collected and disposed of in the sanitary sewer system.
  - Fit underground storage tanks with spill containment and overflow prevention systems meeting the requirements of Section 2635(b) of Title 23 of the California Code of Regulations.
  - Fit fuel dispensing nozzles with “hold-open latches” (automatic shutoffs) except where prohibited by local fire departments.
  - Post signs at the fuel dispenser or fuel island warning vehicle owners/operators against “topping off” of vehicle fuel tanks.<sup>80</sup>

These BMPs are feasible and easy to implement. They should be added to the draft Monterey Proposal and to the relevant training programs.

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<sup>80</sup> MURP at 4W-2 – 4W-9.

## MONTEREY'S PROGRAM: WHAT IT DOES

*BMP:* Develop and implement a program to prevent pollutants from washing municipal vehicles, such as vehicle fluids and phosphate soaps, from entering storm drains.

*BMP Implementation:*

- Vehicle & equipment washing facilities equipped with storm water pollution control measures from reference materials such as the CASQA (California Storm Water Quality Association) BMP Handbooks (years 3-5);
- Hoses with nozzles that have automatic shut off when left unattended (years 1-5);
- Vehicles washed in area that does not allow detergents to flow to storm drain system (years 3-5);
- Trash container supplied in vehicle wash area (years 1-5).

Training of municipal employees in proper washing techniques (years 3-5);

- Vehicle washing facilities inspected for compliance with reference materials such as the CASQA (California Storm Water Quality Association) BMP handbooks (years 3-5).

## "CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO

**The draft Monterey Proposal must incorporate additional BMPs for municipal vehicle washing, as recommended by the MURP.** The MURP provides the following additional BMPs, which are feasible and should be added to the draft Monterey Proposal:

### Washing Cars and Other Vehicles

- Regular Activity
  - If car washing is a central activity of your business, the most desirable option is to treat and recycle the wash water.
  - Designate a vehicle washing area and wash cars and trucks only in that area. This "wash pad" should be bermed to prevent discharges to storm drains and should discharge to the sanitary sewer after adequate treatment and approval of the sewage treatment plant.
  - Cover an outside wash pad or minimize the area of an uncovered pad to reduce the amount of rainwater reaching the sanitary sewer. Consult your local sewage treatment plant for guidance.
  - Acid-based wheel cleaners and other specialized cleaners may be prohibited or require additional treatment before discharge to the sewer.
- Occasional Activity
  - Even biodegradable soap is toxic to fish and wildlife. Whenever possible, take vehicles to a commercial car wash that recycles.
  - If soap is used in washing, the wash water must be collected and discharged, preferably with treatment, to the sanitary sewer. This water cannot be discharged to a storm drain.
  - Never rinse off spray-on acid-based wheel cleaners where rinsewater may flow to a street, gutter, or storm drain.

- Washing New Vehicles
  - If cleaning the exterior of new vehicles with water only, the discharged water may go to the storm drain directly unless the vehicle has been coated.
  - Always protect the storm drains from solvents used to remove protective coatings from new cars. Discharges of these solvents to the sanitary sewer must receive adequate treatment and approval of the sewage treatment plant.<sup>81</sup>

### **MONTEREY'S PROGRAM: WHAT IT DOES**

*BMP:* Develop and implement policies and procedures to prevent pollutants from bridge and street maintenance activities, such as paving and painting work, from entering storm drains.

*BMP Implementation:*

- Regular street sweeping (years 1-5);
- Schedule all pavement marking for dry weather (years 1-5);
- Transfer and load all paint away from storm drain inlets (years 1-5);
- Protect storm drain inlets prior to road work (years 1-5);
- Protect all stockpiled materials from erosion such as covering, placing away from all watercourses and storm drain inlets, etc. (years 1-5);
- Collect all stockpiles, excess, and sweepings from street projects and dispose of properly (years 1-5).

*BMP:* Develop and implement a program of regularly cleaning storm drains and inlets to prevent accumulated pollutants from being discharged with the storm water.

*BMP Implementation:*

- Stencil catch basins and inlets as needed as prevention measure (years 1-5);
- Inspect catch basins and inlets annually prior to rainy season (years 1-5);
- Clean and repair catch basins, inlets and piping as identified through inspections as needed prior to November 1st annually (years 1-5);
- Re-inspect identified problem areas of debris accumulation during wet season (years 1-5);
- Keep documentation of inspections and cleanings (years 1-5).

### **"CLEAN WATER, HEALTHY ECONOMY" PROVISIONS: WHAT IT NEEDS TO DO**

**The draft Monterey Proposal must include a program of maintenance of the Municipal Storm Sewer System that includes key components from the Salinas Permit, MURP, and San Diego Permit. These include:**

- Implementation of a schedule of maintenance activities at all structural controls designed to reduce pollutant discharges to or from its Municipal storm sewers and related drainage structures.

<sup>81</sup> MURP at 4W-7 – 4W-8.

- Implementation of a schedule of maintenance activities for the municipal separate storm sewer system. The maintenance activities must, at a minimum, include:
  - Inspection and removal of accumulated waste (e.g. sediment, trash, debris and other pollutants) between May 1 and September 30 of each year;
  - Additional cleaning as necessary between October 1 and April 30 of each year;
  - Record keeping of cleaning and the overall quantity of waste removed;
  - Proper disposal of waste removed pursuant to applicable laws;
  - Measures to eliminate waste discharges during Municipal Storm Sewer System maintenance and cleaning activities.

**The MURP provides the following additional BMPs that are practicable and must be included in the draft Monterey Proposal:**

- Conduct periodic visual inspections during the dry season to determine if there are problem inlets where sediment/trash accumulate. Clean if necessary. The main objective of the dry season inspections is to identify problem areas.
- Conduct inspections of storm drain inlets once a month or more frequently during the wet season. The frequency may be as high as once a week for problem areas where sediment or trash accumulates more often. Clean as needed.
- Inspect and clean storm drain pipelines and inlets in areas affected by pollutant generating incidents immediately or at a minimum before the wet season (incidents include spills, fires, and other events that may have released pollutants to the storm drain system and residues may be present in the system in the vicinity of the event).
- Store wastes collected from the cleaning in appropriate containers or temporary storage sites in a manner that prevents discharge to the storm drain.
- Dewater the wastes if necessary with outflow into the sanitary sewer. Do not dewater near a storm drain or stream.
- Sediment (less the debris) removed from the catchbasin or inlet cleaning should be analyzed for disposal. Pollutants of concern are lead; oil and grease; and hydrocarbons. In general, based on the analysis of sediments from inlet cleaning, it appears that in older cities all these pollutants have been found at elevated levels whereas, in the newer cities, the main pollutants in inlet sediments are hydrocarbons. If concentrations are elevated, the sediment should be disposed of as hazardous waste.<sup>82</sup>

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<sup>82</sup> MURP at 4J-6 – 4J-7.

## CHAPTER 5

# FUNDING SOURCES

Some storm water pollution solutions are extremely inexpensive, such as screens and filters. While proven cost-effective, other Best Management Practices or the combination of BMPs in a storm water management program can require a financial investment needed to protect important resources. Recognizing the value of our waters, Californians support pollution cleanup with grants and ballot measures. For example:

### Consolidated Watershed Non-Point Source Pollution Control Grant Program

- Coastal Non-Point Source Control Grant Program

Purpose:	Restore and protect water-quality and environment of coastal waters, estuaries, bays, and near shore waters and groundwater
Amount:	\$33.1 million
Source:	Proposition 50
Eligible projects:	Implementation of storm water and runoff pollution reduction and prevention; improve water quality at public beaches to meet bacteriological standards; improve existing sewer collection systems and septic systems for restoration and protection of coastal water quality; provide comprehensive capability for monitoring, collecting and analyzing ambient water quality.

- Non-Point Source Pollution Control Grant Program

Purpose:	Protect beneficial uses of water throughout the state through the control of NPS pollution.
Amount:	\$19 million
Source:	Proposition 40
Eligible projects:	Projects consistent with local watershed management plans and RWQCB plans; projects which implement watershed best management measures and practices; projects that improve the quality of drinking water supplies and address contamination by pathogens, organic carbon, or salinity.



- Urban Storm Water Grant Program

Purpose: Implement storm water runoff pollution reductions and prevention programs.  
Amount: \$14.25 million  
Source: Proposition 40  
Eligible projects: Projects that divert dry weather flows to publicly owned treatment works; projects that involve the acquisition and development of constructed wetlands; projects that implement BMPs required by storm water permits.

- Integrated Watershed Management Grant Program

Purpose: Protect and improve water quality, protect and restore habitat and fisheries, improve local water supply reliability, control erosion and sedimentation, and reduce flooding.  
Amount: \$47.5 million  
Source: Proposition 40  
Eligible projects: Storm water capture and treatment; nonpoint source pollution reduction, management and monitoring; groundwater recharge and management; vegetation management; planning and implementation of multipurpose flood control programs; erosion and sediment control and stream enhancement projects; watershed management planning and implementation; native fisheries enhancement and improvement projects.

- Federal 319(h) Grant Program

Purpose: Reduce, eliminate or prevent water pollution resulting from polluted runoff, and focus action in implementing TMDLs.  
Amount: Funds continuously appropriated on an annual basis.  
Eligible projects: Implementation of measures and practices that reduce or prevent NPS pollution to ground and surface waters; TMDL implementation.

- Clean Beaches Initiative

Purpose: Reduce beach closures caused by bacteria.  
Amounts: Prop 13: \$32.298 million (closed by June 30, 2004); Prop 40: \$43.7 million (\$21.5 million committed as of January 1, 2005, competitive location list for remaining \$22.2 million); Prop 50: \$30 million in 2005, 2006.

Funding criteria:

- State Water Board must consult with Coastal Conservancy;
- Demonstrate 20 year sustained benefit;
- Address cause of pollution;
- Consistent with existing water protection plans;
- Monitoring plan and final report required;
- Certify permits obtained for project;
- Be consistent with recovery plans for endangered species;
- Public review;
- Recommendation for funding by Clean Beaches Task Force;
- Capital costs only.

- Integrated Regional Water Management Grant Program

Purpose: Protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water.  
Amount: \$380 million over two funding cycles  
Source: Proposition 50

Innovative funding solutions, such as Los Angeles' Prop O, are also possible. Over 76 percent of voters in the City of Los Angeles voted for a \$500 million bond measure that will be used to finance capital improvements to prevent pollution. Partnership grants with government agencies, such as the Coastal Conservancy, are also available.