



City of Grover Beach
STORM WATER MANAGEMENT PROGRAM

**September 2008 Draft
RWQCB Copy**



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(as revised October 2008)
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Section 1. Introduction

1.1 Stormwater Management: Why It's Important

State Water Resources Control Board (SWRCB) Water Quality Order No. 2003-0005-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, "Waste Discharge Requirements (WDRs) for Small Municipal Separate Storm Sewer Systems" (MS4 General Permit), reports the following findings:

"Urban runoff is a leading cause of pollution throughout California."

"Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides and herbicides."

"During urban development, two important changes occur. First, where no urban development has previously occurred, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing a very effective purification process. Because pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost. Second, urban development creates new pollutant sources as human population density increases and brings with it proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc., which can be washed into the MS4. As a result of these two changes, the runoff leaving a developed urban area may be significantly greater in volume, velocity, and/or pollutant load than predevelopment runoff from the same area."

"A higher percentage of impervious area correlates to a greater pollutant load, resulting in turbid water, nutrient enrichment, bacterial contamination, organic matter loads, toxic compounds, temperature increases, and increases of trash or debris."

"Pollutants present in stormwater can have damaging effects on both human health and aquatic ecosystems. In addition, the increased flows and volumes of stormwater discharged from impervious surfaces resulting from development can significantly impact beneficial uses of aquatic ecosystems due to physical modifications of watercourses, such as bank erosion and widening of channels."

"When water quality impacts are considered during the planning stages of a project, new development and many redevelopment projects can more efficiently incorporate measures to protect water quality."

1.2 Regulatory Summary

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added §402(p), which established a framework for regulating certain storm water discharges under the NPDES Program.

Phase I of the U.S. Environmental Protection Agency's (EPA) storm water program was promulgated in 1990 under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address storm water runoff from:

- (1) "medium" and "large" municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater,
- (2) construction activity disturbing 5 acres of land or greater, and
- (3) ten categories of industrial activity.

On December 8, 1999, EPA promulgated regulations known as the Storm Water Phase II Final Rule. The Phase II program expanded the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted storm water runoff.

Since the passage of the Clean Water Act (CWA), the quality of our Nation's waters has improved dramatically. Despite this progress, however, degraded water bodies still exist. According to the 1996 National Water Quality Inventory (Inventory), a biennial summary of State surveys of water quality, approximately 40 percent of surveyed U.S. water bodies are still impaired by pollution and do not meet water quality standards. A leading source of this impairment is polluted runoff. In fact, according to the Inventory, 13 percent of impaired rivers, 21 percent of impaired lake acres and 45 percent of impaired estuaries are affected by urban/suburban storm water runoff and 6 percent of impaired rivers, 11 percent of impaired lake acres and 11 percent of impaired estuaries are affected by construction site discharges.

1.3 Stormwater Management: A Water Quality Mandate for the City

The Phase II NPDES Program addresses potentially adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation. The environmental problems associated with discharges from areas such as urbanized Grover Beach and discharges resulting from construction activity are outlined in this SWMP.

Although these problems provide the basis and rationale for the Phase II Program, it is important to note that these problems do not necessarily exist or pertain to the storm drains. Storm water discharges from MS4s in urbanized areas are a concern because of the potential for these discharges to contain pollutants. Concentrated development in urbanized areas

substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, on which pollutants from concentrated human activities can settle and remain until a storm event washes them into nearby storm drains.

Common pollutants include pesticides, fertilizers, oils, salt, litter and other debris, and sediment. Another concern is the possible illicit connections of sanitary sewers, which can result in fecal coliform bacteria entering the storm sewer system. Storm water runoff can pickup and transport these and other potentially harmful pollutants and discharge them untreated to waterways via storm sewer systems. Under some circumstances, these discharges can result in fish kills, the destruction of spawning and wildlife habitats, a loss in aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health.

Uncontrolled runoff from construction sites is a water quality concern because of the effects that sedimentation can have on local water bodies, particularly small streams. Numerous studies have shown that the amount of sediment transported by storm water runoff from construction sites with no controls is significantly greater than from sites with controls. In addition to sediment, pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids can be present at construction sites and have the potential under some circumstances to be picked up by storm water. During storms, construction sites can be the source of sediment-laden runoff, which can overwhelm a small stream channel's capacity, resulting in streambed scour, stream bank erosion, and loss of near-stream vegetative cover. Where left uncontrolled, sediment-laden runoff has been shown to result in the loss of in-stream habitats for fish and other aquatic species, an increased difficulty in filtering drinking water, the loss of drinking water reservoir storage capacity, and negative impacts on the navigational capacity of waterways.

1.4 Storm Water Management Program Purpose

The purpose of this City of Grover Beach Storm Water Management Program (SWMP) is to comply with the requirements of the Storm Water Phase II Final Rule which applies to the City of Grover Beach. (See Appendix E) and to achieve the following conditions:

- I. Maximize infiltration of clean stormwater, and minimize runoff volume and rate
- II. Protect riparian areas, wetlands, and their buffer zones
- III. Minimize pollutant loading; and
- IV. Provide long-term watershed protection.

1.5 How We Achieve The Storm Water Management Program Purpose

In order to achieve these conditions, the City will implement and enforce a series of management practices, referred to herein as “Best Management Practices” (BMPs). These BMPs are designed to reduce the discharge of pollutants from the municipal separate storm sewer systems to the “maximum extent practicable,” to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act. The achievement of these objectives will be gauged using a series of Measurable Goals, which also are contained in the SWMP.

The BMPs are grouped under the following six “Minimum Control Measures”, which are required under the Phase II regulations:

1. Public Education and Outreach
2. Public Participation/Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Runoff Control
5. Post-Construction Runoff Control
6. Pollution Prevention/Good Housekeeping

1.6 The City’s Approach to Stormwater Management

The City has developed the following approach to most effectively address stormwater issues in the SWMP coverage area.

1) Provide General Guidance and Anticipate Specific Needs of the Community.

The City has structured the SWMP to meet the requirements of the NPDES Final Rule and the MS4 General Permit. The City anticipates that application of the SWMP will require further analysis of community-specific resources and issues. The SWMP has been designed to provide a menu of BMPs that can be tailored to the particular needs of its community.

2) Provide for Community Input. In the early stages of the SWMP, the City will provide opportunities for community input to the SWMP. The City anticipates presentations to the Water Resources Advisory Committee (WRAC) and other stakeholder groups. These stakeholder meetings and presentations will give the public opportunities to gain an understanding of the new regulation and its implications and to provide comment regarding the application of the SWMP in their local community.

3) Review and Revise Ordinances. Jurisdictions often find that their ordinances do not provide the language or authority necessary to implement and enforce Phase II requirements. The City anticipates a thorough review of applicable ordinances and formulation of the amendments to ordinances needed to implement the SWMP.

4) Process New and/or Revised Ordinances. The City anticipates processing of new and/or revised ordinances in Years 1 through 5 of SWMP implementation.

5) Begin implementation of BMPs. The schedule for implementation of BMPs over the first five-year permit term will vary depending on the BMP. More complex BMPs are broken down into a number of stages with measurable goals identified for each. The more complex BMPs will take longer than those that require relatively simple changes to existing practices. Refer to Section 4 for a description of the BMPs and Measurable Goals for each Minimum Control Measure and for the BMP implementation timetable and responsible parties.

6) Review and Report on Effectiveness. The City will determine whether the Maximum Extent Possible (MEP) standard is being achieved through annual review and reporting of stormwater management activities. On construction sites, the City will determine the MEP on a case-by-case basis. To determine the MEP for a specific site, the City will consider the proximity of the site to local water bodies and the state of the water bodies, among other factors, for the proposed activity.

1.7 Scope and Responsibility for the Stormwater Management Program

The SWRCB determined that the City of Grover Beach is subject to NPDES Phase II requirements and the MS4 General Permit. Communities are selected based on criteria that take into account the potential to impact water quality due to conditions influencing discharges into their storm sewer systems or due to where they discharge.

A community can be individually designated by the SWRCB and/or RWQCB based on discharges to sensitive water bodies. Sensitive water bodies are receiving waters including groundwater that are an environmental protection priority.

Sensitive waters include 1) those listed as providing or known to provide habitat for threatened or endangered species; 2) those used for recreation that are subject to beach closures or health warnings; 3) those listed as impaired subject to the Clean Water Act (CWA) 303(d) list due to constituents of concern such as biological oxygen demand (BOD), sediment, pathogens, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons, trash, and other constituents found in the MS4 discharge.

Section 2. Stormwater Management Program Development and Administration

2.1 Stormwater Management Area Assessments: Land Use and Water Quality

The NPDES Phase II Final Rule and the MS4 General Permit require the City's SWMP to encompass and cover the entire incorporated area of the City of Grover Beach. U.S. EPA maps were found to be useless in the preparation of this SWMP because they are not drawn to parcel level and do not follow landmarks and streets.

This SWMP uses land use maps generated by the City of Grover Beach which represent major waterways and stormwater. Section 6 describes the various land uses in the SWMP coverage area.

2.2 Stormwater Pollutants of Concern (POC) Discussed

In general, Pollutants of Concern generally fall within one of two categories:

- 1) pollutants associated with soil disturbance, and
- 2) pollutants entering the system from other surface runoff.

These pollutants are generally associated with land use and enter waterways through runoff from urban surfaces. For more detailed assessment information refer to Section 6.

The City reviewed existing water quality data to determine the Pollutants of Concern impacting the waterways within the permit coverage area. The following reviews were conducted.

2.2.1 Central Coast Ambient Monitoring Program

Water quality monitoring data from the Central Coast Ambient Monitoring Program were reviewed to determine their applications to this SWMP.

The Central Coast Ambient Monitoring Program (CCAMP) is the Central Coast Regional Water Quality Control Board's regionally scaled water quality monitoring and assessment program. The purpose of the program is to provide scientific information to Regional Board staff and the public to protect, restore, and enhance the quality of the waters of Central California. The Central Coast Ambient Monitoring Program (CCAMP) provides water quality monitoring data on the internet at <http://www.ccamp.org>.

There is no water quality monitoring data or identifiable monitoring site locations for waterbodies within the City of Grover Beach SWMP coverage area listed on the CCAMP web site.

2.2.2 Additional Reports and Plans

Additionally, the City reviewed listings for water quality reports and watershed management plans for stormwater pollution impacts on waterbodies located within the SWMP permit coverage area. See Table 2.1 for those resources reviewed.

Table 2.2.2 Local Water Quality Reports and Watershed Management Plans Reviewed for Application to City of Grover Beach SWMP

Water Quality Document	Watersheds Covered	Internet Hyperlink, where available
San Luis Obispo Integrated Regional Water Management Plan	All	http://www.slocountywater.org/reports/irwm/toc.htm
Morro Bay National Estuary Program Comprehensive Conservation Management Plan for Morro Bay	Morro Bay	http://www.mbnep.org/publications/
Monterey Bay National Marine Sanctuary Program Action Plan IV: Agriculture and Rural Lands	All watersheds draining to the Monterey Bay National Marine Sanctuary	http://montereybay.noaa.gov/resourcepro/reports/agactioniv_99/welcome.html
Monterey Bay National Marine Sanctuary Program Action Plan I: Implementing Solutions to Urban Runoff	All watersheds draining to the Monterey Bay National Marine Sanctuary	
Monterey Bay National Marine Sanctuary Program Water Quality Protection Program Implementation Action Plan	All watersheds draining to the Monterey Bay National Marine Sanctuary	
Upper Salinas River Watershed Action Plan	Upper Salinas River	
San Luis Obispo Creek Waterway Management Plan	San Luis Obispo Creek	http://suntzu.larc.calpoly.edu/slo_creek/reports.htm
Arroyo Grande Creek Watershed Management Plan, Central Coast Salmon Enhancement, Draft	Arroyo Grande Creek	
Nipomo Creek Watershed Management Plan	Nipomo Creek	http://www.specialplaces.org/ecm/Conservation_Planning/Nipomo_Creek_Watershed_Management_Plan.html
Salinas River Watershed Management Action Plan, October 1999	Salinas River	http://www.waterboards.ca.gov/centralcoast/WMI/Salinas%20River.pdf
Central Coast Regional Water Quality Control Board Basin Plan	All	http://www.waterboards.ca.gov/centralcoast/BasinPlan/Index.htm
Watershed Management Initiative, January 2002	All	http://www.swrcb.ca.gov/rwqcb3/WMI/WMI%202002,%20Final%20Document,%20Revised%201-22-02.pdf
Water Quality Priorities and Targeted Projects 2004-2005	All	http://www.waterboards.ca.gov/centralcoast/WMI/documents/WMI2004WaterQualityPrioritiesAppendixDFINAL.pdf
Draft 2005 Basin Plan Triennial Review Priority List	All	http://www.waterboards.ca.gov/centralcoast/BasinPlan/TriennialReview/documents/AttachATRL2004revised4-6-05.pdf
Final 2001 Basin Plan Triennial Review Priority List	All	http://www.waterboards.ca.gov/centralcoast/BasinPlan/TriennialReview/documents/
Central Coast RWQCB 303(d) Investigations and TMDL Projects	See Table 2.3	http://www.waterboards.ca.gov/centralcoast/TMDL/303dandTMDLprojects.htmattachB.pdf
Central Coast RWQCB 2002 CWA 303(d) List of Impaired Waterbodies	See Table 2.2	http://www.waterboards.ca.gov/tmdl/docs/2002reg3303dlist.pdf

Water Quality Document	Watersheds Covered	Internet Hyperlink, where available
RWQCB Central Coast Ambient Monitoring Program (CCAMP)	See Appendix A	http://www.ccamp.org/
Heal the Bay Annual Beach Report for San Luis Obispo County	Coastal watersheds	http://www.healthebay.org/brc/annual/default.asp

2.2.3 CWA Section 303(d) List

Table 2.2 represents the California 2002 CWA Section 303(d) List of Water Quality Limited Segments waterbodies in the City that are impaired by pollutants and the potential sources of pollutants. **The are no Section 303(d) Pollutants of Concern (POC) listed for the City of Grover Beach SWMP coverage area.** For a complete listing of all 303(d) listed waterbodies in San Luis Obispo County, refer to the RWQCB website at <http://www.swrcb.ca.gov/rwqcb3/TMDL/303dlist.htm>.

Table 2.2.3 CWA 303(d) Listed Waterbodies in the SWMP Coverage Area

SWMP COMMUNITY	303(d) LISTED WATER BODY	POLLUTANT/STRESSOR AND POTENTIAL SOURCES LISTED
City of Grover Beach	Meadow Creek	None

2.2.4 RWQCB Determination of POC for City

The City was advised in May, 2008 that *'The Water Board did not find any specific POC for the City of Grover Beach and none of the Stakeholders brought up any concerns (at a RWQCB meeting on May 15, 2008). Though, if the city is aware of any water quality issues we expect those to be addressed in the plan'*.¹ However, all SWMPs must address the generic Pollutants of Concern found in urban runoff listed in the Statewide Municipal Stormwater Permit.

¹ email, Subject: May 27th Meeting, TPresser@waterboards.ca.gov, May 20, 2008

2.3 Inventory and Assessment of Existing City Water Quality Activities Related to Stormwater

Currently, the City is engaged in a number of water quality activities that are related to stormwater. These activities are summarized in Appendix B. The existing water quality activities are consistent with the extent of the City's jurisdiction and are continued and refined in the SWMP BMPs.

It is important to note that there are a number of other agencies and non-profit organizations that also administer water quality programs related to stormwater. Refer to Appendix B for a summary of water quality activities sponsored by these groups. The City will continue to work with other agencies and organizations to implement regional public education and outreach and public participation and involvement programs.

2.5 SWMP Program Administration: Staff and Budget

2.5.1 Staff

The City Community Development Department has the mission of achieving compliance with federal, state and local environmental regulations. A Stormwater Management Program Coordinator (SWMPC) will be necessary to administer the SWMP. The City will determine the extent of time necessary for administration of the SWMP and if the position will be a City or contract employee. Consideration will be given to sharing the Coordinator's position with other local agencies.

The City's Community Development Department will oversee the SWMP. The Public Works Director and Community Development Director report directly to the City Manager. A contract City Engineer also reports to the City Manager who is responsible for the general administration and operations of the City. Public health services to the community are provided by the San Luis Obispo County Department of Public Health, and its Environmental Health Services Division.

The Public Works Department manages the City's water, sanitary sewer, storm water systems, as well as roads and physical facilities such buildings, parks and grounds. This division also oversees public construction projects within the City with the assistance of the City Engineer.

The Planning and Building Inspection Division of the Community Development Department conducts plan review for all private development projects that propose grading or drainage changes and inspects all privately constructed facilities intended for dedication to the public such as new subdivision streets. This division develops and manages the City General Plan, Area Plans, and Local Coastal Plan. It will participate in the implementation of the City's SWMP.

The Environmental Health Services Division of the County Department of Public Health works to protect the health of the community by preventing the transmission of disease and exposure to harmful levels of environmental contaminants. County Environmental Health Services works with organizations, businesses and regulatory agencies to protect the overall health of residents and visitors by preventing the transmission of disease and exposure to harmful chemicals and microbes in the environment. Environmental Health programs address issues related to: drinking water, recreational water, food safety,

indoor mold abatement, lead abatement, liquid and solid waste, water well contamination, hazardous materials and wastes, vector surveillance, land use hazards, and housing and institutions.

The City is a member and participant of a Stormwater Pollution Prevention Team (SWP2) made up of representatives from four County departments and the cities of San Luis Obispo County. Leadership is provided by the County Stormwater Coordinator. The SWP2 Team's mission is to implement the County and City SWMPs in compliance with the NPDES Phase II stormwater regulations and the MS4 General Permit. The SWP2 Team seeks to protect and improve water quality in San Luis Obispo County and its cities by implementing stormwater pollution prevention BMPs. SWP2 teamwork promotes County and its City consideration of stormwater quality in all aspects of their activities and to leverage the synergies afforded by inter-agency communication and coordination of stormwater efforts.

2.5.2 Budget

The development of this SWMP was funded by the City's General Fund. The proposed 2008/09 budget is approximately \$_____. Ultimately, SWMP implementation will have a broad impact on the City, the District, and the general public. The total financial impact will be based on the details of how the plan is implemented, or modified, during the five-year permit term.

Section 3 Stormwater Management Program (SWMP) Requirements

Section D of the MS4 General Permit requires the following:

“The Permittee shall maintain, implement, and enforce an effective SWMP, and develop adequate legal authority to implement and enforce the SWMP, designed to reduce the discharge of pollutants from the permitted MS4 to the MEP and to protect water quality. The SWMP shall serve as the framework for identification, assignment, and implementation of control measures/BMPs. The Permittee shall implement the SWMP and shall subsequently demonstrate its effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the MEP. The SWMP shall be fully implemented by the expiration of the MS4 General Permit, or within five years of designation for Small MS4s designated subsequent to Permit adoption, with reasonable progress made toward implementation throughout the term of the General Permit. Existing programs that have stormwater quality benefits can be identified in the SWMP and be part of a Permittee's stormwater program.”

“The SWMP shall be revised to incorporate any new or modified BMPs or measurable goals developed through the Permittee's annual reporting process. The Permittee shall incorporate changes required by or acceptable to the RWQCB Executive Officer into applicable annual revisions to the SWMP and adhere to its implementation.”

“The SWMP must describe BMPs and associated measurable goals, that fulfill the requirements of the following six Minimum Control Measures: 1) Public Education and Outreach on Stormwater Impacts; 2) Public Participation and Involvement; 3) Illicit Discharge Detection and Elimination; 4) Construction Site Stormwater Runoff Control; 5) Post-Construction Stormwater Management in New Development and Redevelopment; and 6) Pollution Prevention/Good Housekeeping for Municipal Operations.”

3.1 Maximum Extent Practical Discharges Achieved Through Minimum Control Measures and Best Management Practices, and Measurable Goals

The Stormwater Phase II Final Rule and the MS4 General Permit require that the City implement a SWMP that “*reduces stormwater discharges to the maximum extent practicable (MEP) to protect water quality, meet water quality standards, and comply with receiving water limitations*”. MEP can be achieved by implementing BMPs for the six minimum control measures described below. Measurable goals allow for evaluation of BMP effectiveness in improving stormwater quality.

3.1.1 Minimum Control Measure #1 - Public Education and Outreach on Stormwater Impacts

What is required?

Section D.2.a. of the MS4 General Permit requires that regulated Small MS4s develop and implement BMPs, measurable goals and timetables for implementation of the Public Education and Outreach Minimum Control Measure. “The Permittee must educate the public in its permitted jurisdiction about the importance of the stormwater program and the public’s role in the program. The Permittee must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impact of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff.”

USEPA provides additional guidance in Fact Sheet 2.3, “Public Education and Outreach”, which states that this section of the SWMP must include the following minimum requirements:

- Implementation of a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on local water bodies and the steps that can be taken to reduce stormwater pollution; and
- Determination of appropriate best management practices and measurable goals for the public education and outreach minimum control measure.

Why is it necessary?

Public education and outreach is necessary as a means to inform the public about the importance of stormwater pollution prevention. An effective public education and outreach program is essential to ensure public support and compliance. The public education and outreach program must target a number of audiences and must be designed to focus on why stormwater pollution prevention is important, the benefits of stormwater pollution prevention, and how each individual plays a role. Public education and outreach is a critical pollution prevention measure because it helps reduce the source of pollutants that are generated during common everyday urban activities.

**Table 3.1.1
Public Education and Outreach
Minimum Control Measure #1 BMPs**

swp = stormwater prevention

SWMP = Stormwater Management Program

SWMPC = Stormwater Management Program Coordinator

S = Sediment

N = Nutrients

GP = Gross pollutants (litter, trash, debris)

T = Toxics (organics, hazardous waste, etc.)

P = Pathogens (bacteria)

D = Detergents

H = Hydrocarbons (oil, gas, lubricants)

PE = Pesticides

M = Metals

All = All POC Groups

Implementation Method	Potential POC	BMP	Measurable Goal	Effectiveness Measures	Permit Year					Implementer
					1	2	3	4	5	
Activity: Educating the public through live Stormwater Educational/Presentational Programs which have an impact upon stormwater discharges and steps the public can take to reduce pollutant runoff. (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).										
Conducting School swp programs for elementary grades (Note: There are no other grades in MS4.)	All	PE 1A Document the number of elementary presentations, attendance, issue participatory youth patches and report annually.	The goal: One presentation per school grade per year.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by: a. the number of presentations yearly and the MS4s performance in meeting the measurable goal; and, b. The number of attendees in relationship to the number of individuals/firms eligible to attend within the MS4.	X	X	X	X	X	SWMPC

Conducting Commercial (including residential) swp programs.	S,N,P, H,P,G P,T,M	PE 1B Document the number of Commercial presentations, attendance, issue participatory certificates and report annually.	The goal: One presentation annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by: a. the number of presentations yearly and the MS4s performance in meeting the measurable goal; and b. The number of attendees in relationship to the number of individuals/firms eligible to attend within the MS4.	X	X	X	X	X	SWMPC
Conducting General Public (including residential) swp programs.	All	PE 1C Document the number of General Public presentations, attendance, issue participatory certificates and report annually.	The goal: Two public presentations annually.							
Conducting Industrial swp programs.	S,N,P, H,PE, GP,T, M	PE 1D Document the number of Industrial presentations, issue participatory certificates attendance and report annually.	The goal: One presentation annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by: a. the number of presentations yearly and the MS4s performance in meeting the measurable goal; and, b. The number of attendees in relationship to the number of individuals/firms eligible to attend within the MS4	X	X	X	X	X	SWMPC
Conducting Development/ Developer swp programs.	S,P,H, PE,GP T	PE 1E Document the number of Development/Developer presentations, attendance, issue participatory certificates and report annually.	The goal: One presentation annually.							
Conducting Construction/ Contractor swp programs.	S,P,H, PE,GP T	PE 1F Document the number of Construction/Contractor presentations, attendance, issue participatory certificates and report annually.	The goal: One presentation annually.							

Conducting Municipal employee swp programs. (Additional training programs are required for MS4 SWMP implementation personnel).	All	PE 1G Document the number of Municipal employee presentations, attendance, issue participatory certificates and report annually.	The goal: One presentation annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by: a. the number of presentations yearly and the MS4s performance in meeting the measurable goal; and, b. The number of attendees in relationship to the number of individuals/firms eligible to attend within the MS4	X	X	X	X	X	SWMPC
Conducting school teacher swp programs.	All	PE 1H Document the number of volunteer school teachers attending, presentations, attendance, issue participatory certificates and report annually.	The goal: One presentation annually.							
Participating in public events, water quality promotional organizations and distribute educational materials.	All	PE 1I Document public event participation and report annually.	The goal: One participation annually and distribution of 100 educational printed items.							
		PE 1J Provide public display to community organizations to borrow for their events and activities and report annually.	The goal: Create display and lend to community organizations.	Changing the behavior of the SWMP targeted audience: Use of display at a minimum of 5 events per year.						
Participating in regional partnerships	All	PE 1K Participate in public activities such as presentations before other MS4s and the Water Resources Advisory Committee and attendance at SLO County Partners for Water Quality and report annually.	The goal: Attend 4 meetings of SLO County Partners for Water Quality and 1 meeting of WRAC annually and record attendance.	Changing the behavior of the SWMP targeted audience: Effectiveness determined by attainment of measurable goal.	X	X	X	X	X	SWMPC
		PE1L: Use collaborative regional partnerships ("SLO County Partners for Water Quality") to leverage shared resources to distribute stormwater pollution prevention public education and outreach information, materials,	The goal: Efficient use of City and regional resources.	Changing the behavior of the SWMP targeted audience: Effectiveness determined by use of at least one regional vehicle to distribute information for each local potential POC.						

		and activities throughout the City. Target audiences include, but are not limited to: General Public, <u>disadvantaged communities</u> , Residential, Commercial Business, Industrial, Construction, Development, Municipal and Quasi-governmental agencies, as well as Tourists, School Age Children, and College Students.								
Educating restaurant owners	N, T	PE1M: <u>Distribute printed materials in English and Spanish to all restaurant owners about the proper disposal of restaurant wastes, including grease clogging, wash water and mop cleaning.</u>	The goal: A decrease of the number of grease clogs in sanitary sewers and public complaints of restaurant stormwater quality abuses.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by maintaining and analyzing City maintenance records for clogs and public complaints. The first year will establish the base. An anticipated reduction of 20% annually will be considered effective.	X	X	X	X	X	SWMPC and Public Works
Activity: Educating the public through broadcast radio and television Stormwater Prevention public service announcements (PSAs) that have an impact upon stormwater discharges and steps the public can take to reduce pollutant runoff. (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).										
Broadcasting 30 second television PSAs on local stations and/or cable.	All	PE2A: Measure and record the reach and frequency achieved using TV Public Service Announcements (PSAs). Use 30 second television PSAs on at least one local TV channel at least two times per year. Partner broadcasts with other public agencies.	The goal: One survey per year to all utility customers containing brief five questions in order to motivate interest, participation and return of survey forms. <u>The Year 1 goal shall be to reach 20% of the local community citizens that view television.</u>	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by the per cent of viewers and listeners reached.	X	X	X	X	X	SWMPC

Broadcasting 30 second radio PSAs on local stations and/or cable.	All	PE2B : Measure and record the reach and frequency achieved using radio PSAs. Use 30 second radio public service announcements broadcast on at least one local radio station at least two times per year. Partner with other public agencies.	The goal: One survey per year to all utility customers containing brief five questions in order to motivate interest, participation and return of survey forms. <u>The Year 1 goal shall be to reach 20% of the local community citizens that listen to radio.</u>								
Activity: Educating the public by distribute Stormwater Prevention brochures and other printed materials targeting specific audiences that have an impact upon stormwater discharges and steps the public can take to reduce pollutant runoff. (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).											
Distributing printed materials targeting residents and POCs with which they are most closely identified and contribute. Distribution may be by mail, door to door, at community events.	S,N,P, H,PE, GP,T	PE3A Document each distribution, including dates, distribution methods, items distributed, audiences targeted, POCs targeted, numbers distributed, item sample and report annually.	The goal: Distribute as frequently as necessary to meet the Effectiveness Measure.	Changing the behavior of the SWMP targeted audience: Effectiveness will be: a. Distribution to 100% of the MS4s residential population. b. All POCs addressed in the annual distribution.	X	X	X	X	X		SWMPC
Distributing printed materials targeting general commerce and POCs with which they are most closely identified and contribute. Distribution may be by mail, door to door, at community events.	S,N,P, H,P,G P,T,M	PE3B Document each distribution, including dates, distribution methods, items distributed, audiences targeted, POCs targeted, numbers distributed, item sample and report annually.	The goal: Distribute as frequently as necessary to meet the Effectiveness Measure.	Changing the behavior of the SWMP targeted audience: Effectiveness will be by: a. Distribution to 100% of the MS4s commercial establishments. b. All POCs addressed in the annual distribution.	X	X	X	X	X		SWMPC

Distributing printed materials targeting industries and POCs with which they are most closely identified and contribute. Distribution may be by mail, door to door, at community events.	S,N,P, H,PE, GP,T, M	PE3C Document each distribution, including dates, distribution methods, items distributed, audiences targeted, POCs targeted, numbers distributed, item sample and report annually.	The goal: Distribute as frequently as necessary to meet the Effectiveness Measure.	Changing the behavior of the SWMP targeted audience: Effectiveness will be: a. Distribution to 100% of the MS4s commercial establishments. b. All POCs addressed in the annual distribution.	X	X	X	X	X	SWMPC
Distributing printed materials targeting the development / construction community and POCs with which they are most closely identified and contribute. Distribution may be by mail, door to door, at community events.	S,P,H, PE,GP ,T	PE3D Document each distribution, including dates, distribution methods, items distributed, audiences targeted, POCs targeted, numbers distributed, item sample and report annually.	The goal: Distribute as frequently as necessary to meet the Effectiveness Measure.		X	X	X	X	X	SWMPC
Developing a plan to identify specific commercial and industrial industries requiring specialized printed materials to assist in reducing negative water quality impacts.	All	PE3E Document each industry to be included in Plan and its POCs, prepare method of distribution, distribution schedule and printed materials for distribution in following years and report results.	The goal: Publication of Plan.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be measured by the degree of inclusion in Plan of all BMP criteria.	X					SWMPC
Distributing printed materials targeting all specific commercial and industrial industries identified in PE 3g .	All	PE3F Document each distribution, including dates, distribution methods, items distributed, audiences targeted, POCs targeted, numbers distributed, item sample and report annually.	The goal: Distribute as frequently as necessary to meet the Effectiveness Measure.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be determined by 100% attainment of criteria stabled in PE 3g Plan.		X	X	X	X	SWMPC

Distributing printed materials targeting all groups and POCs electronically.	All	PE3G Post all printed materials distributed on the City stormwater web site and report annually.	The goal: Record all web site postings and report annually.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be determined by the percentage of printed materials produced and distributed which are posted on the web.	X	X	X	X	X	SWMPC
Providing public with easy access to stormwater information.	All	PE3H Establish a SWPP telephone information line and hotline for gathering swp information and reporting pollution problems and report annually.	The goal: Install, activate and maintain Hotline and Information line.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by changing Information line quarterly. Accessing Hotline daily and reporting responses.	X	X	X	X	X	SWMPC
Providing the public with easy access and understanding of stormwater information.	All	PE 3I Establish a public access library and publicize its existence and report annually.	The goal: Include all printed swp materials at a facility open to public without cost and note library's availability in printed materials.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be determined by inclusion of all printed materials in library and public use	X	X	X	X	X	SWMPC
		PE 3J Use familiar logos and easily recognizable symbolism for stormwater educational materials and report annually.	The goal: Include 'Sammy the Steelhead', 'You are the solution to stormwater pollution.', 'Sammy's Kids Club', 'Don't Trash California' and other widely distributed visual and audio symbolism in educational materials distributed.	Changing the behavior of the SWMP targeted audience: Effectiveness is measured by inclusion of at least one symbolism in each printed item distributed.						
Providing pet owners with pet waste disposal information.	P	PE 3K Provide informational materials at dog parks, to veterinarians, pet shops, and through general public printed matter, radio, television, web site, library and other media and distribution vehicles and report annually.	The goal: Creation of an information dispensing station created at the dog park and distribution of at least 1,000 informational pieces that promote pet spay/neuter efforts.	Changing the behavior of the SWMP targeted audience: Effective determined by distribution of a minimum of 1,000 informational pieces annually and creation and maintenance of a dog park information dispensing station. Effectiveness will also be determined by the evaluation of local veterinarian and animal shelter information annually.	X	X	X	X	X	SWMPC and Public Works
Increasing public awareness of proper use of storm water system.	All	PE 3L Mark storm drain inlets with 'This Inlet Drains to Meadow Creek' or 'Your Groundwater Quality Depends On Stormwater Only' and report annually.	The goal: All inlets stenciled and maintained.	Changing the behavior of the SWMP targeted audience: Attainment and maintenance of measurable goal.	X	X	X	X	X	SWMPC and Public Works

	All	PE3M Add 'Do Not Dump' signs in areas of illegal dumping and report annually.	The goal: Signs installed and maintained.	Changing the behavior of the SWMP targeted audience: Attainment and maintenance of measurable goal.	X	X	X	X	X	SWMPC and Public Works
		PE 3N Install public display at City Hall and report annually.	The goal: Display installed and maintained.	Changing the behavior of the SWMP targeted audience by providing easy access for public to information.	X	X	X	X	X	SWMPC and Public Works
	All	PE3O : Distribute printed materials in all of the communities in the stormwater permit coverage area each year. Materials shall be in English and summarized in Spanish.	The goal is to target to reach 100% of the households in the permit coverage area by Year 3 and again by Year 5.	Changing the behavior of the SWMP targeted audience by providing easy access for public to information.			X		X	SWMPC
Activity: Assess the effectiveness of live educational programs, television and radio public service announcements and distribution of brochures and printed materials. . (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).										
Conducting general public surveys.	All	PE4A : Conduct and analyze the initial (baseline) survey in Year One. City utility bills or their address base shall be used as the means of survey distribution. Survey households in the permit coverage area. Target to achieve a 20% response rate or better.	The goal: To determine how many residents have been exposed to educational programs, materials and PSAs and the nature of the basic information they gained.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be measured by A 20% response rate and determination that a minimum of 50% of respondents indicate their stormwater pollution prevention knowledge increased.	X					SWMPC
		PE4B : Conduct and analyze follow up surveys to measure changes in Years 3 and 5. Target to achieve at least a 50% increase in awareness by Year 5.	The goal: To determine if educational programs, materials and PSAs increased indicate their stormwater pollution prevention knowledge by at least 50% over the Year 1 results.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be measured by a 50% increase in respondent knowledge.			X		X	SWMPC
		PE4C : Use survey results to update the program for continuous improvement.	The goal: Modification of educational materials to improve public knowledge in areas where knowledge is lacking.	Changing the behavior of the SWMP targeted audience: Effectiveness shall be measured by analysis of surveys and altering or enhancing educational material where necessary.		X	X	X	X	SWMPC
Conducting quizzes of attendees at live presentations.	All	PE 4D Quiz students, teachers and municipal employees at	Goal: Quiz after live presentations and provide certificates to those providing correct answers	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by all audience categories averaging 90%	X	X	X	X	X	

		<p>educational programs and issue attainment certificates for acceptable knowledge of material presented. .Each audience category will be asked five questions pertaining to that category and the answers recorded and evaluated to determine progress of marketing efforts. No less than ten individuals will be surveyed in each category. Two categories will be surveyed annually.</p>		correct answers.						
All	<p>PE 4E Quiz specialized attendees at educational programs, such as industrialists, developers, contractors, food servicers and issue attainment certificates for acceptable knowledge of material presented and include them in a 'Clean Water Business Certification Program'. . Each audience category will be asked five questions pertaining to that category and the answers recorded and evaluated to determine progress of marketing efforts. No less than ten individuals will be surveyed in each category. Two categories will be surveyed annually.</p>	<p>Quiz after live presentation and provide certificates to those providing correct answers. Maintain a list of 'Clean Water Business Certification Program' performers on the web-site and on public display in City Hall.</p>	<p>Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by decreasing complaints of violations within each specialized category of attendees.</p>	X	X	X	X	X		

3.1.2 Minimum Control Measure #2 - Public Participation and Involvement

What is required?

Section D.2.b. of the MS4 General Permit requires that the Permittee comply with all State and local public notice requirements when implementing a public participation and involvement program.

U.S. EPA provides additional guidance in Fact Sheet 2.4, “Public Participation and Involvement”, which says that this section of the SWMP must include the following minimum requirements:

- Comply with applicable State and local public notice requirements; and
- Determine the appropriate best management practices and measurable goals for the public participation and involvement minimum control measure.

Why is it necessary?

BMPs for this minimum control measure are intended to promote community support for the SWMP and to ensure that the community has opportunities to provide input and direction regarding SWMP implementation. Public participation ensures that the program reflects community values and priorities and has the greatest potential for success. An effective public participation and involvement program engages the community, instills a sense of personal ownership for water quality issues, and encourages behavioral changes that can lead to water quality improvement.

**Table 3.1.2
Public Participation and Involvement
Minimum Control Measure #2 BMPs**

swp = stormwater prevention

SWMP = Stormwater Management Program

SWMPC = Stormwater Management Program Coordinator

S = Sediment

N = Nutrients

T = Trash

M = Metals

B = Bacteria

Oi = Oil and Grease

O = Organics

OD = Oxygen Demanding

Implementation Method	Potential POC	BMP	Measurable Goal	Effectiveness Measures	Permit Year					Implementer
					1	2	3	4	5	
<p>Activity: Advising people of involvement opportunities to provide input and direction regarding SWMP implementation. (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).</p>										
Advertising and promoting involvement opportunities.	All	<p>PP1A Comply with public notice legal requirements.</p>	Documentation of each event and its compliance with legal public notice.	Changing the behavior of the SWMP targeted audience: Effectiveness will be confirmation in annual report that legal notice requirements were met for all water quality meetings.	X	X	X	X	X	SWMPC
		<p>PP1B Publish notice all meetings and events on web site one week prior to meeting when feasible.</p>	Documentation of web site publishing.	Changing the behavior of the SWMP targeted audience: Effectiveness will be confirmation in annual report that web site notice requirements were met for all water quality meetings.						
		<p>PP1C Publish notice of all meetings, events and water quality activities in the newspaper whenever estimated participation will exceed 100 attendees.</p>	Documentation of publication and attendance figures at all public water quality events. The goal is to publish 100% of all such meetings.	Changing the behavior of the SWMP targeted audience: Effectiveness will be confirmation in annual report that newspaper notice requirements were met for all water quality meetings where attendance exceeded 100 participants.						

Activity: Identifying involvement opportunities to provide input and direction regarding SWMP implementation. (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).

Conducting search for resources.	All	<p>PP2A Hold public involvement Stakeholder Meetings / Workshops to identify volunteer educators, speakers, workers and their links to other resources which include people, organization and information.</p>	The goal is to conduct two meeting annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by at least ten individuals participating in additional pollution prevention activities after attendance at a Stakeholder Meeting.	X	X	X	X	X	SWMPC
		<p>PP2B Publicize the need for volunteer participants for each event or opportunity for involvement to be held.</p>	Use web site, news releases and postings to identifying needs for events such as Beach and Creek Cleanup Day, inlet stenciling, Snapshot Day, etc. and record. The goal is involve a minimum of 100 participants in Year 1.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by records of each events volunteers. Volunteer participation should increase by 5% minimum annually.						
		<p>PP2C Coordinate search efforts and information with other MS4s and SLO County Partners.</p>	Schedule discussions with other agencies for discussions and links to untapped resources and record. Also record the value of such information and its applicability to the City. The goal is to develop a minimum of two additional means in Year 2 to develop searches for additional participants.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by identification of information and links to information gathered and reported as well as value and applicability ratings.						
		<p>PP2D Conduct internet searches for information leading to involvement opportunities.</p>	Search internet monthly and record results. The goal is to develop at least one additional vehicle to search for public participants.	Changing the behavior of the SWMP targeted audience: Effectiveness will be determined by identification of information and links to information gathered and reported as well as value and applicability ratings.						
		<p>PP2E Use information obtained in BMPs PP2a thru PP2d to prepare a plan to increase public participation the following year.</p>	Analyze data and records and prepare plan. The goal is to publish an annual Plan.	Changing the behavior of the SWMP targeted audience: effectiveness will be determined by printing the plan which includes goal of increasing public participation a minimum of 5% annually.						

Activity: Conducting public participation and involvement opportunities for input and direction regarding SWMP implementation. (The MS4 may use mutual resources and combine its programs with those of adjoining MS4s and the SLO Partners for Water Quality).

Conducting activities which involve the public in stormwater pollution prevention activities.	All	PP3A Hold meeting in which public can review and recommend amendments to the SWMP and its BMPs and activities.	Record attendance and report. Record public comments and recommendations. The goal is to conduct one meeting annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by a. participation b. the value of recommendations and comments; and, c. a minimum of 5% increase in attendance at the meeting over the previous year.	X	X	X	X	X	SWMPC
		PP3B Post of the SWMP annual report on the web site. For public review.	Record postings and responses to postings. A minimum of two responses is desired to reach goal.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by the number of response to the web posting.						
		PP3C Conduct an annual Creek and Shore Cleanup Day involving the public.	Record events, attendance and POCs collected. The goal is to conduct one event annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by attendance and POCs collected.						
		PP3D Conduct a Inlet Stenciling Day involving the public.	Record events, including maintenance, participation and locations stenciled. The goal is to conduct one event annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by attendance and the number of stenciling and maintenance performed. The goal is to reach 1005 inlet stenciling by public.						
		PP3E Conduct a Snapshot Day involving the public.	Collect snapshots, provide samples to media, award participants. The goal is to conduct one event annually.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by photographers recognizing water quality problems to photograph and bringing examples to public attention.						

		<p>PP3F Institute a 'Adopt a Storm Drain' program.</p>	<p>Record participation, locales and frequency of POC collections. The goal is to adopt all inlets by Year 5.</p>	<p>Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by the inlet adoptions and actual maintenance.</p>						
		<p>PP3G Institute a 'Adopt a Street Program'.</p>	<p>Record participation, locales and frequency of POC collections. The goal is to adopt two new street sections annually.</p>	<p>Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by the degree of street section adoptions and actual maintenance.</p>						

3.1.3 Minimum Control Measure #3 - Illicit Discharge Detection and Elimination

What is required?

The MS4 General Permit requires that the Permittee adopt and enforce ordinances or take equivalent measures that prohibit illicit discharges. The Permittee must also implement a program to detect illicit discharges. Section D.2.c. of the MS4 General Permit requires that the Permittee:

- 1) "Develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR §122.26(b)(2) into the regulated Small MS4;
- 2) Develop, if not already completed, a storm sewer map, showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls;
- 3) To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions;
- 4) Develop and implement a plan to detect and address non-stormwater discharges, including illegal dumping to the system that are not authorized by a separate NPDES permit;
- 5) Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste; and
- 6) Address the following categories of non-stormwater discharges or flows (i.e., authorized non-stormwater discharges) only where they are identified as significant contributors of pollutants to the Small MS4:
 1. water line flushing;
 2. landscape irrigation;
 3. diverted stream flows;
 4. rising ground waters;
 5. uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20) to separate storm sewers;
 6. uncontaminated pumped ground water;
 7. discharges from potable water sources;
 8. foundation drains;
 9. air conditioning condensation;
 10. irrigation water;
 11. springs;
 12. water from crawl space pumps;

13. footing drains;
14. lawn watering;
15. individual residential car washing;
16. flows from riparian habitats and wetlands; and
17. dechlorinated swimming pool discharges.”

“Discharges or flows from fire fighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to the waters of the U.S.”

“If the RWQCB Executive Officer determines that any individual or class of non-stormwater discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the RWQCB Executive Officer may require the appropriate Permittee(s) to monitor and submit a report and to implement BMPs on the discharge.”

Why is it necessary?

An illicit discharge is defined by U.S. EPA as “a point source discharge of pollutants to a separate storm drain system that is not composed entirely of stormwater and is not authorized by a NPDES permit.” Illicit discharges are considered “illicit” because MS4s are not designed to accept, process, or discharge such non-stormwater wastes. Sources of illicit discharges include sanitary wastewater, septic tank effluent, car wash wastewater, improper oil disposal, radiator flushing disposal, laundry wastewater, spills from street way accidents, and improper disposal of auto and household toxic materials. Controlling and eliminating illicit discharges through a comprehensive stormwater management program can protect public health and safety. The BMPs for this minimum control measure are intended to reduce pollutants in stormwater runoff to receiving waters. The development and implementation of a system to detect and eliminate sources of illicit discharge and illegal dumping is required.

Authorized Non-Storm Water Discharges

Federal regulations define an illicit discharge as “...any discharge to an MS4 that is not composed entirely of storm water...” with some exceptions. These exceptions include discharges from NPDES-permitted industrial sources and discharges from firefighting activities. Illicit discharges are considered “illicit” because MS4s are not designed to accept, process, or discharge such non-storm water wastes. It is important to note that “illicit” does not mean “illegal.” Not every illicit discharge is necessarily a prohibited illegal discharge.

Addressing Most Common Illicit Discharge Sources

The following concerns address the most common sources of illicit discharges and the City's current and proposed responses:

Broken sanitary sewer laterals

The City's existing program for the identification and elimination is composed of spill and complaint response and abatement, as well as field investigation and prevention measures. The public calls the City to report spills. Calls are received at City Hall and the Police Department after hours and on weekends. Public Works standby crews are dispatched to identify and eliminate. The City annually televises sewer laterals to identify existing and potential points of leakage and replaces suspect pipe or seals cracks.

Sanitary sewer collectors are owned by the South County Sanitary District which is called by the public or City to respond to a spill. There are no recorded incidents of this nature.

The SWMP proposes additional measures for sanitary sewer spills which are addressed under MCM 3, Illicit Discharge and Elimination, BMPs **IL6A**, **IL6B** and MCM 6, Good Housekeeping and Pollution Prevention for Municipal Operations, **MO1D** through **MO1F**.

Outdoor restaurant mat/floor/patio washing

The City's existing program is composed of complaint, response and abatement. The City contracts with SLO County Public Health Department and has adopted County health regulations. The public calls the City or County to report events. Calls are received at City Hall and, after hours and on weekends, and referred to the San Luis Obispo County Health Department for investigation and abatement. There are no known current, recorded complaints at this time.

The SWMP proposes additional measures for restaurant operations which are addressed through BMPs **PE3E**, **PE4C**, **IL1G**, **IL4C** and **IL4D**

Improper oil disposal

The City's existing program is composed of complaint, response and abatement by Community Development Department staff. The public calls the City to report improper oil disposal or spills. Disposal normally involves participation by a local service station or auto repair shop. Calls are received at City Hall and the Police Department after hours and on weekends. There are no current, recorded complaints.

City code requires an attendant on location at all activated gas pumps in the City. The code also contains a hazardous waste disposal provision with process and penalties.

The SWMP proposes additional measures for improper oil disposal which are addressed through BMPs **MO1A** through **MO1C, CON1C** and **IL3A**.

Improper paint disposal

The City's existing program is composed of complaint, response and abatement by Community Development Department staff. The public calls the City to report disposal problems. Disposal normally involves participation by the South County Sanitation Service. Calls are received at City Hall and the Police Department after hours and on weekends. There are no current, recordable complaints.

The SWMP proposes additional measures for improper paint removal which are addressed through BMPs **IL4F** and **IL4G**.

Radiator flushing disposal

The City's existing program is composed of complaint, response and abatement by Community Development Department staff. Disposal normally involves participation by a local auto repair shop. The public calls the City to report spills. Calls are received at City Hall and the Police Department after hours and on weekends. There are no current, recordable complaints at this time.

City code requires an attendant on location at all activated gas pumps in the City. The code also contains a hazardous waste disposal provision with process and penalties.

The SWMP proposes additional measures for improper oil disposal which are addressed through BMPs **MO1A** through **MO1C, CON1C** and **IL3A**.

Spills from roadway accidents

The City's existing program is composed of complaint, response and abatement by Police and Fire Department staff. The public calls the City to report spills. Calls are received at Fire Department and the Police Department. Generally, these are 911 calls and responses. HAZMAT crews are often called by the accident Incident Commander for cleanup activity. Minor spills are addressed by Public Works on-call standby crews.

The City code also contains a hazardous waste disposal provision with process and penalties.

The SWMP proposes additional measures for roadway accident spills which are addressed in BMPs **IL3A** and **MO1D** through **MO1F**.

Improper disposal of auto and household toxics

The City's existing program is composed of complaint, response and abatement by Community Development Department staff. The public calls the City to report spills. Calls are received at City Hall and the Police Department after hours and on weekends. There are no current, recordable complaints. The City maintains a corporation yard which stores chemicals and auto-related toxics for on-site vehicle maintenance and repairs.

City crews are licensed by the State in the application of chemicals at City facilities, such as parks. The code also contains a hazardous waste disposal provision with process and penalties.

The SWMP proposes additional measures for City operations and facilities which are addressed under MCM 6, Good Housekeeping and Pollution Prevention for Municipal Operations, BMPs **MO1A** through **MO3C**.

Construction sites

The City reviews, amends and approves all new construction and redevelopment in the City. It issues various permits for all development and inspects all construction for compliance with all permit requirements.

City code contains a section for construction site maintenance.

The SWMP proposes additional measures under MCM 4, Construction Site Runoff Control BMPs **CON1A** through **CON3G**.

Homeless encampments

The City's existing program is composed of complaint, response and abatement by Police Department staff. The public calls the City to report encampments. Calls are received at City Hall and the Police Department after hours and on weekends. There are no current, recordable complaints at this time. The City lacks authority to address encampments upon State Parks property which are cited by residents from time to time.

City code prohibits overnight camping on public and private property without the owner's consent.

The SWMP proposes additional measures for the Pismo State Beach Dunes Channel Section of Meadow Creek in BMP **IL5H**.

Landscape irrigation and lawn watering.:

The SWMP's concern with these authorized discharges and practices is the degree to which runoff may occur at specific locations and the chemical applications on lawns and landscaping which can have a negative effect upon groundwater and Meadow Creek.

City crews are licensed by the State in the application of chemicals at City facilities, such as parks.

Concerns regarding the State's public golf course are addressed in BMPs **IL5F** and **IL5H**. Concerns regarding City parks and landscape areas and private development are addressed in BMPs **MO1E** and **MO1F**.

Flows from Riparian Habitats and Wetlands

There is concern regarding flows in Meadow Creek, specifically sedimentation, salt water introduction, and golf course runoff. State Fish and Game controls the Creek's water quality standards and maintenance.

The City's regulations impacting Meadow Creek are largely preventative in nature. All development is currently required to contain runoff on the development site. The City requires grading permits for land disturbances as well as site-specific measures for each proposed development or redevelopment.

The SWMP's action for wetland and riparian flows in the various Meadow Creek channels are addressed through BMPs **IL5A** through **IL5I**.

Parking lots and streets

The City owns a number of public parking lots and streets that discharge into the stormwater collection system. These facilities are swept regularly under a private service contract. Private facilities and development also discharge into the stormwater collection system.

The SWMP proposes additional measures for City and private facilities which are addressed in BMPs **MO1A** through **MO1F** and **IL3A**.

**Table 3.1.3
Illicit Discharge Detection and Elimination (IDDE)
Minimum Control Measure #3 and BMPs**

swp = stormwater prevention

SWMP = Stormwater Management Program

SWMPC = Stormwater Management Program Coordinator

S = Sediment

N = Nutrients

GP = Gross pollutants (litter, trash, debris)

T = Toxics (organics, hazardous waste, etc.)

P = Pathogens (bacteria)

D = Detergents

H = Hydrocarbons (oil, gas, lubricants)

PE = Pesticides

SW = Saltwater

All = All POC Groups

M = Metals

IWMA = Integrated Waste Management Authority

Implementation Method	Potential POC	BMP	Measurable Goal	Effectiveness Measures	Permit Year					Implementer	
					1	2	3	4	5		
Activity: Implementing measures which will develop, implement, and enforce a program to detect and eliminate illicit discharges											
Adopting, implementing and enforcing new and existing measures.	All	IL1A Adopt an ordinance to detect and prohibit illicit discharges, including enforcement provisions and penalties. The ordinance will also address the categories of illicit and non-storm water discharges or flows listed in Section D.2.c. (6) of the MS4 General Permit. Model ordinances will be used to help draft this ordinance.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption with Year 1 and the ordinance content's inclusion of all requirements.	X						City Engineer
		IL1B BMP IL1A shall be implemented and enforced.	The goal is for implementation in Year 2 and enforcement thereafter as provided by the adopted ordinance.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by Year 2 implementation and ordinance compliance and enforcement measures tracking and annual reporting.	X	X	X	X	X		Community Development and Public Works

Adopting, implementing and enforcing new measures.	All	<p>IL1C: Include stormwater illicit connections and discharges in construction plan review and building inspections on an ongoing basis for all new development and redevelopment projects.</p>	<p>The goal is to detect and prevent illicit connections and discharges before they are created through development / redevelopment in Year 1.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by thorough plan reviews and inspections and documentation of violations.</p>	X	X	X	X	X	Planning and Inspection
		<p>IL1D: Track and trend violations to determine additional preventive and corrective actions that may be needed. Report these results annually.</p>	<p>The goal is to determine if improved or additional actions / procedures are necessary annually.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by accurate documentation and evaluation.</p>	X	X	X	X	X	Planning and Inspection
		<p>IL1E: Revise inspection checklists and procedures to prohibit illicit connection and discharge to the storm sewer system.</p>	<p>The goal is to implement improved or additional actions / procedures when necessary.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by accurate documentation of revisions to checklists and procedures.</p>	X	X	X	X	X	Inspection
		<p>IL1F: Survey City stormwater system outfalls to determine adverse water quality impacts, if any, and provide recommendations for correction, if any.</p>	<p>The goal is to determine if the outfalls have a negative effect and document what actions, if any, are necessary for corrective action.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by a comprehensive report and corrective actions where necessary each year.</p>	X	X	X	X	X	Public Works and City Engineer

		IL1G: Inspect all restaurants annually through the health inspection program. Health inspectors will report all stormwater violations to the Public Works Department for follow up. For violations that occur within the permit coverage area, the City must follow up on all reports, and include response actions and response times in the Annual Report.	The goal is to prevent illicit discharges to the system.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by analysis of violation trending and a decrease of violations of 50% in Year 3 and 10% annually thereafter.		X	X	X	X	Public Health, Public Works and SWMPC
		IL1H: Public Works and the City Engineer will continue to provide standards for water and sewer utilities to prevent cross-connections and to advise the public.	The goal is to continue providing graphic and written materials for distribution to the public at the permit counter.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by including a copy of these materials in the annual report with a statement that it has been distributed at the counter during the course of the past year.	X	X	X	X	X	Public Works and City Engineer
		IL1I: City Public Works and the City Engineer will continue to provide standards for water and sewer utilities to prevent illicit cross-connections and advises public.	The goal is to continue providing graphic and written materials for distribution to the public at the permit counter.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by including a copy of these materials in the annual report with a statement that it has been distributed at the counter during the course of the past year.	X	X	X	X	X	Public Works and City Engineer

Activity: Developing a storm sewer map, showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls.										
Preparing and publishing the map.	All	IL2A: Complete storm sewer maps showing all required criteria.	The goal will be to prepare and publish and report in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be determined by publishing the map with all required criteria contained.	X					City Engineer
		IL2B: Update maps on an annual basis to include new and modified storm sewer facilities.	The goal will be to update and report.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be determined by updating annually.		X	X	X	X	City Engineer

Activity: Effectively prohibit, through ordinance, or to the regulatory mechanism, non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions.										
Adopting measures, procedures, enforcement and actions.	All	IL3A: Adopt an ordinance to prohibit non-stormwater discharges, including enforcement measures and penalties. Model ordinances may be used.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption with Year 1 and the ordinance content's inclusion of all requirements.	X					
		IL3B: BMP IL3a shall be implemented and enforced.	The goal is for implementation in Year 2 and enforcement thereafter as provided by the adopted ordinance.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by Year 2 implementation and ordinance compliance and enforcement measures tracking and annual reporting.		X	X	X	X	Community Development and Public Works

	P	IL3C: Adopt and enforce a pet waste ordinance according to schedule. The ordinance adoption process includes public review.	The goal is reduce pet waste introduction to surface runoff and groundwater infiltration.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by adoption and implementation in Year 2.		X	X	X	X		SWMPC
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Activity: Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.

Inform public and employees of good stormwater management practices.	P,N	IL4D: Train restaurant health inspectors in illicit discharge detection and elimination.	The goal is to inform / train all inspectors in Year 1 and to train all new inspectors annually thereafter.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by training records demonstrating 100% inspector training.	X	X	X	X	X		SWMPC
	All	IL4E: Train City inspectors in illicit discharge detection and elimination.	The goal is to inform / train all inspectors in Year 1 and to train all new inspectors annually thereafter.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by training records demonstrating 100% inspector training.	X	X	X	X	X		
		IL4F: Include the SLO City IWMA Recycling and Household Hazardous Waste Programs in the Stormwater Pollution Prevention public education and outreach and public participation and involvement activities.	The goal is to inform employees and the public in proper hazardous household waste disposal and local locations for disposal.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by recording the increase of hazardous household wastes at local disposal locations.	X	X	X	X	X		
		IL4G: Coordinate activities with the IWMA.	The goal is share effective pollution prevention measures.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by City attendance records for IWMA meetings.	X	X	X	X	X		

		IL4H: Emphasize IDDE in the municipal operations employee training program.	The goal is inform employees of effective IDDE measures.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by emphasizing IDDE in employee Training Manual.	X	X	X	X	X	
		IL4I: Include IDDE in public education and outreach activities.	The goal is inform the public of effective IDDE measures.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by documenting inclusion.	X	X	X	X	X	

Activity: Address specific categories of non-stormwater and stormwater discharges or flows (i.e., authorized non-stormwater discharges) where they are identified as potential significant contributors (POCs) to the Small MS4.

Adopting specific categories for potential significant contributors to Meadow Creek.	S	IL5A: Identify court-supported actions that can be taken.	The goal is to determine if previous litigation on the stream requires pollution control measures that are not enforce.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by a comprehensive report to the City by the City Attorney in Year 1.	X					City Attorney
	S	IL5B: Request voluntary compliance of sedimentation reduction by upstream agencies and Coastal San Luis Resource Conservation District.	The goal is improve water quality absent legal or other actions.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by voluntary compliance by other agencies affecting stream water quality in Year 2.		X				City Administration
	S	IL5C: Meet with Nacimiento Avenue residents and property owners to discuss stormwater concerns and potential solutions and prepare a List of Public Concerns.	The goal is document public concerns regarding stormwater quality and flood hazards prior to meeting with IL5B and IL5D agencies.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by involving affected public in the process of finding solutions to water quality and flooding issues.	X					City Administration and Public Works

	S	IL5D: Presentation of List of Concerns and discussion of issues at F&G Headquarters in Sacramento.	The goal is to modify F&G actions inhibiting water quality and flooding improvements.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by positive action and response by F&G.		X					City Administration
	SW, S	IL5E: Request Coastal San Luis Resource Conservation District to address the impact of the Pismo Ecological Lake operations upon Meadow Creek water quality and to publish a comprehensive analysis and report recommending corrective operational actions where necessary.	The goal is to determine if salt introduction to the creek at the lake is accurate and what actions are necessary, if any, to improve the water quality in Year 2.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by the District's publication of a comprehensive report of findings and improved lake operations, if necessary.		X					City Administration
	N, O	IL5F: Request the State Department of Parks and Recreation to address the impact of golf course operations upon Meadow Creek water quality and provide a report containing recommendations for corrective actions, if necessary.	The goal is to determine if nitrogen is introduced to the creek and what actions are necessary, if any, to improve the water quality in Year 2.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by the State's publication of a comprehensive report of findings and improved golf course operations, if necessary.	X						City Administration
	T,H	IL5G: Request the LeSage recreational vehicle park address the impact its stormwater system and operations upon Meadow Creek water quality and provide a report containing recommendations for corrective actions, if necessary.	The goal is to determine POCs are introduced to the creek and what actions are necessary, if any, to improve the water quality in Year 2.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by the park's publication of a comprehensive report of findings and improved park operations, if necessary.	X						City Administration
	N,T	IL5H: Request RWQCD to include Pismo State Beach Dunes Park to be added to the General Permit Non-Traditional Small MS4 List.	The goal is to fix responsibility for water quality resulting from agency's property and operations.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by adding agency to the General Permit Non-Traditional Small MS4 List.	X						City Administration
	SW, S	IL5I: Request RWQCD to include Coastal San Luis Resource Conservation District to be added to the General Permit Non-Traditional Small MS4 List.	The goal is to fix responsibility for water quality resulting from agency's property and operations.	Changing awareness and behavior of SWMP target audiences: Effectiveness is measured by adding agency to the General Permit Non-Traditional Small MS4 List.	X						City Administration

Activity: Developing and implementing a plan to detect and address non-stormwater discharges, including illegal dumping to the system.										
Preparation of a Non-Stormwater Discharge Plan	All	IL6A: The City shall prepare a formal Plan to guide municipal employees and the public in the detection and elimination of non-stormwater discharges to the system. The Plan shall address illegal dumping and enforcement and will include BMPs.	The goal is to prepare a comprehensive document to guide City efforts.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be determined by publication of the Plan in Year 2.		X				SWMPC
		IL6B: The City shall implement the Non-Stormwater Discharge Plan in Year 2.	The goal is to reduce non-stormwater discharges to the system by 30% in the year after implementation and 10% each year thereafter.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be determined by tracking recorded violations as provided in the Plan.			X	X	X	SWMPC
		IL6C: Adopt and enforce a pet waste ordinance according to schedule. The ordinance adoption process includes public review.	The goal: To reduce pollutants in storm water runoff by adopting and enforcing a pet waste ordinance to prohibit the introduction of animal wastes into waterbodies and groundwater.	The effectiveness of this ordinance shall be measured by tracking and evaluating City maintenance crew records of pet waste cleanup and disposal. A decrease in City pet waste disposal shall be adequate basis for a conclusion that the introduction of pet waste into stormwater runoff and adsorption has been reduced.		X	X	X	X	SWMPC
Promoting the Non-Stormwater Discharge Plan	All	IL6D: The Integrated Waste Management Authority (IWMA) will continue to provide public education and outreach materials on behalf of City for waste reduction, disposal of household hazardous materials, composting and recycling.	The goal is to involve the public in implementation of the Plan.	Changing awareness and behavior of SWMP target audiences: Effectiveness will be determined by recording the City's distribution of materials provided by the IWMA.			X	X	X	SWMPC

3.1.4 Minimum Control Measure #4 - Construction Site Runoff Control

What is required?

The MS4 General Permit requires that the Permittee develop a program to control the discharge of pollutants from construction sites greater than or equal to one acre in size within its permitted jurisdiction. The program must include inspection of construction sites and enforcement actions against violators.

Section D.2.d. of the MS4 General Permit requires that the Permittee “develop, implement, and enforce a program to reduce pollutants in any stormwater runoff to the Small MS4 from construction activities that result in land disturbance of greater than or equal to one acre. Reduction of stormwater discharges from construction activity disturbing less than one acre must be included in the program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include the development and implementation of, at a minimum:

- 1) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law;
- 2) Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
- 3) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
- 4) Procedures for site plan review which incorporate consideration of potential water quality impacts;
- 5) Procedures for receipt and consideration of information submitted by the public;
- 6) Procedures for site inspection and enforcement of control measures.”

Why is it necessary?

The intent of this minimum control measure is to prevent the introduction of sediment, construction materials, construction waste and debris, concrete truck washout, sanitary waste, chemicals, and other non-stormwater discharges into the storm sewer system and receiving water bodies. Sediment is an important Pollutant of Concern in the City.

**Table 3.1.4
Construction Site Runoff Control
Minimum Control Measure #4 and BMPs**

swp = stormwater prevention

SWMP = Stormwater Management Program

SWMPC = Stormwater Management Program Coordinator

S = Sediment

N = Nutrients

GP = Gross pollutants (litter, trash, debris)

T = Toxics (organics, hazardous waste, etc.)

P = Pathogens (bacteria)

PE = Pesticides

M = Metals

D = Detergents

H = Hydrocarbons (oil, gas, lubricants)

All = All POC Groups

Implementation Method	Potential POC	BMP	Measurable Goal	Effectiveness Measures	Permit Year					Implementer
					1	2	3	4	5	
Activity: Controlling the discharge of pollutants from construction sites greater than or equal to one acre in size.										
Adopting, implementing and enforcing a new ordinance (Construction Runoff Control Ordinance) reducing stormwater discharges requiring erosion and sediment controls, inspection, enforcement actions against violators and sanctions / penalties to ensure compliance.	All	CON1A Prepare and adopt a Construction Runoff Control Ordinance.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption with Year 1 and the ordinance content's inclusion of all requirements.	X					City Engineer
		CON1B Include requirements for construction site operators to implement appropriate erosion and sediment control BMPs in ordinance.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption in Year 1.	X					City Engineer
		CON1C Include requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals litter, and sanitary waste at the construction site that may cause adverse	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption within Year 1.	X					City Engineer

		impacts to water quality.								
		CON1D Include requirements for site plan review which incorporate consideration of potential water quality impacts.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption in Year 1.	X					City Engineer
Adopting, implementing and enforcing a new ordinance (Construction Runoff Control Ordinance) reducing stormwater discharges requiring erosion and sediment controls, inspection, enforcement actions against violators and sanctions / penalties to ensure compliance.	All	CON1E Include requirements for procedures for receipt and consideration of information submitted by the public.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption in Year 1.	X					City Engineer
		CON1F Include requirements for site inspection and enforcement control measure procedures in ordinance.	The goal is to adopt in Year 1.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption in Year 1 .	X					City Engineer
		CON1G Implement adopted ordinance requirements.	The goal is to adopt in Year 2.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by implementation in Year 2.		X	X	X	X	City Council
		CON1H Review applications and approve / deny applications based upon ordinance criteria.	The goal is to adopt in Year 2 and every year thereafter.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by the review of all applications and imposition of requirements to reduce pollutant runoff.		X	X	X	X	Planning

	<p>CON1I Inspect development, enforce requirements and enforce penalties and sanctions for violations.</p>	<p>The goal is to inspect and enforce all ordinance requirements and maintain records for such activity in Year 2 and every year thereafter.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by inspection and enforcement records for all development impacted by this ordinance</p>		X	X	X	X	Inspection Division
	<p>CON1J: All City land use plan, conditional use permit and local coastal plan approvals address construction site runoff control standards</p>	<p>The goal is to continue this legally required practice.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured annually by a statement signed by the Community Development Director that all City's land use plan, conditional use permit and local coastal plan approvals address construction site runoff control standards.</p>	X	X	X	X	X	Community Development
	<p>CON1K: The General Plan, Area Plans, Local Coastal Plan and Zoning Ordinances support the minimization of sprawl and shall be retained and upgraded as permitted by law.</p>	<p>The goal is to continue this practice.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured annually by a statement signed by the Community Development Director that the City's General Plan, Area Plans, Local Coastal Plan and Zoning Ordinances support the minimization of sprawl.</p>	X	X	X	X	X	Community Development

Activity: Revise the City Grading Ordinance to reflect requirements in the new Construction Runoff Control Ordinance and MS4 General Permit.

<p>Reviewing, preparing, adopting, implementing and enforcing a revised grading ordinance.</p>	<p>All</p>	<p>CON2A: Revise existing grading ordinances to require additional specific construction site runoff control measures as required by the MS4 General Permit and Construction Stormwater General Permit including, but not limited to: use of good site planning, minimization of soil movement, erosion and sediment control BMPs, good housekeeping practices for recycling and disposal of discarded building materials, concrete truck washouts, chemicals, litter, and sanitary waste at construction sites. The ordinance revisions must include provisions for enforcement and penalties for noncompliance.</p>	<p>The goal: The grading ordinances will be revised by the end of permit year 2.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by adoption in Year 1 and the ordinance content's inclusion of all requirements.</p>		<p>X</p>				<p>City Engineer and Public Works</p>
		<p>CON2B: Implement adopted ordinance requirements.</p>	<p>The goal is to adopt in Year 2.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by implementation in Year 3.</p>			<p>X</p>	<p>X</p>	<p>X</p>	<p>Planning</p>
		<p>CON2C: Implement procedures for reviewing grading plans to verify that erosion and sediment control BMPs are included and are adequate before issuing permits for projects that involve one acre or more of land disturbance and smaller projects that are part of a common plan of development that is one acre or more in size according to schedule.</p>	<p>The goal is to adopt in Year 3 and every year thereafter.</p>	<p>Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by all applications reviewed and required to reduce pollutant runoff.</p>			<p>X</p>	<p>X</p>	<p>X</p>	<p>Planning</p>

		CON2D Inspect development, enforce requirements and enforce penalties and sanctions for violations.	The goal is to inspect and enforce all ordinance requirements and maintain records for such activity in Year 3 and every year thereafter.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured by inspection and enforcement records for all development impacted by this ordinance			X	X	X	Inspection Division
Providing for interim measures prior to implementation of the new ordinance.	All	CON2E: The City shall continue reviewing existing grading and building plans for design, drainage, erosion control and flood hazard.	The goal is to continue current practices until the revised grading ordinance is implemented.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by a signed statement from the Community Development Director in the annual report that the current practice was enforced prior to implementation of the new ordinance.	X	X				
		CON2F: The City shall continue providing plan checking and inspection services for construction projects, subdivisions, development plans and administering the CEQA review process.	The goal is to continue current practices until the revised grading ordinance is implemented.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness is measured by a signed statement from the Community Development Director in the annual report that the current practice was enforced prior to implementation of the new ordinance.	X	X				

Activity: Establish a construction site runoff control education and training programs.										
Educating construction permit applicants.	All	CON3A Prepare construction site education and outreach information for distribution in the Public Education and Outreach Program and to construction site and grading permit applicants.	The goal for preparation is Year 1.	Changing the behavior of the SWMP targeted audience: Effectiveness is measured by information preparation and distribution records.	X					SWMPC
		CON3B Revise construction site education and outreach information to reflect criteria and standards included in the adopted Construction Runoff Control Ordinance and Revised Grading Ordinance.	The goal for preparation is Year 2.	Changing the behavior of the SWMP targeted audience: Effectiveness is measured by information preparation and distribution records.		X				SWMPC
		CON3C Issue the current construction site education and outreach information to all construction site and grading permit applicants.	The goal is to issue information to all applicants.	Changing the behavior of the SWMP targeted audience: Effectiveness is measured by distribution to all applicants and its recording.	X	X	X	X	X	SWMPC
		CON3D Post the current construction site education and outreach information on the web site.	The goal is to post information annually and maintain records.	Changing the behavior of the SWMP targeted audience: Effectiveness is measured by records of postings.	X	X	X	X	X	SWMPC
		CON3E Develop a comprehensive municipal inspectors and planning staff training program specifically designed to address good municipal practices, requirements and procedures for construction runoff control and administration of City policies and ordinances.	The goal is publication of the program and training in Year 1.	Changing the behavior of the SWMP targeted audience: Effectiveness is measured by completion of at least one training course per year per employee.	X	X	X	X	X	Planning and SWMPC

	<p>CON3F Train Hotline operators in the proper and effective use of the service, including maintaining records of responses.</p>	<p>The goal is to complete training in Year 1.</p>	<p>Changing the behavior of the SWMP targeted audience: Effectiveness is measured by all operators training and SWMPC evaluation that procedures have been followed and records properly maintained.</p>	X	X	X	X	X	SWMPC
	<p>CON3G Develop and disseminate a construction site BMP policy and procedures Manual. (The CASAQA Construction BMP Manual may be used).</p>	<p>The goal is to adopt and disseminate the Manual via the web site and hard copies at City Hall annually.</p>	<p>Changing the behavior of the SWMP targeted audience: Effectiveness is measured by contractor use of BMPs contained with the Manual.</p>	X	X	X	X	X	Planning

3.1.5 Minimum Control Measure #5 - Post-Construction Stormwater Management New Development and Redevelopment

What is required?

The MS4 General Permit requires that the Permittee “require long-term post-construction BMPs that protect water quality and control runoff flow to be incorporated into new development and significant redevelopment projects. Post-construction programs are most efficient when they stress (i) low impact design; (ii) source controls; and (iii) treatment controls.”

Section D.2.e. of the MS4 General Permit requires that the Permittee:

- 1) “Develop, implement, and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb greater than or equal to one acre including projects less than one acre that are part of a larger plan of development or sale, that discharge to the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts;
- 2) Develop and implement strategies, which include a combination of structural and/or nonstructural BMPs appropriate for the community;
- 3) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law. For those Small MS4s described in Supplemental Provision E, the requirements must at least include the design standards contained in Attachment 4 of the MS4 General Permit or a functionally equivalent program that is acceptable to the appropriate RWQCB
- 4) Ensure adequate long-term operation and maintenance of BMPs.”

“The MS4 General Permit does not require redesign of K-12 school or community college facilities that have been submitted to the Department of General Services, Division of the State Architect before adoption of the permit, and which receive final approval from the State Allocation Board or the Public Works Board, as appropriate, on or before December 21, 2004.”

Based on additional guidance provided by EPA in Fact Sheet 2.7, “Post-Construction Site Runoff Control”, this section of the SWMP must include the following minimum requirements:

- Develop and implement strategies that include a combination of structural and/or non-structural best management practices;
- Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State or local law;

- Ensure adequate long-term operation and maintenance of controls; and
- Determine the appropriate best management practices and measurable goals for the post-construction runoff minimum control measure.

Why is it necessary?

The BMPs for this minimum control measure provide one of the best opportunities to reduce the generation of nonpoint source pollution from urban runoff through construction planning and design prior to development. Once a parcel is built, it is increasingly complex and expensive to correct problems. Site design and site-specific considerations are the focus of this minimum control measure. Stormwater pollution prevention considerations are most effective when addressed in the planning and design stages of project development. Effective long-term management and maintenance are critical. The best design opportunities are those with minimum maintenance needs. The goal of the SWMP is to integrate basic and practical stormwater management techniques into new development and significant redevelopment to protect water quality.

Conversion of formerly rural lands to urban development is one of the most important impacts to water quality in City. As watersheds become developed, the amount of total impervious surface area in the watershed increases which disrupts the natural hydrology of the watershed. Low Impact Development (LID) is a post-construction stormwater management technology that can protect and improve water quality by helping to restore watersheds to their pre-development hydrology.

Table 3.1.5
Post-Construction Stormwater Management - New Development and Redevelopment
Minimum Control Measure #5 and BMPs

swp = stormwater prevention
 SWMP = Stormwater Management Program
 SWMPC = Stormwater Management Program Coordinator

S = Sediment N = Nutrients
 GP = Gross pollutants (litter, trash, debris)
 T = Toxics (organics, hazardous waste, etc.)

P = Pathogens (bacteria)
 D = Detergents
 H = Hydrocarbons (oil, gas, lubricants)

PE = Pesticides M = Metals
 All = All POC Groups

Implementation Method	Potential POC	BMP	Measurable Goal	Effectiveness Measures	Permit Year					Implementer
					1	2	3	4	5	
Activity: Developing, implementing, and enforcing a program to address stormwater runoff from new development and redevelopment that disturb greater than or equal to one acre including projects less than one acre that are part of a larger plan of development, or sale, that discharge to the MS4 by ensuring that controls are in place that would minimize or prevent water quality impacts.										
Maintaining existing standards.	All	PC1A: Continue to enforce City requirements for all development and redevelopment to contain all stormwaters on-site.	The goal is maintain the existing standard as an improved standard is being prepared.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by maintaining the standard in Year 1.	X					Planning and Inspection
Improving existing standards.	All	PC1B: Prepare and adopt a LID (low impact design) ordinance that will incorporate the existing concept of on-site retention with the addition of a LID Manual to assist project designers and municipal staff in the incorporation of good retention design, source controls and treatment controls.	The goal is to prepare and adopt a new standard at the end of Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption by the end of Year 1.	X					Planning

		PC1B2 Develop and implement a Low Impact Development (LID) Design Standards Manual. The City of Santa Barbara's LID Manual can/may be used as a model for developing this manual.	The goal is to prepare and adopt a new standard at the end of Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption by the end of Year 1.	X					Planning
Implementing and enforcing improved standards.	All	PC1C: Implement and enforce the LID ordinance and Manual cited in PC1B and PC1B2 in Year 2.	The goal is to implement and enforce the new standard in Year 2 and to maintain in following years.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation and enforcement in Year 2.		X	X	X	X	Planning and Inspection
		PC1D: Inspect project sites one acre or more in size and smaller projects that are part of a common plan of development that is one acre or more in size for compliance with post-construction stormwater management controls as defined in the revised City Land Use Ordinances. The Ordinances shall specify the frequency and prioritization of site inspections and include a tracking system for approved treatment and flow/volume-based BMPs. Site inspections will be tracked and re-inspected to determine BMP effectiveness. The City will establish a self-certification and long-term maintenance program which includes spot checking post construction BMPs to ensure continued compliance. Inspections must include a check to verify that that post-construction runoff controls have been implemented and are being maintained.	The goal is to implement and enforce the new standard in Year 2 and to maintain in following years.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation and enforcement in Year 2.		X	X	X	X	Planning and Inspection

		PC1E Amend Zoning Ordinance to include LID Ordinance requirements.	The goal is assure all zoning districts are affected by the new standard.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation and enforcement in Year 2.		X	X	X	X	Planning and Inspection
Activity: Using an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment.										
Using an ordinance prohibiting all post-construction runoff from new development and redevelopment	All	PC2A Continue to enforce City requirements for all development and redevelopment to contain all stormwaters on-site.	The goal is maintain the existing standard as an improved standard is being prepared.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by maintaining the standard in Year 1.	X					Planning and Inspection
		PC2B Prepare and adopt a LID (low impact design) ordinance that will incorporate the existing concept of on-site retention with the addition of a LID Manual to assist project designers and municipal staff in the incorporation of good retention design, source controls and treatment controls.	The goal is to prepare and adopt a new standard at the end of Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption by the end of Year 1.	X					Planning
		PC2C Implement and enforce the LID ordinance and Manual cited in PC1B in Year 2.	The goal is to implement and enforce the new standard in Year 2 and to maintain in following years.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation and enforcement in Year 2.		X	X	X	X	Planning and Inspection
		PC2D Amend Zoning Ordinance to include LID Ordinance requirements.	The goal is assure all zoning districts are affected by the new standard.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation and enforcement in Year 2.		X	X	X	X	Planning and Inspection

Activity: Developing and implementing strategies, which include a combination of structural and/or non-structural BMPs appropriate for the MS4.											
Developing and adopting structural and non-structural BMPs for post-development and redevelopment.	All	PC3A Prepare and adopt a Post-Development / Redevelopment Ordinance which provides a strategy for incorporating post-development/ redevelopment structural BMPs and requirements for all new projects.	The goal is establish standards by the end of Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption in Year 1.	X					Planning	
		PC3B Prepare and adopt a Post-Development / Redevelopment Ordinance which provides a strategy for incorporating post-development/ redevelopment non-structural BMPs and requirements for all new projects.	The goal is establish standards by the end of Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption in Year 1.	X					Planning	
		PC3C Implement and enforce the adopted Post-Development / Redevelopment Ordinance in Year 2.	The goal is to require all new development and redevelopment to inspect, maintain and assure performance starting in Year 2.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured inspection reports and enforcement records.		X	X	X	X		Planning and Inspection
		PC3 : Incorporate post-construction stormwater management BMPs and requirements in the development review process.	The goal is to help ensure that all new development and redevelopment is inspected, maintained and performed starting in Year 2.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by maintenance and review of plan checking records.		X	X	X	X		Planning
		PC3D Include post-construction stormwater management in the City inspection process for City stormwater facilities.	The goal is to help ensure that all new development and redevelopment is inspected and maintained starting in Year 2.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by maintenance and review of inspection records.	X	X	X	X	X		Public Works and Inspection
		PC3E Revise existing ordinances to require specific post-construction stormwater management controls including the Design Standards specified in Attachment 4 of the MS4	The goal is to comply with the Ms4 General Permit.	Effectiveness is measured by the development of buffers in Year 3.				X	X		

		General Permit according to the schedule shown. The City will include BMPs and/or other control measures to establish and maintain a minimum 30-foot buffer zone for riparian areas and wetlands. The City will establish more substantial buffers where necessary, based on habitat degradation, water quality, and land management practices. The final ordinance / revisions will be adopted and enforcement provisions implemented by the end of permit year 3.									
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Activity: Ensuring adequate long-term operation and management of BMPs.											
Providing for long-term operation and maintenance of development / redevelopment BMPs	All	PC4A Add post-construction stormwater management to development review beginning in Year 1. The City must insure that development applications are only deemed complete if they include post-construction BMP selection, sizing, and siting.	The goal is eliminate post-construction runoff on new development and redevelopment through preventative measures such as CEQA.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by revision in Year 2.		X	X	X	X		
		PC4B Provide LID public education and outreach information to all permit applicants, property owners and the general public and maintain records of distribution.	The goal is assist with the general long-term knowledge and acceptance of the LID concept.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by the number of proposed projects submitted for plans review which voluntarily incorporate LID concepts and BMPs.	X	X	X	X	X	Planning	
		PC4C Include long-term maintenance and operation requirements upon property owners as conditions of approval on development permits. Include these requirements in the Post-Development / Redevelopment Ordinance and a requirement	The goal is to ensure adequate long-term BMP operation and management.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by annual owner and City inspection results for developments / redevelopments receiving conditions of approvals.		X	X	X	X	Planning	

		for owner submission of an development facility inspection reports to the City annually.								
		PC4D: Provide Low Impact Development public education and outreach for municipal staff, project applicants, contractors, developers, architects, property owners, and other interested parties.	The goal is to ensure adequate long-term BMP operation and management.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing BMPs that reduce POCs. Effectiveness will be measured for municipal staff by results of tests where the goal shall be 90% correct responses. Effectiveness for other shall ten participants annually in a training session. Certificates for attainment shall be provided to participants.		X	X	X	X	SWMPC
		PC4E: Municipal staff shall receive LID and HM training and education on the requirements as contained in the City's SWMP, LID Manual and ordinances. The training and education program shall be specified in the City's SWMP Training Manual.	The goal is to ensure adequate long-term BMP operation and management.	Protecting and restoring runoff and receiving water quality and improving beneficial use conditions, especially emphasizing City requirements in the LID Manual and ordinance and SWMP. Effectiveness will be measured for municipal staff by results of tests where the goal shall be 90% correct responses. Certificates for attainment shall be provided to participants.						
		PC4F: The City will measure LID education program effectiveness by measuring the quantity of applications after the first submittal that includes adequate HM and LID components to meet the City's ordinances.	The goal is to measure LID education program effectiveness.	Effectiveness will be measured by the quantity of applications after the first submittal that includes adequate HM and LID components meeting City ordinance.		X	X	X	X	Planning
		PC4G: Include policies for post-construction stormwater management in the revision of the Conservation Element. Stormwater management control measures will be integrated into all aspects of land use planning and development to protect healthy	The goal is to provide for long-term operation and maintenance of development / redevelopment BMPs.	Effectiveness is measured by amendment of the current Conservation Element as scheduled and required by State law in Year 5.					X	Planning

	<p>watersheds. The Element shall define future growth that protects watersheds. The Element shall identify a plan to pool resources with the County, Pismo Beach and Arroyo Grande to define water quality and watershed issues and conditions. The City will ensure they plan to limit EIA to no more than 3-10 percent of their jurisdictional area.</p>								
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3.1.6 Minimum Control Measure #6 - Pollution Prevention and Good Housekeeping for Municipal Operations

What is required?

The MS4 General Permit requires that the Permittee examine its own activities and develop a program to prevent the discharge of pollutants from these activities. At a minimum, the program must educate staff on pollution prevention and minimize pollutant sources.

Section D.2.f. of the MS4 General Permit requires that the Permittee:

- 1) “Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and
- 2) Using training materials that are available from the U.S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce stormwater pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and stormwater system maintenance.”

Based on additional guidance provided by U.S. EPA in Fact Sheet 2.8, “Pollution Prevention/Good Housekeeping”, this section of the SWMP must include the following minimum requirements:

- Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system;
- Include employee training on how to incorporate pollution prevention/good housekeeping techniques into municipal operations such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and stormwater system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from EPA, their State, or relevant organizations; and
- Determine the appropriate best management practices and measurable goals for the pollution prevention/good housekeeping minimum control measure.

Why is it necessary?

Municipal operations can contribute to stormwater pollution. Some examples of municipal operations that can contribute to stormwater pollution are:

- Street and bridge maintenance which can generate sediment, oil and grease, poly aromatic hydrocarbons, and other

contaminants;

- Streets and storm drains can contribute sediment, trash, and other pollutants;
- Government vehicle and equipment fueling, maintenance, repair, and storage can be a source of oil and grease, gasoline spills, and other automotive fluids;
- City Parks and Golf Courses can be a source of pesticides and fertilizers;
- Corporation yards can be a source of oil and grease and other chemicals;
- Government building and landscape maintenance can be a source of pesticides and fertilizers as well as other chemicals;
- Municipal water treatment facilities can be a source of chlorine; and
- Municipal wastewater treatment facilities can be a source of sewage, chlorine, and other chemicals.

BMPs for pollution prevention and good housekeeping for municipal operations can prevent the introduction of these pollutants into stormwater runoff.

**Table 3.1.6
Pollution Prevention and Good Housekeeping for Municipal Operations
Minimum Control Measure #6 and BMPs**

swp = stormwater prevention

SWMP = Stormwater Management Program

SWMPC = Stormwater Management Program Coordinator

S = Sediment

N = Nutrients

GP = Gross pollutants (litter, trash, debris)

T = Toxics (organics, hazardous waste, etc.)

P = Pathogens (bacteria)

PE = Pesticides

M = Metals

D = Detergents

H = Hydrocarbons (oil, gas, lubricants)

All = All POC Groups

Implementation Method	Potential POC	BMP	Measurable Goal	Effectiveness Measures	Permit Year					Implementer	
					1	2	3	4	5		
Activity: Developing and implementing an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operations into the storm sewer system.											
Development of Municipal operations and facilities plans	S,N, T,M, B,Oi ,O,O D	MO1A Implement the current Corporation Yard Plan. (See Appendix C).	The goal is to have an operational Plan prior to implementation of MO1B.	Complying with General Permit or RWQCB requirements: Effectiveness will be determined by prevention BMPs and measures contained within the Plan.	X						Public Works
		MO1B Prepare and adopt a new Corporation Yard Plan addressing all operations and facilities within. (Note: See MO1A).	The goal is adopt the Program in Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption within Year 1.	X						Public Works and SWMPC
		MO1C Implement a new Corporation Yard Plan and record its required activities.	The goal is to reduce and/or prevent pollutant runoff.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation of the Plan in Year 2, required facility and operations inspections, documentation and evaluations of prevention measures progress.		X	X	X	X		Public Works
		MO1D Implement the current Municipal Operations Program. (See Appendix C).	The goal is to have an operational Program prior to implementation of MO1E.	Complying with General Permit or RWQCB requirements: Effectiveness will be determined by prevention BMPs and measures contained within the Program.	X						Public Works

		MO1E Prepare and adopt a Municipal Operations Program addressing municipal facilities, street and hard surface sweeping cleaning, repair and maintenance, landscaped areas and parks, storm sewer inlets, pipe cleaning, detention and retention basins.	The goal is adopt the Program in Year 1.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption within Year 1.	X						Public Works and SWMPC
		MO1F Implement the Municipal Operations Program and record its required activities.	The goal is to reduce and/or prevent pollutant runoff.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation of the Plan in Year 2, required facility and operations inspections, documentation and evaluations of prevention measures progress.		X	X	X	X		Public Works
Development of Municipal operations and facilities plans	S,N, T,M, B,Oi ,O,O D	MO1G: Implement routine inspection and cleaning procedures and schedules for storm drain catch basins and other components of the storm sewer system that require cleaning at least twice per year on an ongoing basis. Additional cleaning may be needed based on historical need in specific locations. The storm sewer collection system inspection program will include inspecting all catch basins and other storm drain components twice per year. Catch basins and other storm drain components will be cleaned at least twice per year unless the inspections demonstrate that cleaning is not necessary. Preferably, cleaning will occur prior to wet season. City should re-inspect problem areas of debris accumulation during wet season.	The goal is to reduce and/or prevent pollutant runoff.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation of the Plan in Year 2, required facility and operations inspections, documentation and evaluations of prevention measures progress.		X	X	X	X		Public Works
Development of Municipal operations and facilities plans	S,N, T,M, B,Oi ,O,O D	MO1F: Use a self-inspection checklist to inspect City facilities for stormwater pollution prevention practices and procedures. A list and map of City facilities to inspect is located in Appendix I.	The goal is to reduce and/or prevent pollutant runoff.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by implementation of the Plan in Year 2, required facility and operations inspections, documentation and evaluations of prevention measures progress.	X	X	X	X	X		Public Works

Activity: Including employee training in incorporating pollution prevention / good housekeeping techniques into municipal operations.										
Municipal employee SWMP education and training for existing and new employees in Public Works, Planning, Inspection and Administration.	All	MO2A Identify course content, employee course requirements and methods of training and training administration for park and open space maintenance, fleet and building maintenance, new construction and land disturbances, street and hard surface maintenance, storage, corporation yard, government buildings and water treatment facilities, and stormwater system maintenance.	The goal is to include and train all employees in good pollution prevention practices.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by adoption and implementation of a comprehensive Training Manual in Year 1 and commencing training in Year 1.	X					SWMPC
		MO 2B Conduct and document training received and certificates received and report annually.	The goal is to assure all employees identified for training receive training and are recognized.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by training of all identified personnel.	X	X	X	X	X	SWMPC
		MO 2C See BMPs 1g, 4b, IL4D, IL12B, IL4E, PE 4b, CON3E and CON3F for related training.	The goal is to train all employees in good pollution prevention practices.	Changing the behavior of the SWMP targeted audience: Effectiveness will be measured by adoption and implementation of a comprehensive Training Manual in Year 1 and commencing training in Year 1.	X	X	X	X	X	SWMPC

Activity: Determining the appropriate best management practices (BMPs) and measurable goals for the pollution prevention / god housekeeping minimum control measure.										
Reviewing and adopting appropriate BMPs and measurable goals	All	MO3A Review and adopt BMPs contained in the California Municipal BMP Handbook and those adopted by other MS4s which are applicable and appropriate.	The goal is adopt BMPs applicable to City operations and facilities that will effectively prevent and/or eliminate pollution runoff.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by adoption of the CM Handbook in Year 1 and an annual review of BMPs adopted by other MS4s.	X	X	X	X	X	Public Works
		MO3B Include the solicitation and adoption of measures and goals from municipal employees in the City training program.	The goal is adopt BMPs and measurable goals applicable to City operations and facilities that most likely will prevent and/or eliminate pollution runoff.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by solicitations of employees for improved and new BMPs and measurable goals on a continuing basis and the number adopted.	X	X	X	X	X	Public Works
		MO3C Review adopted measurable goals of other MS4s.	The goal is to review web site postings by other MS4s of adopted measurable goals which have applicability to the City and to adopt.	Complying with General Permit or RWQCB requirements: Effectiveness will be measured by reviewing all MS4s in SLO and SB counties in Year 1 and implementing those most applicable.	X	X	X	X	X	SWMPC

Section 4. Monitoring, Annual Review and Reporting

4.1 What is Required

The NPDES Phase II Final Rule and the MS4 General Permit require that the City as a Permittee report annually on the progress of SWMP implementation. The City must track and assess its program to ensure BMP effectiveness and must conform to other monitoring requirements that may be imposed by the RWQCB. MS4 General Permit Section F cites the Permittee reporting, monitoring, and recordkeeping requirements as follows:

4.1.1 Reporting

“The Permittee must submit annual reports to the appropriate RWQCB by September 15th of each year, or as otherwise required by the RWQCB Executive Officer, unless exempted under MS4 General Permit Provision D.6. The report shall summarize the activities performed throughout the reporting period (July 1 through June 30) and must include:

- a. the status of compliance with permit conditions;
- b. an assessment of the appropriateness and effectiveness of the identified BMPs;
- c. the status of the identified measurable goals;
- d. the results of information collected and analyzed, including monitoring data, if any, during the reporting period;
- e. a summary of the stormwater activities the Permittee plans to undertake during the next reporting cycle;
- f. any proposed changes to the SWMP along with a justification of why the changes are necessary; and
- g. a change to the person or persons implementing and coordinating the SWMP.”

4.1.2 Monitoring

Chemical monitoring by Permittees is not required by the MS4 General Permit. The RWQCB may impose additional monitoring requirements, which may include a reporting component. RWQCBs may adopt such requirements on an individual or group basis. The MS4 General Permit says:

“Inspections, as a form of visual monitoring, are important to a stormwater program. Inspections of stormwater runoff and infrastructure (such as drop inlets, basins, and gutters) can say a lot about the effectiveness and needs of a stormwater program. Through inspections, non-stormwater discharges can be discovered and subsequently stopped, maintenance needs can be identified, and visual pollutants and erosion problems can be detected. Inspections of facilities are also important for public education and outreach, to ensure proper BMP implementation and maintenance, and to detect non-stormwater discharges. Additionally, chemical monitoring can be used to involve the public through citizen monitoring

groups, detect pollutants, identify and target pollutants of concern, illustrate water quality improvements and permit compliance, and participate in TMDL development and implementation.”

“More specifically, the objectives of a monitoring program may include:

- Assessing compliance with this General Permit
- Measuring and improving the effectiveness of the SWMP
- Assessing the chemical, physical, and biological impacts on receiving waters resulting from urban runoff
- Characterizing stormwater discharges
- Identifying source of pollutants; and
- Assessing the overall health and evaluating long-term trends in receiving water quality.”

4.1.3 Recordkeeping

“The Permittee must keep records required by the MS4 General Permit for at least five years or the duration of the General Permit if continued. The RWQCB Executive Officer may specify a longer time for record retention. The Permittee must submit the records to the RWQCB Executive Officer upon request. The Permittee must make the records, including the permit and SWMP, available to the public during regular business hours.”

4.2 Why it is necessary?

“The MS4 General Permit requires that regulated Small MS4s (Permittees) develop a SWMP designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. The SWRCB finds that the MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of stormwater pollutants to MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities. To do this, the Permittee must conduct and document evaluation and assessment of each relevant element of its program and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP. The purpose of the annual performance review is to evaluate:

- the SWMP’s effectiveness;
- the implementation of the SWMP;
- the status of measurable goals; and
- effectiveness of BMPs; and
- improvement opportunities to achieve MEP.”

4.3 City Assessment, Monitoring, Evaluation, and Reporting Procedures

The City will evaluate the effectiveness of the SWMP by reviewing the results of BMP implementation and progress made toward meeting the measurable goals. As part of the annual evaluation, a plan for updating and refining the SWMP will be developed. The evaluation and update procedures will be submitted, by the City, to the RWQCB on an annual basis.

The main purpose of the SWMP is to improve water quality in the receiving waters in the SWMP coverage area. It is important to monitor water quality to determine whether or not improvements are taking place. The Phase II Stormwater regulations note that it may be infeasible for jurisdictions to develop independent water quality monitoring programs. As a result, a jurisdiction may monitor water quality individually or take part in regional monitoring efforts when monitoring is required.

Non-profit organizations and other agencies in San Luis Obispo County are currently monitoring water quality in the County and the Central Coast region. These groups have relatively well-developed programs. The most effective means of monitoring water quality improvements under this SWMP will be achieved through coordination with this existing monitoring network. The City can provide support to these programs by providing opportunities to increase public education and awareness and by assisting in obtaining grant funds. The City can also participate in a central location for synthesizing information and for reporting results. Continued monitoring at the regional level will provide a better overall picture of water quality in the City and will make the most efficient use of City resources.

Inspections, as a form of visual monitoring, are a key aspect of the City's stormwater management program. Storm sewer and City facility stormwater pollution prevention inspections are incorporated into the SWMP. In addition, the City's public education and outreach and public participation and involvement BMPs such as the storm drain marking and adopt-a-drain programs are intended to increase stormwater awareness and watershed stewardship enabling citizens to monitor the storm sewer system in addition to inspections by City employees.

In addition to monitoring water quality and visual inspections, the City will monitor the individual BMPs in the SWMP. Monitoring the individual BMPs will include receiving public comments, keeping track of activities, and collecting any other information that may assist the City in evaluating the BMPs.

Evaluation of the SWMP will occur at two levels:

- 1) evaluation of individual BMPs, and
- 2) evaluation of overall program effectiveness.

The effectiveness of individual BMPs will be assessed on an annual basis in terms of progress made toward achieving the measurable goals. Construction site BMPs will be assessed real time as they are implemented and inspected at construction sites. The most common way to assess the overall effectiveness of stormwater management is through chemical monitoring of water quality; however, there are a number of factors that affect water quality that are outside the City's control and it may take some years before measurable water quality improvements are manifest.

The City will be supporting regional water quality monitoring efforts; however, due to the shortcomings mentioned above, the City will consider other indirect measurements as well to evaluate the effectiveness of the SWMP including, but not limited to, the following:

- Increases in the amount of sediment and debris removed from streets and catch basins
- Declines in hazardous materials spills;
- Declines in the number of complaints of illegal dumping;
- Increases in the number of development projects that are being required to implement BMPs;
- Increases in the number of construction sites that are implementing BMPs;
- Increases in inspection frequencies; and
- Other special studies developed to evaluate the effectiveness of specific BMPs.

Since much of this data has never been collected before, this first five-year permit term will be important for collecting baseline data to enable more specific and accurate measurable goals to be established in the future.

The evaluation of the SWMP will result in submittal of an annual work plan, program assessment, and annual report to the RWQCB. The work plan will outline the proposed changes to the SWMP and the projects proposed for the following year. Submittal of a work plan will assist the City in defining budgets for the following year and will identify the City's goals for the various departments involved in implementation of the work plan. The City's SWMP assessment will review the program's effectiveness in terms of criteria outlined above, the project's compliance within the current regulatory framework, and progress made towards regional planning efforts. It is recognized that as the Phase II Final Rule is implemented, the City must keep abreast of revisions to the Phase II Final Rule and other applicable Federal and State laws and regulations.

The SWMP must be assessed for any updates needed to comply with any new requirements that result from revised regulation. Assessment of progress made toward regional planning coordination is also important to the success of the program because water quality concerns are best addressed on a watershed scale. Currently, the City is working with other jurisdictions, agencies, and organizations within the County to develop regional planning mechanisms. The City anticipates further development of these relationships over the five-year permit term.

Based on the SWMP evaluation, revisions to the SWMP will be made necessary. This update process will allow the SWMP to continuously improve to better fit the needs of the regulated communities. This closed-loop iterative process of assessment, development, implementation, and evaluation gives the City a means to continuously improve the SWMP to better address water quality concerns now and in the future effectiveness of the SWMP including, but not limited to, the following:

- Increases in the amount of sediment and debris removed from streets and catch basins
- Declines in hazardous materials spills;
- Declines in the number of complaints of illegal dumping;
- Increases in the number of development projects that are being required to implement BMPs;
- Increases in the number of construction sites that are implementing BMPs;
- Increases in inspection frequencies; and
- Other special studies developed to evaluate the effectiveness of specific BMPs.

Since much of this data has never been collected before, this first five-year permit term will be important for collecting baseline data to enable more specific and accurate measurable goals to be established in the future.

The evaluation of the SWMP will result in submittal of an annual work plan, program assessment and annual report to the RWQCB. The work plan will outline the proposed changes to the SWMP and the projects proposed for the following year. Submittal of a work plan will assist the City in defining budgets for the following year and will identify the City's goals for the various departments involved in implementation of the work plan.

The City's SWMP assessment will review the program's effectiveness in terms of criteria outlined above, the project's compliance within the current regulatory framework and progress made towards regional planning efforts. It is recognized that as the Phase II Final Rule is implemented, the City must keep abreast of revisions to the Phase II Final Rule and other applicable Federal and State laws and regulations. The SWMP must be assessed for any updates needed to comply with any new requirements that result from revised regulation.

Assessment of progress made toward regional planning coordination is also important to the success of the program because water quality concerns are best addressed on a watershed scale. Currently, the City is working with other jurisdictions, agencies, and organizations within the City and beyond to develop regional planning mechanisms. The City anticipates further development of these relationships over the five-year permit term.

Based on the SWMP evaluation, revisions to the SWMP will be made as necessary. This update process will allow the SWMP to continuously improve to better fit the needs of the regulated communities. This closed-loop iterative process of assessment,

development, implementation, and evaluation gives the City a means to continuously improve the SWMP to better address water quality concerns now and in the future.

Section 5. SWMP Watershed Water Quality Issues and Land Use

The U.S. Environmental Protection Agency recommends that MS4s (the City) prepare a municipal assessment including water quality issues and existing land use patterns. Preparation of a municipal assessment helps the City focus the SWMP to its community of jurisdiction.

The City of Grover Beach municipal assessment is based on its current land use maps and available water quality information available provided by the RWQCB. The City identifies its general land use predominance and the location of its major waterbodies in this appendix. Land use and water quality issues are described in general terms in the following paragraphs.

5.1. City of Grover Beach Land Uses: Grover Beach is a ‘built-out’ community. Its growth and capacity to accommodate an increasing population will come largely through redevelopment of its urban environment. Past stormwater improvements have largely addressed the urban community’s ability to direct volume to points of disposal and to retention areas for replenishment of groundwater resources.

Land uses in the City include commercial, residential, industrial, public facilities, agriculture, and recreation. The industrial area houses businesses related to light manufacturing, trucking, storage, printing, vehicle repair and service. Agriculture is primarily limited to strawberry production and horse pastures. Commercial services include retailing and auto-related services. Recreational uses include various City and State park facilities and a RV park. Public facilities include schools, a fire station, police station and City and County offices.

A detailed land use category map follows. This map can be viewed in higher resolution on the internet on the City website at <http://www.grover.org>.

MAP 5.1 CITY OF GROVER BEACH LAND USE



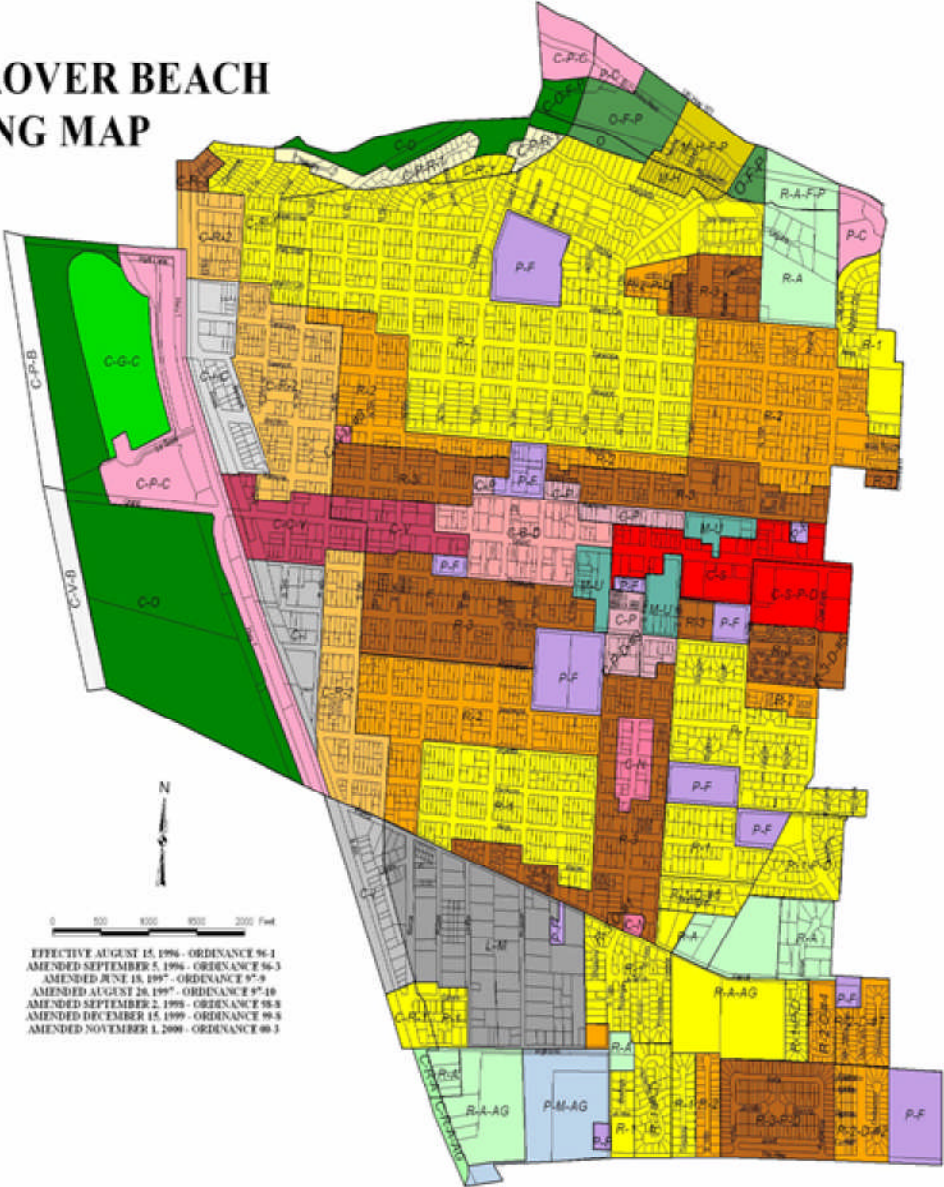
**CITY OF GROVER BEACH
ZONING MAP**

ZONING DISTRICTS

- Residential Agricultural (R-A)
- Coastal Residential Agricultural (C-R-A)
- Coastal Planned Single Fam. Residential (C-P-R-1)
- Single Family Residential (R-1)
- Coastal Single Family Residential (C-R-1)
- Duplex Residential (R-2)
- Coastal Residential (C-R-2)
- Multiple Residential (R-3)
- Coastal Multiple Residential (C-R-3)
- Mobilehome (M-H)
- Mixed Use Development (M-U)
- Professional Office (C-P)
- Neighborhood Commercial (C-N)
- Central Business District (C-B-D)
- Visitor Services (C-V)
- Coastal Visitor Services (C-C-V)
- Shopping Center (C-S)
- Planned Commercial (P-C)
- Coastal Planned Commercial (C-P-C)
- Light Manufacturing (L-M)
- Coastal Industrial (C-I)
- Coastal Industrial Commercial (C-I-C)
- Planned Manufacturing (P-M)
- Public Facilities (P-F)
- Open Space (O)
- Coastal Open Space (C-O)
- Coastal Golf Course (C-G-C)
- Coastal Vehicular Beach (C-V-B)
- Coastal Pedestrian Beach (C-P-B)

COMBINING DISTRICTS

- F-P Flood Plain
- D Design Development
- P-D Planned Community Development
- AG Agriculture Combining



EFFECTIVE AUGUST 15, 1996 - ORDINANCE 96-1
 AMENDED SEPTEMBER 5, 1996 - ORDINANCE 96-3
 AMENDED JUNE 18, 1997 - ORDINANCE 97-9
 AMENDED AUGUST 28, 1997 - ORDINANCE 97-10
 AMENDED SEPTEMBER 2, 1998 - ORDINANCE 98-8
 AMENDED DECEMBER 15, 1999 - ORDINANCE 99-5
 AMENDED NOVEMBER 1, 2000 - ORDINANCE 00-3

5.2. The Grover Beach SWMP Watershed Identified

Grover Beach, its watershed and SWMP coverage area are located in the 18060006 Central Coastal Watershed as shown in the figure below.

MAPS 6.2 CENTRAL COAST WATERSHED

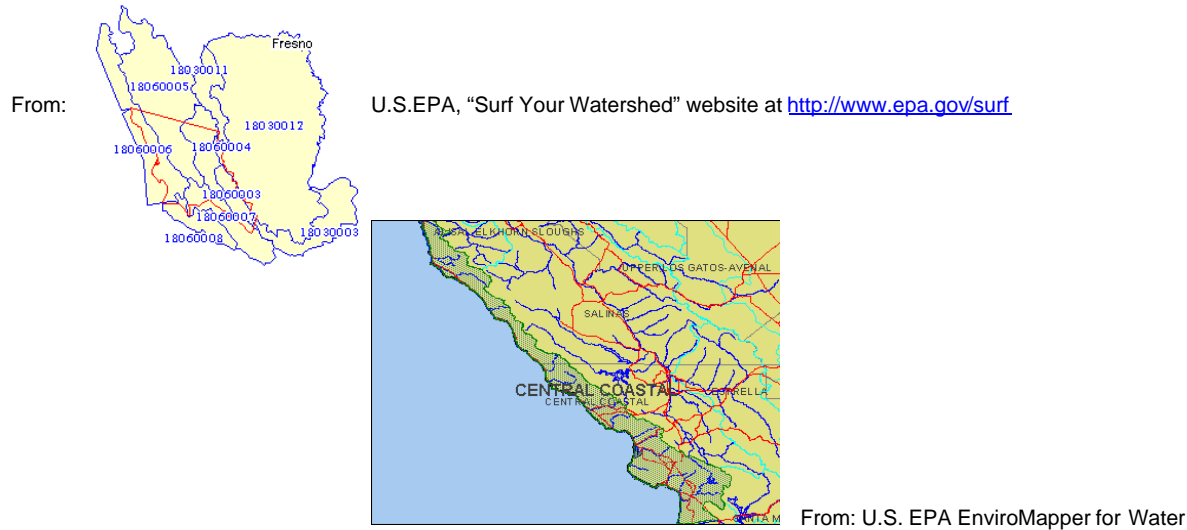
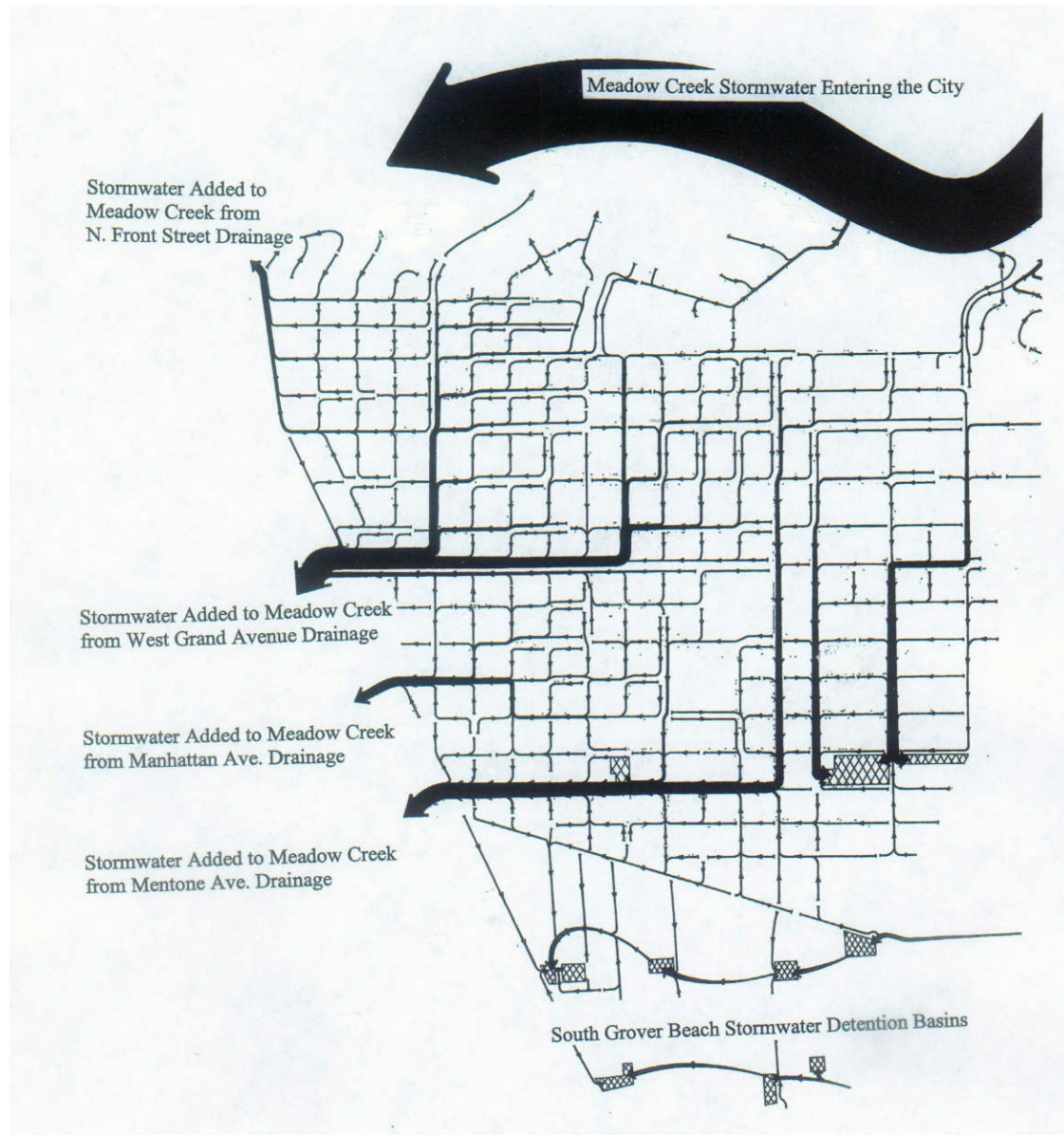


Table 6-1 lists the waterbodies in the SWMP watersheds and the corresponding California Hydrologic unit name and number. Meadow Creek is identified in the City’s SWMP coverage area.

Table 5-2 Major Waterbodies in the SWMP Coverage Area

U.S.G.S . HYDROLOGIC UNIT AND #	CA HYDROLOGIC UNIT AND #	WATERBODIES IN THE SWMP COVERAGE AREA	SWMP COMMUNITY
Central Coastal <u>18060006</u>	Estero Bay 310	Arroyo Grande Creek	Arroyo Grande -Oceano
		Meadow Creek (tributary to Oceano Lagoon)	Grover Beach - Oceano

Map 5.2 – City and Meadow Creek Storm Drainage



5.3. Meadow Creek Beneficial Uses

The Beneficial Uses in the SWMP coverage area, as developed by the RWQCB, are shown in the Table 6-2.

Table 5-3: Beneficial Uses of the Waterbodies in the SWMP Coverage Area, From the RWQCB Basin Plan, September 8, 1994, Inland Surface Waters

ESTERO BAY HYDROLOGIC UNIT																															
Waterbody Names	MUN	AGR	PRO	IND	GWR	REC1	REC2	WILD	COLD	WARM	MIGR	SPWN	BIO	RARE	EST	FRESH	NAV	PO	COMM	AQUA	SAL	SHELL									
Meadow Creek	X	X			X	X	X	X	X				X	X						X											

5.3.1 SWMP Beneficial Uses for Meadow Creek

Those listed beneficial uses which are unchallenged by this SWMP are listed below:

Ground Water Recharge (GWR)

Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers. Ground water recharge includes recharge of surface water underflow.

Non-Contact Water Recreation (REC-2)

Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Cold Fresh Water Habitat (COLD)

Uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

Wildlife Habitat (WILD)

Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

Preservation of Biological Habitats of Special Significance (BIOL)

Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.

Spawning, Reproduction, and/or Early Development (SPWN)

Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.

5.3.2 Challenged SWMP Beneficial Uses for Meadow Creek

Those uses identified by the RWQCB for Meadow Creek within the MS4 coverage area which are challenged are:

Municipal and Domestic Supply (MUN)

Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply. RWQCB should identify the specific uses which qualify inclusion of Meadow Creek in this category for that section of Meadow Creek within and/or downstream of the City of Grover Beach.

Agricultural Supply (AGR)

Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing. RWQCB should identify the specific uses which qualify inclusion of Meadow Creek in this category for that section of Meadow Creek within and/or downstream of the City of Grover Beach.

Water Contact Recreation (REC-1)

Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs. RWQCB should identify the specific uses which qualify inclusion of Meadow Creek in this category for that section of Meadow Creek within and/or downstream of the City of Grover Beach.

Commercial and Sport Fishing (COMM)

Uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes. RWQCB should identify the specific uses which qualify inclusion of Meadow Creek in this category for that section of Meadow Creek within and/or downstream of the City of Grover Beach.

Rare, Threatened, or Endangered Species (RARE)

Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered. RWQCB should identify the specific uses which qualify inclusion of Meadow Creek in this category for that section of Meadow Creek within and/or downstream of the City of Grover Beach.

5.4. SWMP Grover Beach and Meadow Creek Watershed Described

Prior to development, Grover Beach's natural watershed drained the northern hills to the south into a natural basin where stormwater was absorbed by the sandy soils. Today, urbanization channels the City's northerly neighborhoods stormwaters to Meadow Creek to the south and to the west as can be seen on Map 6.3. Detention basins that recycle stormwaters are important in collecting runoff from North Grover Beach, as well as South Grover Beach.

The City has been successful in requiring new development to detain stormwater on site. This is particularly evident in the industrial district and in residential subdivisions created in the past thirty years. The Mentone Basin was created in the 1980s to provide stormwater detention for the neighborhood's natural basin and to feed the groundwater table.

The City drainage pattern and volume relationship map (see Map 6.3) illustrates significant stormwater and urban runoff locations and patterns in the community. The map also illustrates the magnitude or capacity of flow for each stormwater or runoff route, block by block. As an example, the most significant stormwater volume is illustrated by the boldest arrow on the

map. The map clearly illustrates Meadow Creek's role as the City's major watercourse. The map also portrays the importance of stormwater basins and recycling in South Grover Beach.

Meadow Creek drains a 3,800 acre watershed located in rural San Luis Obispo County, Arroyo Grande and Pismo Beach. It carries runoff through Grover Beach to the Pacific Ocean. It is the City's greatest carrier of stormwater and runoff as it weaves in and out of the communities it serves. Meadow Creek is best understood by separately analyzing three sections of the creek with the SWMP coverage area.

5.4.1 The El Camino Real Channel Section

The waters of Meadow Creek originate in the rural and urbanized unincorporated area of San Luis Obispo County and incorporated Pismo Beach and Arroyo Grande. The Creek enters the City of Grover Beach in a buried structure near U.S. 101 and Oak Park Blvd. The Meadow Creek channel then follows a route parallel to U.S. 101 and El Camino Real to 4th Street where it enters the City of Pismo Beach and the sixty-nine acre Pismo Lake Ecological Preserve.

This section of the Grover Beach channel is heavily laden with willow and other flora which collects sediment and other solids. The channel has filled in with sediment over recent years, perhaps, as much as five feet within the last ten to fifteen years. Litigation in the 1980s addressed the importance and means of limiting upstream development sedimentation to this channel section.

The collection of sediment may be exacerbated by the slowing of creek flow due to the downstream creation and operation of a thirty acre lake within the Pismo Lake Ecological Preserve. The Preserve area was a depository of upstream silt prior to the lake's creation in 1986. This SWMP recommends the displacement of sediment from the Preserve area to the creek channel should be addressed by the Coastal San Luis Resource Conservation District which operates the Preserve.

Attempts by City crews to adequately remove sediment from the creek by hand have been futile. Removal of silt by hand is only semi-adequate until the creek's first seasonal storm flow, at which time, storm drain outlets serving Nacimiento Avenue housing become buried under silt. Mechanized removal of channel sediment buildup has historically been hampered by the California Department of Fish and Game's permitting process.

The California Department of Fish and Game financially assisted with the lake's creation. The Preserve is now reputed to be an important riparian breeding ground for waterfowl and used by 250 bird species. Salt water is introduced to the creek's fresh water in the lake according to the Coastal San Luis Resource Conservation District web site <http://www.coastalrcd.org/PismoLake.html> (see Appendix F.)

This channel section also collects storm waters and runoff from residential areas to the south and public roadways to the north. Silt buildup has buried creek storm drain outlets serving Nacimiento Avenue housing causing storm waters to threaten those residents during major storms.

Water quality improvement in this section of Meadow Creek must be dissected and addressed as follows:

- a. water quality entering this Grover Beach channel section
- b. water quality problems in this channel section
- c. water quality as it leaves this Grover Beach channel section

5.4.2 The Le Sage Channel Section

Meadow Creek waters enter Grover Beach again at a north City boundary located west of Hwy 1 after their impoundment at the Pismo Lake Ecological Preserve. Originally, the creek made its way through the beach sands to the Pacific Ocean near the North Beach Campground, but it was diverted and channelized in the early 1900s to a southerly direction en route to state campgrounds and lagoons in Oceano.

Water quality of the channel has changed in the creek due to the mixture of salt and fresh water at the Pismo Lake Ecological Preserve. The City diverts storm waters from Front Street and West Grand Avenue to the creek.

The channel within Grover Beach flows southerly and parallels a public golf course owned by the California Department of Parks and Recreation and operated by a private contractor. A private recreational vehicle park adjoins the creek channel to the east. The channel flows under West Grand Avenue and proceeds through State Park property.

Water quality concerns include runoff and impact from:

- a. the State golf course
- b. the Le Sage recreational vehicle park
- c. the State park
- d. Front Street, Le Sage Drive and West Grand Avenue

5.4.3 The Pismo State Beach Dunes Channel Section

The creek enters this section at West Grand Avenue and flows southerly to camp sites and lagoons in Oceano and then to the Pacific Ocean.

The Pismo State Beach Dunes Channel section of Meadow Creek lies within the ownership, operation and jurisdiction of the California Department of Parks and Recreation. It is generally inaccessible to the public due to the heavy overgrowth of willows and other flora. There have been undocumented reports from time to time that the area may provide some temporary shelter to the homeless. The watercourse is known to breed a large mosquito population which is blown across Hwy 1 to the Amtrak rail station during windy, summer days.

Map 5.4.1 Meadow Creek SWMP Channel Sections



Map 5.4.2 City Storm Drain Discharge to Meadow Creek



The City diverts storm waters from City streets to this section of the creek. They are illustrated on Map 6.5. Water quality concerns include runoff and impact from the City stormwater diversions, the stagnation of water within the State park and water quality entering this section.

Section 6. Potential Pollutants Addressed

6.1. Water Quality Concerns Specific To Grover Beach and Meadow Creek

A number of water quality concerns and their potential sources have been identified for the area covered by this SWMP. These specific concerns are in addition to the POCs commonly found in urban runoff.

Table 6.1. Water Quality Concerns Specific to Meadow Creek Channel Sections Addressed in SWMP

Waterbody	Water Quality Concern	Potential POC Sources	Potential POC	BMP
Meadow Creek- (El Camino Channel)	Sedimentation = S Salt Water Intrusion = SW	Natural Sources, Construction/Land Development, Pismo Lake Ecological Preserve	S S S S SW&S SW&S	IL5A IL5B IL5C IL5D IL5E IL5I
Meadow Creek- (LeSage Channel)	Salt Water Intrusion Sedimentation = S	Pismo Lake Ecological Preserve	SW&S SW&S	IL5E IL5I
Meadow Creek- (LeSage Channel)	Organics = O Nutrients = N	Golf Course Operations	N&O	IL5F
Meadow Creek- (LeSage Channel)	Petroleum hydrocarbons = H Trash = T	LeSage recreational vehicle park	T&H	IL5G
Meadow Creek- (Pismo State Beach Dunes Channel)	Petroleum hydrocarbons Trash = T Sedimentation = S Salt Water Intrusion = SW	State beach recreational uses	N&T SW&S	IL5H IL5I

6.2. Pollutants Commonly Associated with Land Use and Pollutants of Concern (POCs)

The Municipal Phase II General Permit says "POCs consist of any pollutants that exhibit one or more of the following characteristics:

- Current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water
- Elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein
- The detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna."

It identifies POCs found in urban runoff as:

- Sediments
- Non-sediment solids
- Nutrients
- Pathogens
- Oxygen-demanding substances
- Petroleum hydrocarbons
- Heavy metals
- Floatables
- Polycyclic aromatic hydrocarbons (PAHs)
- Trash
- Pesticides and herbicides

A land uses can generate pollutants that have an adverse affect upon the environment. The common pollutants listed below are generally associated with their corresponding land use category, but are not identified here as specific to Grover Beach.

Agriculture: The following pollutants are commonly associated with agricultural use:

- Pesticides and herbicides;
 - Siltation and increased erosion due to cultivation causing removal of topsoil, clogging of waterbodies, and fish kill;
- and
- Fertilizers contributing nutrients such as nitrogen and phosphorus to runoff leading to eutrophication.

Recreation: Recreational uses can result in the production of the following pollutants:

- Sewage discharge;

- Oil and gas;
- Pet wastes; and
- Siltation: Recreational vehicles, hikers, and bikers can cause erosion leading to siltation of adjacent waterbodies.

Residential: The pollutants below are often associated with residential uses:

- Chlorine: High levels of chlorine can be introduced into the environment when swimming pools are drained. High concentrations of chlorine are toxic to fish and wildlife;
- Oil and gas;
- Pesticides, herbicides, and fertilizers;
- Hazardous household products.

Commercial: Commercial uses have the potential to produce the following pollutants:

- Chemicals including detergents and synthetic organic chemicals;
- MTBE which volatilizes (becomes unstable) in soil and leaches into groundwater;
- Oil and grease.

Industrial: Several pollutants impacting water quality can result from industrial uses including:

- Heavy metals;
- Priority organics;
- Oil and gas;
- MTBE

6.3 Summary of Potential POCs and Related BMPs

The following Table identifies the BMPs contained the SWMP and their relationship to identified potential POCs.

Table 6.2 General Water Quality & Specific Meadow Creek Concerns Addressed in the SWMP

Potential Source	Generating Site	Potential Pollutant Activities/Source	POC Groups	BMP
Residential	Single Family Multi Family Mobile/Recreational Vehicle	<ul style="list-style-type: none"> • Driveway and sidewalk cleanup • Dumping/spills • Vehicle equipment maintenance and washing • Landscaping maintenance and irrigation • Illicit connections • Painting • Toxic materials disposal 	<ul style="list-style-type: none"> • Sediment • Nutrients (P,N,N03,NO2) • Pathogens (bacteria) • Hydrocarbons (oil,gas,lubricants) • Pesticides • Gross pollutants (litter, trash, debris) • Toxics (organics, hazardous waste, etc.) 	PE3A, PE3K,IL3K PE1A, PE1C, PE1E thru PE1L, PE4A, PE4B, PE3E thru PE3J, PE3L thru PE3O, PE4A thru PE4E, PP1A thru PE 1C, PP2A thru PP2E, PP3A thru PP3G, IL1A ,IL2A, IL2B, IL3A, IL3B, IL4E-IL4I, IL5G, CON1A thru CON1K, CON2A thru CON2F, COM3A thru CON3G, PC1A thru PC1E, PC2A thru PC2D, PC3A thru PC3E and PC4A thru PC4G
Commercial	Golf Course Auto Related Nurseries/garden centers Restaurants Agriculture Motel/Visitor Housing	<ul style="list-style-type: none"> • Driveway, parking lot and sidewalk cleanup • Dumping/spills • Building maintenance (power washing) • Landscaping maintenance and irrigation • Illicit connections • Grease wash down 	<ul style="list-style-type: none"> • Sediment • Nutrients (P,N,N03,NO2) • Pathogens (bacteria) • Hydrocarbons (oil,gas,lubricants) • Pesticides • Gross pollutants (litter, trash, debris) • Toxics (organics, hazardous waste, etc.) • Metals 	PE1B, PE1M, PE3B, IL4D PE1A, PE1C, PE1E thru PE1L, PE4A, PE4B, PE3E thru PE3J, PE3L thru PE3O, PE4A thru PE4E, PP1A thru PE 1C, PP2A thru PP2E, PP3A thru PP3G, IL1A ,IL2A, IL2B, IL3A, IL3B, IL4E-IL4I, IL5G, CON1A thru CON1K, CON2A thru CON2F, COM3A thru CON3G, PC1A thru PC1E, PC2A thru PC2D, PC3A thru PC3E and PC4A thru PC4G
Industrial	Garbage truck Metal Plating Petroleum storage Food processing/preparation Distribution/Vehicle Storage Auto Maintenance/Repair	<ul style="list-style-type: none"> • Driveway, parking lot and sidewalk cleanup • Dumping/spills • Vehicle equipment maintenance and washing • Landscaping maintenance and irrigation • Illicit connections 	<ul style="list-style-type: none"> • Sediment • Nutrients (P,N,N03,NO2) • Pathogens (bacteria) • Hydrocarbons (oil, gas, lubricants) • Pesticides • Gross pollutants (litter, trash, debris) • Toxics (organics, hazardous waste, 	PE1D, PE 3D PE1A, PE1C, PE1E thru PE1L, PE4A, PE4B, PE3E thru PE3J, PE3L thru PE3O, PE4A thru PE4E, PP1A thru PE 1C, PP2A thru PP2E, PP3A thru PP3G, IL1A ,IL2A,

		<ul style="list-style-type: none"> • Building maintenance (power washing) • Grease wash down 	<p>etc.) Metals</p>	<p>IL2B, IL3A, IL3B, IL4E-IL4I, IL5G, CON1A thru CON1K, CON2A thru CON2F, COM3A thru CON3G, PC1A thru PC1E, PC2A thru PC2D, PC3A thru PC3E and PC4A thru PC4G</p>
Institutional	Schools Churches Courts/Social services	<ul style="list-style-type: none"> • Driveway, parking lot and sidewalk cleanup • Dumping/spills • Landscaping maintenance and irrigation • Illicit connections • Building maintenance (power washing) 	<ul style="list-style-type: none"> • Sediment • Pathogens (bacteria) • Hydrocarbons (oil, gas ,lubricants) • Pesticides • Gross pollutants (litter, trash, debris) 	<p>IL 5D, IL5F, IL5B PE1A, PE1C, PE1E thru PE1L, PE4A, PE4B, PE3E thru PE3J, PE3L thru PE3O, PE4A thru PE4E, PP1A thru PE 1C, PP2A thru PP2E, PP3A thru PP3G, IL1A ,IL2A, IL2B, IL3A, IL3B, IL4E-IL4I, IL5G, CON1A thru CON1K, CON2A thru CON2F, COM3A thru CON3G, PC1A thru PC1E, PC2A thru PC2D, PC3A thru PC3E and PC4A thru PC4G</p>
Municipal	Fleet maintenance/storage Parks Multi-use facilities Emergency response facilities Administration facilities Parking lots/streets/highways	<ul style="list-style-type: none"> • Driveway, parking lot and sidewalk cleanup • Building maintenance (power washing) • Dumping/spills • Vehicle equipment maintenance and washing • Landscaping maintenance and irrigation • Illicit connections 	<ul style="list-style-type: none"> • Sediment • Nutrients (P,N,N03,NO2) • Hydrocarbons (oil ,gas, lubricants) • Pesticides • Detergents • Metals • Gross pollutants (litter, trash, debris) • Toxics (organics, hazardous waste, etc.) 	<p>IL5A, IL5C, IL5H, IL5I, MO1A thru MO1G MO2A thru MO2C MO3A thru MO3C PE1A, PE1C, PE1E thru PE1L, PE4A, PE4B, PE3E thru PE3J, PE3L thru PE3O, PE4A thru PE4E, PP1A thru PE 1C, PP2A thru PP2E, PP3A thru PP3G, IL1A ,IL2A, IL2B, IL3A, IL3B, IL4E-IL4I, IL5G, CON1A thru CON1K, CON2A thru CON2F, COM3A thru CON3G, PC1A thru PC1E, PC2A thru PC2D, PC3A thru PC3E and PC4A thru PC4G</p>
Other/All	Mobile Construction sites Detention/retention/recharge	<ul style="list-style-type: none"> • Vehicle accidents • Driveway and sidewalk cleanup • Dumping/spills 	<ul style="list-style-type: none"> • Sediment • Pathogens (bacteria) • Hydrocarbons (oil, gas ,lubricants) 	<p>PE1A, PE1C, PE1E thru PE1L, PE4A, PE4B, PE3E thru PE3J, PE3L thru PE3O,</p>

	basins	<ul style="list-style-type: none"> • Vehicle equipment maintenance and washing • Landscaping maintenance and irrigation • Illicit connections • Homeless encampments 	<ul style="list-style-type: none"> • Pesticides • Gross pollutants (litter, trash, debris) • Toxics (organics, hazardous waste, etc.) 	<p>PE4A thru PE4E, PP1A thru PE 1C, PP2A thru PP2E, PP3A thru PP3G, IL1A ,IL2A, IL2B, IL3A, IL3B, IL4E-IL4I, IL5G, CON1A thru CON1K, CON2A thru CON2F, COM3A thru CON3G, PC1A thru PC1E, PC2A thru PC2D, PC3A thru PC3E and PC4A thru PC4G</p>
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