

County of Kings

Storm Water Management Program

April 2012

**County of Kings
Storm Water Management Program**

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1.0 - INTRODUCTION

BACKGROUND

In 1972, the Federal Water Pollution Control Act (Clean Water Act) was amended to require compliance with a National Pollutant Discharge Elimination System (NPDES) permit for any point source discharge of pollutants to waters of the United States. Amendments to the Clean Water Act in 1987 established a framework for regulating storm water discharges under the NPDES program.

The Storm Water Phase II Final Rule adopted by the EPA applies to operators of regulated small Municipal Separate Storm Sewer Systems (MS4s). An MS4 is not limited to a system of underground pipes - it may include roads with drainage system, gutters and ditches. According to 40 CFR 122.26 (b)(8), municipal separate storm sewer is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains), owned by a public body, designated for collecting storm water, is not a combined sewer and is not a part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

The Phase II Final Rule requires nationwide coverage of all operators of small MS4s that are located within the boundaries of a Bureau of the Census defined urbanized area (UA). An UA is a land area that has a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile.

THE PERMIT AREA

Pursuant to direction from the Regional Water Quality Control Board (RWQCB), Kings County is required to prepare a Storm Water Management Program (SWMP) for the geographic area encompassed by the UAs within the County. The boundaries of UAs within Kings County are shown on Figure 1. Figure 1 also includes boundaries of Corcoran and Avenal, however, these areas do not contain populations that satisfy UA criteria. The RWQCB has directed the County of Kings to prepare this SWMP for the geographic area within the UAs surrounding the cities of Hanford and Lemoore, including the community of Armona (see Figure 2). Further, the County of Kings responsibility does not extend within the city limits of Hanford or Lemoore, which are preparing separate SWMPs for approval by the RWQCB. Figures 2 and 3 are Urban Cluster Outline Maps for Hanford and Lemoore, as provided by the RWQCB. Figure 4 serves to highlight the specific geographic areas of responsibility for the County of Kings.

Figure 5 is included to locate the various canals within the permit area. Figures 6 and 7 are aerial photographs of the subject areas. The areas of County responsibility consist generally of the suburban community of Armona, the El Rancho subdivision, Home

Garden area, the fringe areas of Hanford and Lemoore, low density residential developments, commercial enterprises, and agricultural property. High density residential, commercial, industrial, and institutional facilities are generally within the jurisdictions of the cities of Hanford and Lemoore, which are preparing specific SWMPs.

PURPOSE AND OBJECTIVES OF THE PROGRAM

The purpose of the County's SWMP is to develop a series of tasks or actions to reduce the discharge of pollutants from the storm drain systems to the maximum extent practicable, to protect water quality, and to satisfy appropriate objectives of the Clean Water Act. The tasks and actions are defined as Best Management Practices (BMPs).

The Phase II Final Rule requires grouping of the BMPs as follows:

- Public Participation/Involvement
- Public Education and Outreach
- Construction Site Runoff Control
- Illicit Discharge Detection and Elimination
- Pollution Prevention/Good Housekeeping
- Post-Construction Runoff Control

This SWMP describes how the BMPs will be performed and contains a schedule for implementation.

COUNTY OF KINGS MUNICIPAL SEPARATE STORM SEWER SYSTEM

The County of Kings storm water system is primarily associated with runoff from County roadways. The system consists primarily of roadside ditches serving to collect and contain runoff. There is a limited amount of storm water collection pipelines and detention basins. These pipeline systems are located in the community of Armona and several County Service Areas. Figure 8 shows the location of storm water systems in the community of Armona.

A comprehensive Storm Drain Master Plan does not exist for the study area. Individual developments within the area have been required to develop site specific solutions to storm drainage issues. Two of the existing storm drainage facilities are the responsibility of a Homeowner's Association rather than the County of Kings.

The topography of the study area is relatively flat and does not contain natural drainage channels. Figure 5 includes the locations of irrigation canals in the permit area. With two exceptions, Irrigation canals are not used by the County for conveyance or disposal of storm water runoff. Only one natural channel is identified west of the City of Lemoore. Due to the topography, the common method of storm water collection and disposal is to use retention basins excavated below ground level or to use remnants of sloughs that had once served as natural drainages. Drainage from developed areas is commonly directed to street curbs and gutters. The drainage is conveyed along the surface to inlets that direct the water to storm drain pipelines, and ultimately to retention basins.

2.0 - COMPLIANCE WITH FEDERAL REGULATIONS

PHASE II STORM WATER REGULATIONS

The Phase II Storm Water Regulations are intended to reduce adverse impacts to water quality and aquatic habitat from storm water discharges. Such discharges may contain concentrated levels of pollutants. Developed areas contain a large amount of impervious surfaces that will retain pollutants until precipitation generates the mechanism for the pollutants to come into contact with waters of the United States.

Wastes may also be derived from non-storm water sources, such as leaks from sanitary sewer systems, spills of materials on the roadways, deliberate discharges of paints and oils into the storm drain system, fertilizers from properties adjacent to collection systems, litter, and other similar sources.

Construction sites also are a potential source of pollutants that may impact waters of the United States. Pollutants from construction sites may include sediments, pesticides, petroleum products, construction materials, solvents, asphalt, cements, and similar materials.

The Phase II Final Rule requires the responsible public entity to address the following six Minimum Control Measures (MCM):

1. Public Education and Outreach - Encourages distribution of educational materials and other means to inform the public of the potential impacts of storm water to water quality.
2. Public Participation/Involvement - Provides the opportunity for the public to participate in program development and implementation.
3. Illicit Discharge Detection and Elimination - Develops a means to detect and eliminate illicit discharges by defining the location of collection systems and consequences of illegal or improper disposal of wastes.
4. Construction Site Storm Water Runoff Control - Develops a program for erosion and sediment control of construction activities that disturb 1 or more acres; it also requires an erosion and sediment control program for activities that disturb less than 1 acre if the activities are a part of a planned project that is greater than 1 acre.
5. Post Construction Storm Water Management in New Development - Develops a program to address post construction storm water runoff from disturbed sites once construction activities have been completed. The program may include requirements of construction of specific BMPs that are designed to mitigate pollution sources from the completed projects.
6. Pollution Prevention/Good Housekeeping for Municipal Operations - Preparation of a program to reduce pollutant runoff from municipal operations. The program may include training of staff or modification of existing procedures.

The EPA delegated to the State Water Resources Control Board (SWRCB) the authority to administer and enforce the Phase II NPDES Final Rule within the State of California. In 2003, the SWRCB adopted a General Permit for storm water discharges from regulated Small MS4s. The County of Kings is defined as a small MS4 and is required to prepare and implement a Storm Water Management Program for those portions of the UA between the cities of Hanford and Lemoore, excluding the land within the city limits of Hanford and Lemoore. Figures 6 and 7 show the UA boundaries which are the SWMP boundaries.

As required by 40 CFR 122.33(c)(1) and the Porter-Cologne Water Quality Control Act (Porter-Cologne) 13376, regulated Small MS4s automatically designated because they are within an urbanized area must submit to the appropriate RWQCB by March 10, 2003, a Notice of Intent (NOI) to comply with the terms of the General Permit, a Storm Water Management Program (SWMP), and the appropriate fee. Review of Title 23, Division 3, Chapter 9 of the California Code of Regulations indicates that the fee for Kings County is \$2,500. Correspondence between the County of Kings and the RWQCB has allowed the submittal of said required documents at this later date.

The regulated Small MS4 will be considered to be permitted once the NOI has been received by the RWQCB and written confirmation of an accepted plan is received from the RWQCB. The RWQCB Executive Officer may require revision of the SWMP if it is deemed inadequate to achieve compliance with the General Permit.

3.0 - STORM WATER MANAGEMENT PROGRAM

INTRODUCTION

In accordance with the Phase II NPDES General Permit, this SWMP addresses the six MCMs that were previously defined. The SWMP identifies tasks and a schedule for implementation for each of the MCMs to enable the County to comply with the objectives of the General Permit within the defined geographical area.

The MCMs are described in detail in the following text.

PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

This effort includes implementation of a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on local water bodies and the steps that can be taken to reduce storm water pollution. Efforts may be coordinated with other public entities such as the Cities of Hanford and Lemoore, the Kings Waste and Recycling Authority and Kings County Water District.

An informed community provides for probable support of implementation plans as the reasons for specific actions directed toward storm water discharges are understood with respect to potential consequences to pollution of water bodies. Public participation in the form of funding assistance, adherence to policies, and implementation of the program is enhanced if the community is well informed of the subject matter. Public service organizations may also provide assistance in general education of the County on the subject of storm water pollution.

Table 3-1 serves to consolidate the BMPs that have been identified to satisfy this MCM. In addition, this table includes the goals of the MCM, a description of how the practices would be implemented, and a schedule for the tasks.

PUBLIC INVOLVEMENT/PARTICIPATION

This effort serves to identify opportunities for the public to provide input and involvement in the SWMP. The EPA has determined that an active public may result in:

- Broader public support of the program, as a sense of ownership is gained through participation.
- Efficient implementation schedules as obstacles are generally fewer and volunteer support from the community is likely.

- A larger base of site specific expertise regarding appropriate management practices directed toward the greatest benefit to water quality.
- A link to other programs directed toward water quality in the general area (such as the cities of Hanford and Lemoore).

Table 3-2 serves to consolidate the BMPs that have been identified to satisfy this MCM. In addition, this table includes the goals of the MCM, a description of how the practices would be implemented, and a schedule for the tasks.

ILLCIT DISCHARGE DETECTION AND ELIMINATION

Recognizing the potential impacts illicit discharges may have on receiving waters, the Phase II Final Rule requires a regulated MS4 to develop, implement, and enforce an illicit discharge detection and elimination program. This program must include:

- A storm drainage system map, showing the location of all outfalls and the names and locations of all waters of the United States that receive discharges from these outfalls.
- A prohibition of non-storm water discharges into the MS4 and appropriate enforcement procedures and actions.
- A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4.
- Education of public employees, businesses, and the general public about the hazards and consequences of illegal discharges and improper waste disposal.
- Determination of appropriate BMPs and measurable goals for this subject matter.

Table 3-3 serves to consolidate the BMPs that have been identified to satisfy this MCM. In addition, this table includes the goals of the MCM, a description of how the practices would be implemented, and a schedule for the tasks.

CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Storm water runoff from construction sites often flows into MS4s and ultimately to waters of the United States. Sediment is often the primary pollutant from said sites. Sediment runoff rates from construction sites may be 10 or 20 times greater than those of agricultural lands. In addition to sediment, construction sites are often the source of solid wastes, nutrients (nitrogen, phosphorus), pesticides, oils and greases, concrete truck washouts, and solvents.

Table 3-4 serves to consolidate the BMPs that have been identified to satisfy this MCM. In addition, this table includes the goals of the MCM, a description of how the practices would be implemented, and a schedule for the tasks.

POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The operator (County of Kings) of a regulated small MS4 is required to prevent or reduce pollutant runoff from municipal operations into the storm drain system. Training guides are available from the EPA for incorporation of techniques to operations such as park and open space maintenance, storm system maintenance, street sweeping, and herbicide application.

Table 3-5 serves to consolidate the BMPs that have been identified to satisfy this MCM. In addition, this table includes the goals of the MCM, a description of how the practices would be implemented, and a schedule for the tasks.

POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Runoff from projects that have disturbed an acre or more have been shown to have the potential to effect receiving waters. Planning and design of improvements that minimize pollutants in post-construction circumstances are an effective means to mitigate said post-construction discharges.

Impacts of post construction runoff may be due to an increase in quantity and type of pollutants as compared to the site prior to development. Runoff from new developments may suspend and transport sediment, chemicals, oils, greases, metals, nutrients, and other pollutants. Upon deposition in retention basins or receiving waters, the detrimental effects of the pollutants are realized in the water quality or ecosystem. New developments commonly result in an increase of impervious surfaces that alters natural percolation processes of the site. Concentrated discharges direct storm water to locations and in quantities not previously observed. Scour and flooding may result.

Table 3-6 serves to consolidate the BMPs that have been identified to satisfy this MCM. In addition, this table includes the goals of the MCM, a description of how the practices would be implemented, and a schedule for the tasks.

4.0 - IMPLEMENTATION OF THE STORM WATER MANAGEMENT PROGRAM

SWMP MANAGER

The SWMP will be managed and overseen by the County Department of Public Works. The County Director of Public Works is responsible for specific management and implementation of the BMP's.

Table 3-1
Proposed BMPs, Measurable Goals, & Implementation Schedule

Public Education and Outreach on Storm Water Impacts

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
PE-1: Preparation and Distribution of Educational Materials	Education of residential, commercial, institutional, industrial, and construction entities within the identified area of the issues associated with the storm water program.						
	A) The County would provide the opportunity of Public Hearings at regularly scheduled meetings of the Board of Supervisors to generate public awareness of the issue.	Public notice of information meetings regarding storm water runoff issues within the County.					
	B) Coordination with Kings Waste and Recycling Authority regarding proper disposal of hazardous materials. Coordination with the cities of Hanford and Lemoore regarding content and distribution of educational materials. Coordination with the Kings County Water District regarding impacts to canals within the identified area would be developed.	County of Kings to contact the cities of Hanford and Lemoore, Kings County Water District, and the KWRA to obtain consistency in the information distributed.					


 Shaded area indicates year at which activity will be implemented

Table 3-1
Proposed BMPs, Measurable Goals, & Implementation Schedule

Public Education and Outreach on Storm Water Impacts

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	C) Preparation of educational flyers that would be available at County of Kings Public Works and Planning Departments for the general public.	Prepare flyers (bilingual) to be available at County Departments of Public Works and Planning to interested parties. Flyers would be distributed to all entities requesting building permits.					
PE-2: Public Outreach							
	Identify opportunities for public involvement regarding storm water pollution. Opportunities may include educational programs at the schools and waterway cleanups by service organizations.	Notify service organizations and schools of the opportunities for education and participation.					
PE-3: Targeting Homeowners Associations							
	Education of storm water pollution and the impact on water quality to the entities responsible for maintenance of the facilities.	Notify the Homeowners Associations in Armona of the impacts of storm water pollution to water resources.					


 Shaded area indicates year at which activity will be implemented

Table 3-2
Proposed BMPs, Measurable Goals, & Implementation Schedule

Public Involvement / Participation

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
PI-1: Activities/Public Participation							
Public Information Meeting to introduce the SWMP to the public.	Generate public awareness of the issue of storm water pollution in the County of Kings. Provide the opportunity for the public to review the SWMP and to identify means to participate.	Upon approval of the SWMP by the RWQCB, conduct a Public Information Meeting on the date of a regularly scheduled Board of Supervisors meeting to introduce and discuss the SWMP.					
Storm drain marking	<p>The goal is to stencil approximately 25% of the existing drain inlets per year through four years. The effectiveness of the program will be measured by identifying all drain inlets and identifying which inlets are marked each year. A map of the inlets would be prepared the first year and updated in subsequent years. The map would be included in the Annual Report of the SWMP.</p> <p>All new developments that include storm drain inlets would be required to stencil the inlets during construction.</p>	The County would solicit volunteer service organizations to assist with stenciling.	25 %	50 %	75 %	100 %	



-  Continuing activity, reviewed or revised as needed throughout implementation
-  One-time specific activity to develop or implement a measurable goal or subtask.

Table 3-2
Proposed BMPs, Measurable Goals, & Implementation Schedule

Public Involvement / Participation

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
<p>PI-2: Annual Public Involvement</p> <p>An annual opportunity for public involvement, review and participation in the SWMP would be offered.</p>	<p>An annual report identifying the responsibilities identified in the SWMP and the actions taken over the course of the previous year would be presented for public review. The annual report would also be submitted to the RWQCB.</p>	<p>SWMP Manager to prepare the annual report for submittal to the RWQCB. The annual report would also be presented to the County of Kings Board of Supervisors during a regularly scheduled Board Meeting on an annual basis.</p>					



-  Continuing activity, reviewed or revised as needed throughout implementation
-  One-time specific activity to develop or implement a measurable goal or subtask.

Table 3-3
Proposed BMPs, Measurable Goals, & Implementation Schedule

Illicit Discharge Detection and Elimination

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
ID-1: Storm Sewer System Map	<i>Develop a storm sewer system 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.</i>						
	A) Identify known storm sewer systems and outfalls to waters of the United States	SWMP Manager shall compile record drawings of existing storm drainage systems.					
	B) Conduct field investigations to verify storm sewer systems and outfalls locations.	Field review existing facilities to verify location of inlets and outfalls. Field review County roadways in the study area and identify locations of culverts or other roadway drainage facilities. Field review existing canals in the study area to determine if any outfalls exist that discharge to the canals.					
	C) Complete storm sewer system map	Information compiled from A and B above would be entered into a GIS system to develop an exhibit of the facilities and database for inspection records.					
	D) Develop procedures for adding new storm sewer systems and outfalls to overall system map	Construction of capital improvements would require data entry into the GIS system described in C above.					


 Shaded area indicates year at which activity will be implemented

Table 3-3
Proposed BMPs, Measurable Goals, & Implementation Schedule

Illicit Discharge Detection and Elimination

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
ID-2: Illicit Discharge Regulation & Enforcement	<i>Adopt ordinance that prohibits non-storm water discharges (including illegal dumping) to the system that are not authorized by a separate NPDES permit.</i>						
	A) Prepare draft ordinance to prohibit illicit discharges by June 30, 2013	County Counsel to develop draft ordinance consistent with NPDES regulations.					
	B) Revise ordinance and adopt by January 31, 2014						
	C) Develop procedures for inspection and reporting of illicit discharges and compiling records of reports. Include development of inspection checklists.	Locations of discharges and inspections to be entered into the GIS system identified above.					
	D) Develop procedures for reviewing, prioritizing and responding to reports (including but not limited to inspections).						
	E) Develop penalties for violations including mandatory termination of the discharge and associated fines.						
	F) Include procedure for the public to report illegal dumping and illicit connections.						
ID-3: Illicit Discharge Detection & Elimination Program	<i>Develop, implement, and enforce a program to detect and eliminate illicit discharges into the County of Kings MS4.</i>						
	A) Identify pollutants and problem areas within permit boundary through visual screening or testing. Address the 17 categories of non-storm water discharges or flows (i.e., authorized non-storm water discharges), listed in the general permit, only where they are identified as significant contributors of pollutants to the Small MS4.	Identified pollutants and problem areas to be entered into the GIS system identified above. The 17 categories include: 1) Water line flushing 2) Landscape irrigation 3) Diverted stream					


 Shaded area indicates year at which activity will be implemented

Table 3-3
Proposed BMPs, Measurable Goals, & Implementation Schedule

Illicit Discharge Detection and Elimination

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
		flows 4) Rising ground waters 5) Uncontaminated groundwater infiltration to separate storm sewers 6) Uncontaminated pumped groundwater 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					


 Shaded area indicates year at which activity will be implemented

Table 3-3
Proposed BMPs, Measurable Goals, & Implementation Schedule

Illicit Discharge Detection and Elimination

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	B) Locate pollutant sources (prioritize field investigations, SIC areas)						
	C) Eliminate illicit connections (develop procedures to remove illicit connections/ source of discharge with pollutants.)	Eliminated connections to be entered into the GIS system by date and location.					
	D) Develop procedures for program evaluation & assessment						
ID-4: Public Education	<i>Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste.</i>						
ID-4-1: Employee training	A) Develop training program for County of Kings employees						
	B) Implement training program	Provide education and training to representatives of County of Kings Sheriff Department, Fire Department, Public Works, Road Maintenance, Planning, and Building Inspection annually.					
	C) Evaluate program and modify as necessary						
ID-4-2: Public awareness program	A) Coordinate County departments and the City of Hanford and Lemoore to identify potential teaming opportunities						
	B) Develop program for public awareness and education, including mailers to businesses and residents.						
	C) Implement program						


 Shaded area indicates year at which activity will be implemented

Table 3-4
Proposed BMPs, Measurable Goals, & Implementation Schedule

Construction Site Storm Water Runoff Control

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
CON-1: Construction Site Storm Water Runoff Control Ordinance	<i>Adopt ordinance to require erosion and sediment controls on construction site and address proper management of non-sediment construction wastes to the extent allowable under State or local law. Ordinance shall include procedures and requirements for development review to address storm water quality issues. Ordinance shall define enforcement measures and penalties for non-compliance.</i>						
	A) Prepare draft ordinance by June 30, 2013	Prepare and submit draft ordinance for public review and Board of Supervisor consideration.					
	B) Revise ordinance and approval by January 31, 2014						
CON-2: Construction Site Operator Erosion, Sediment and Waste Control	<i>Set requirements for construction site operators to implement appropriate BMPs for sediment and erosion control, waste management, discarded building materials, concrete truck washout, chemicals, litter, sanitary waste, and non-storm water discharges..</i>						
	A) Develop and revise County Development Standards to include erosion and sediment control on construction sites. Standards may include an approved list and descriptions of BMPs for erosion control, sediment control, tracking, waste management, and non-storm water discharges. BMPs may include: Mulch and Hydroseeding Erosion Control Mats Gravel blankets at access to construction sites Sand bags or similar around drop inlets and catch basins Silt fences or fiber rolls Dust control Temporary drainage ponds	Standards to include fees to allow the implementation of the program to be self-financed.					


 Shaded area indicates year at which activity will be implemented.

Table 3-4
Proposed BMPs, Measurable Goals, & Implementation Schedule

Construction Site Storm Water Runoff Control

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	B) Train County of Kings Development Services and Planning staff to incorporate the updated Development Standards for construction sites.						
	C) Include local contractors for input in the development of County Standards for construction site BMPs.						
CON-3: Development Review Program	<i>Develop procedures for site plan review, which incorporate Consideration of potential water quality impacts.</i>						
	A) Develop guidelines for Storm Water Pollution Prevention Plans (SWPPP) for Construction Activities (>1 acre) and identify references for use by local contractors.						
	B) Modify existing development review procedures and checklist to include consideration of water quality impacts. Include requirements for NOI and SWPPP to be submitted for review by the County prior to plan approval.						
	C) Develop training program for development review staff on storm water regulations and new development review program. Program to include periodic re-fresher training and training for new staff.						
	D) Implement training program and new development conditions and review procedures.						
CON-4: Public Complaint Program	<i>Develop procedures for receipt, organizing and consideration of information submitted by the public.</i>						


 Shaded area indicates year at which activity will be implemented.

Table 3-4
Proposed BMPs, Measurable Goals, & Implementation Schedule

Construction Site Storm Water Runoff Control

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	A) Develop procedure for receiving complaints from the public and compiling data related to the complaint.						
	B) Develop procedures for reviewing complaints, prioritizing and responding (including but not limited to site inspections) and tracking.						
	C) Develop enforcement procedures including tiered system for enforcement measures and assessment of penalties for non-compliance or not correcting violations. Penalty system may include, warnings, follow-up, assessing fines or penalties, and reporting to the RWQCB. Enforcement and penalties to be included in ordinance described in BMP CON-1.						
	D) Incorporate procedures for receiving public complaints in Public Participation and Involvement MCMs.						
CON-5: Construction Site Inspection & Enforcement	<i>Develop procedures for site inspection and enforcement of control measures.</i>						
	A) Develop inspection program, procedures, checklist, and system for retaining inspection logs.						
	B) Develop procedures for prioritizing sites for inspection.						
	C) Develop training program for inspectors. Program to include general education of regulations, inspection procedures and re-fresher training.						
	D) Assign staff for storm water quality inspection and implement training program.						
	E) Implement inspection program	Incorporate inspection records into the GIS system previously described.					
	F) See BMP CON-4 for enforcement measures.						


 Shaded area indicates year at which activity will be implemented.

Table 3-5
Proposed BMPs, Measurable Goals, & Implementation Schedule

Pollution Prevention/ Good Housekeeping For Municipal Operations

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
OM-1: Operation & Maintenance Program for Prevention/ Reduction of Pollutant Runoff from Municipal Operations	<i>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 County operations.</i>						
	A) Identify County facilities or operations that possibly contribute to pollutants.						
	B) Develop plan and identify BMPs to reduce or eliminate pollutants in runoff from county facilities and maintenance operations.	Operations may include street sweeping, maintenance and cleaning of culverts and roadside ditches, and herbicide application.					
	C) Develop routine inspection schedule for county facilities						
	D) Implement O&M plans and BMPs to reduce pollutants in runoff.						
OM-2: Employee Training	<i>Using training materials that are available from U.S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.</i>						
	A) Coordinate with department heads and gather input on existing training programs.						
	B) Develop training program and schedule for county staff on storm water quality and best management practices for specific county operations; to be incorporated into existing training programs.						
	C) Implement training program						
	D) Obtain feedback from trainees, department head and make modifications to training program as appropriate.						
	E) Conduct annual training.						

Table 3-6
Proposed BMPs, Measurable Goals, & Implementation Schedule

Post-Construction Storm Water Management in New Development and Redevelopment

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
DEV-1: Development and Redevelopment Storm Water Program	<i>Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb >1 acres, including projects <1 acre that are part of a larger common plan of development or sale, that discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts.</i>						
	A) Evaluate existing county storm drainage system design standards, construction inspection approval for compliance, and maintenance schedules.	Determine if existing standards require modification to address post-construction storm water impacts.					
	B) Develop draft plan outlining proposed BMP standards (BMP DEV-2), construction inspection procedures for quality assurance, and maintenance (BMP DEV-4)	Technical criteria for consideration of standards may include impervious area within the site, amount of runoff anticipated, proximity to receiving waters, and pollutant loadings from land use. BMPs may include grassy swales for retention and filtration, conveyance facilities to detention basins, downspout drainage collection.					
	C) Develop enforcement procedures for design standards and ongoing maintenance, including monitoring/ reporting of maintenance activities. Enforcement measure may include fines for violations to ordinance (BMP DEV-3).						
DEV-2: Best Management Practices Standards & Strategies	<i>Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for post construction storm water runoff from developments that disturb at least one acre.</i>						


 Shaded area indicates year at which activity will be implemented.

Table 3-6
Proposed BMPs, Measurable Goals, & Implementation Schedule

Post-Construction Storm Water Management in New Development and Redevelopment

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	A) Research and evaluate existing structural and non-structural BMPs and compile list of potential standard BMPs.						
	B) Select and develop BMPs standards and design guidelines for new development and redevelopment. Standards <u>may</u> include requirements set forth in Attachment 4 of the general permit.						
	C) Develop design review guidance documents and checklist to assist development review staff review of structural and non-structural BMPs.						
	D) Train county staff on new BMP standards and checklist						
DEV-3: Post-Construction Storm Water Runoff Regulations & Enforcement	<i>Adopt ordinance to address post-construction runoff for new development and redevelopment projects to the extent allowable under State or local law.</i>						
	A) Prepare draft ordinance by June 30, 2013	County staff to prepare draft ordinance for public review and consideration by the County Board of Supervisors.					
	B) Revise ordinance and adopt by January 31, 2014. Ordinance to include requirements for private owned storm drainage systems (i.e., homeowner's associations) to develop a maintenance and staff training plan to be approved by the County.	Pursuant to review comments the draft ordinance would be revised and presented to the County Board of Supervisors for adoption.					
DEV-4: Operation & Maintenance Program	<i>Ensure adequate long-term operation and maintenance of BMPs.</i>						
	A) Coordinate with County maintenance departments and determine existing storm drainage system maintenance procedures and schedule.						



 Shaded area indicates year at which activity will be implemented.

Table 3-6
Proposed BMPs, Measurable Goals, & Implementation Schedule

Post-Construction Storm Water Management in New Development and Redevelopment

BMPs	Measurable Goals	Implementation	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
	B) Develop or update maintenance schedule and procedures.						
	C) Require privately owned storm drainage systems to develop maintenance and staff training plan (see BMP DEV-3). The plan may include periodic reporting of required maintenance and operation activities for on-site systems.	Incorporate private BMPs into the GIS system previously identified to maintain records of location, condition, and maintenance activities.					
	D) Develop reporting and tracking system for maintenance activities.						

 Shaded area indicates year at which activity will be implemented.