City of Lemoore

Storm Water Management Plan
(SWMP)

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CHAPTER 1 INTRODUCTION

The City of Lemoore has prepared a Storm Water Management Plan (SWMP) in compliance with the National Pollution Discharge Elimination System's (NPDES), Phase II Rule. As of March 10, 2003 the City of Lemoore was designated as a small Municipal Separate Storm Sewer Systems (MS4) under the Attachment 2 NPDES Phase II General Permit. The NPDES selected the California State Water Resources Control Board (SWRCB) to implement the Phase II Rule to all operators of small (MS4's) located within an urban area of less than 100,000 people.

The City of Lemoore was also designated as a high growth area in the general permit. Attachment 4 of the NPDES General Permit indicates any area subject to high growth or serving a population of 50,000 people must account for the thresholds of the permit area. The specific thresholds are identified as Receiving Water Limitations and Design Standards under Attachment 4 and included in this document for review and could be modified or amended as necessary.

The General Permit requires that the Storm Water Management Plan account for the following:

- Implementation of Best Management Practices (BMP) control measures to the maximum extent practical to protect water quality
- Reduce illicit discharge of pollutants to small MS4's and receiving waters
- Schedule completion dates for the proposed control measures prior to the end of the five-year SWMP implementation period.
- Identify responsible agency and individual to implement SWMP control measures

There are six Minimum Control Measures (MCM) identified within the Storm Water Management Plan that are the elements to achieving the measurable goals stated above.

1. Public Education and Outreach on Storm Water Impacts
2. Public Involvement and Participation
3. Illicit Discharge Detection and Elimination
4. Construction Site Storm Water Runoff Control
5. Post-Construction Storm Water Management in New Development and Redevelopment.
6. Pollution Prevention/ Good Housekeeping for Municipal Operations

These Minimum Control Measures will identify appropriate storm water pollution prevention programs, guide the development of new BMPs, establish BMP target dates, and provide a comprehensive plan to enhance and protect storm water quality within the City of Lemoore. Currently, the City of Lemoore has implemented good practices in the management of storm water pollution to comply with the minimum control measures listed above.
CHAPTER 2  NPDES PHASE II: REGULATORY BACKGROUND

Growing public awareness and concern for controlling water pollution led to the enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act (CWA). The CWA regulates discharge of pollutants to waters of the United States. Such discharge is unlawful from any point source without a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added §402(p), which established a framework for the regulation of storm water discharges under the NPDES Program.

In 1990, Phase I of the U.S. Environmental Protection Agency’s (EPA) storm water program was established under the CWA. Phase I relies on National Pollutant Discharge Elimination System (NPDES) permit coverage to address three types of storm water runoff:

1. "Medium" and "large" municipal separate storm sewer systems (MS4s) serving populations of 100,000 or greater
2. Construction activity disturbing 5 acres of land or greater
3. Ten categories of industrial activity

On December 8, 1999, the Phase II Final Rule was established. The Phase II program requires operators of MS4s in urbanized areas serving populations greater than 25,000 and less than 100,000 and operators of small construction sites disturbing 1 acre or more to implement programs and practices to control pollutants in storm water runoff. Such requirements are implemented through the use of the NPDES permitting system.

The Phase II NPDES Program is intended to reduce adverse impacts to water quality by implementing minimum control measures on unregulated storm water discharges that have the potential to cause increased environmental degradation.

Below is a list of environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activities:

- Development in urbanized areas substantially increases impervious surfaces, such as city streets, driveways, parking lots, and sidewalks, which results in concentrated pollutants settling until a storm event washes them into nearby storm drains.
- Pollutants found in urban runoff may include pesticides, fertilizers, oils, litter, heavy metals and sediment.
- The illicit connections of sanitary sewers, which can result in fecal coliform bacteria entering the storm sewer system. Storm water runoff transports these and other harmful pollutants, and then discharges to waterways via storm sewer systems. Conclusion: These discharges can contribute to a significant loss of fish, spawning and wildlife habitats, aesthetic value, and contamination of drinking water supplies and recreational waterways that can threaten public health.
Runoff from construction sites is a water quality concern as unknown sedimentation contaminates local water bodies, particularly small streams. Construction activities yield pollutants such as pesticides, petroleum products, construction chemicals, solvents, asphalts, and acids that can contaminate storm water runoff.
CHAPTER 3    CITY OF LEMOORE HISTORY

3.1 Community Setting

The City of Lemoore is centrally located around the northeast portion of State Highways 41 and 198 in Kings County, California. Approximately 6 miles west of Lemoore is the Lemoore Naval Air Station.

Few topographical features exist in Lemoore. At an average elevation of 221 feet above sea level the landscape gradually slopes at approximately 3 feet per mile in a southwesterly direction toward the Kings River. The climate is characterized as a warm desert with temperatures exceeding 100 degrees Fahrenheit in summer and seldom below 32 degrees Fahrenheit in winter. It is common to experience dense fog in winter months. The average annual rainfall is less than nine inches per year. Prevailing winds come from the northwest and average less than 10mph. This climate and topography is great for viable agricultural production almost year round.

The area represented in this SWMP encompasses the area included in the Lemoore 1990-2010 General Plan. The boundary areas are described pictorially in the Storm Water Drainage Map and the USGS Boundary Map located in the Appendices.

The existing drainage infrastructure within the boundaries covered by the SWMP includes natural drainage channels, retention basins (sumps), natural vegetation, piping, and pump stations. There are few areas where storm drainage is controlled via drainage inlets and underground structures.

3.2 Water Quality, Storage and Capacity

In a review of the city's historical drainage patterns illustrations show activities, reclamation of sloughs and wetlands for farmland, construction of roads, canals, drainage ditches, and urban development that permanently alter the flow to the Kings River. The development alterations of curbs, pump stations, and drainage ponds have captured and detained more storm water than historical flows running over land.

Today a network of detention basins and irrigation canals and channels allow the City of Lemoore to import the majority of its water supply. The Lemoore canal, approximately 150 feet wide running in a north south direction along the east side of the community, is the major source of surface water transport through the City of Lemoore. The canal currently receives regulated pumped storm water discharge that is routed through a large water storage reservoir identifying significant downstream impacts. A significant impact on the movement of water is the soil types within this region. The general plan identifies various soil properties to manage the storm water impacts that may impair drainage, irrigation, diversions, and waterways.

The water supply routed through a collection system is either owned / operated by the City of Lemoore or the Irrigation company. The city's collection of storm water uses a
piped distribution system to transport all storm water through detention facilities discharged by way of pump stations into adjacent irrigation channels.

The Dockstader and Fox Ditches are two other drainage channels that collect city storm water discharge and connect into a slough network. This system has been used to receive tail water and as storage ponds for irrigation purposes. Historically the sloughs have reached capacity and flooded neighboring properties. Due to the lack of outlets the system had to close all inlets to avoid further flood damage. In past practices the use of detention basins and pump stations has been adequate for the separation of potential pollutants from the pumped discharge. The reduction of nuisance water has been an issue raised and proposed solutions include flushing the pipelines and ditch channels or increase coordination efforts to mix/dilute the urban storm water runoff prior to irrigation.

Previous water studies within the Lemoore region identified some developments that have addressed the issues related to storm water discharge:

- Reconstruction of the weir on Lateral 8 of the Dockstader Ditch eliminating nuisance ponding upstream
- A new connection was established between the slough and the north end of Browns Ditch to remedy the flood hazards
- Recommend to improve the connection lines from slough system to Lateral 10, D1 Ditch of Lemoore Canal and Kings River for enhanced storm water distribution.

**Municipal Water Supply**

The existing Lemoore water system is designed to meet the projected population of 21,000. The system can functionally deliver 7,500 gallons per minute at a rate of 55 pounds per inch. The calculated water supply demand has been determined based on a 270 gallons per person per day.

Groundwater is the main source of water supply for the City's domestic water. It is encouraged for the city, county, and state agencies to facilitate a program to ensure safe uncontaminated ground water. Area to the north and eastern areas of Lemoore contain a water table depth greater than six feet and to the west and south less than six feet. In areas of potential development with a water table less than six feet will require further review. The city's existing storage capacity currently has two, one-million gallon aboveground steel tanks with a storage capacity of 1.5 million gallons. With this amount of storage capacity the city only has about seven hours at the maximum day usage. The tanks were constructed in 1971 and appear to be in good condition.

The city has developed a 240-acre industrial park that has a projected industrial water demand of 1,500,000 gallons. According to the 1990-2010 General Plan water quality report indicated water quality is excellent as there have been no detection of chemicals regulated by the state.
3.3 **Flood History**

In 1987 a study was conducted by the Federal Emergency Management Agency to identify potential flood hazards in Lemoore. This study concluded the number one flood hazard was street flooding. The following areas were given special flood hazard designations: the north side of Southern Pacific railroad between Lemoore Ave. and Lemoore Canal is Zone AH, 100-year shallow flooding, and between Cinnamon Drive and Grangeville on the east side of Highway 41 is Zone A, areas inundated by 100-year flood plain. The remaining area in the City of Lemoore and its sphere of influence are designated as Flood Zone X, known as areas outside of the 500-year flood plain.

3.4 **Storm Water Impacts**

Storm water runoff is a challenge for Lemoore as there is little to no slope to distribute storm water runoff efficiently for drainage and percolation of surfaces. This cumbersome task has been addressed by constructing lift stations and storm drains according to the 1990-2010 Lemoore General Plan. Since the adoption of the General Plan additional studies in 1996 and 1998 have been conducted and addressed some of the past concerns. It is noted as further development continues the existing storm water master plan may need to be revised necessary.

According to the Westside Drainage Study (1998) the estimated total acreage of storm water runoff distributed to the King River drainage system was 1767 acres and the volumetric discharge downstream was approximately 302 acre feet.
4.1 Minimum Control Measures

Best Management Practices (BMPs) have been selected for the City representing viable activities specific to Lemoore’s needs. These practices are intended to meet each Measurable Goal within the City’s budget and staff limitations by which this SWMP can be followed. The matrix prepared outlines all activities and practices that are designed to fulfill each MCM. It should be noted that some are not easily quantifiable or predictable, although a concerted effort has been made toward developing ways to measure their effectiveness.

Under Permit requirements, the SWMP is to, "Describe, measurable goals, and timetables for implementation in the following six program areas (Minimum Control Measures or MCM’s). Each Minimum Control Measure below is followed by a brief description of the proposed Best Management Practices satisfying its requirement."

MCM – 1: PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

The city must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies.

For non-traditional Permittees, the employee/user population may serve as “the public” to target for outreach and involvement. Non-traditional Small MS4s that discharge into medium and large MS4 may integrate public education and outreach program with the existing MS4 public education and outreach programs.

Per General Permit requirements, this MCM states that, "The Permittee must educate the public in its permitted jurisdiction about the importance of the storm water program and the public's role in the program."

BMP 1-1: A storm water quality link will be developed and added to the City’s website for public information and education. City webmaster will add link that directs the user to page dedicate to the SWMP. Page content will include all information from permit application as well as annual report information. Effectiveness will be measured by a web counter recording the number of visitors to the page. The goal for this page will be 5 hits per month for the 5-yr permit term. Website will be completed by June 30, 2010.

BMP 1-2: Mass mailings containing a storm water quality message will be distributed to residents of the City of Lemoore. Targeted groups and distribution methods will be evaluated annually throughout the permit term. The public education program can be tailored to address the viewpoints and concerns of
all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

This will consist of one mailing each quarter to include information on current/seasonal storm water issues specific to City of Lemoore, and should include info regarding actions residents can take to address current concerns. Effectiveness of the mailers will be measured by selecting a random sampling of City residents. They will be mailed a feedback questionnaire, with a measurable goal of 10% return. The questionnaire will be developed by December 2008.

BMP 1-3: The city will use existing water conservation pamphlets and acquire new material such as the EPA’s landscape maintenance brochure for public education. The City will maintain list of resources for public education and samples of materials. The City will distribute one mailing of this nature each year.

BMP 1-4: The City will continue to distribute water conservation and educational information to stakeholders, citizen groups and the residents of the City of Lemoore. Stakeholders include applicable commercial and industrial establishments that can potentially discharge into waterways and those who have expressed interest in the City’s storm water practices or water quality issues. Year 1 - One mailing to include information on illicit dumping into inlets. Years 2-5 semi-annually mailings on topic of landscape maintenance, water conservation, etc. as appropriate for current/seasonal issues. See BMP 1-3. The City will maintain a record of mailings and sample of materials sent to residents/groups.

MCM - 2: PUBLIC INVOLVEMENT/PARTICIPATION

Per General Permit requirements, this MCM states that, "The Permittee must comply with all State and local notice requirements when implementing a public involvement/participation program."

BMP 2-1: The City will comply with State and local public notice requirements. The City will prepare public notices as required through local media, and maintain a record of notices and proof materials.

BMP 2-2: The City will sponsor a storm drain-stenciling program for City-maintained storm drain structures. Year 1 - assessment of storm drains in need of stenciling, 25% stenciling per yr in remaining years, reassess at end of permit period. All storm drains marked or stenciled by end of 5 year permit period at rate of 25% per year beginning Year 2, though % may vary based on participation by volunteer groups. The City will record total inlets marked and compare with entire list of inlets to ensure that all inlets have been marked. Volunteer participation will be tracked in terms of number and variety of service organizations participating.
BMP 2-3: City employees and citizens will continue to participate in an Annual Clean-Up Day. Purchase equipment, train volunteers, and hold event yearly. This will be done in conjunction with BMP 2-1. The City will maintain list of interested volunteers, number of volunteers trained, equipment purchased, and volume of waste picked up.

BMP 2-4: The City will continue to implement its existing oil and automobile coolant recycling program. Beginning Year 2 the City will maintain record of quantities of waste products disposed of through recycling program. Year 1 - Establish baseline of current disposal quantities. Year 2 - Yearly increase in the quantities of waste products disposed of through the recycling program.

BMP 2-5: The City will continue to distribute water conservation and educational information to stakeholders, citizen groups and the public. Year 1 - One mailing to include information on illicit dumping into inlets. Years 2-5 - semi-annual mailings on topic of landscape maintenance, water conservation, etc. as appropriate for current/seasonal issues. See BMP 1-4. The City will maintain a record of mailings and sample of materials sent to residents/groups. The City will document any input received in response to mailed and distributed materials.

BMP 2-6: The City will conduct public stakeholders meetings beginning in Year 3 of plan and maintain list of attendees/agendas/etc. for the meetings. The City will document any input received at these meetings.

BMP 2-7: The City will create a 24-hour emergency response system, including hotline for public use, and will complete implementation by June 2012. The hotline will be advertised in our City newsletter and education materials distributed throughout the permit period. The sewer/stormwater on-call attendant will receive the calls and will be properly trained to address the situation. The City will track input, responses, and follow-up actions, including number of calls received, resulting enforcement actions, and actual illicit discharges.

MCM - 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

Per General Permit requirements, this MCM states that, "The Permittee must adopt and enforce ordinances or take equivalent measures that prohibit illicit discharges. The Permittee must also implement a program to detect illicit discharges."

The definition of an illicit discharge is any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities. Illicit discharges constituents
or pollutants of concern include the following: oil & grease, suspended solids, metals, gasoline, pesticides, and pathogens.

Certain discharges are considered as non-water discharges or flows and may be deemed as authorized discharges. The following types of discharges are authorized unless they first come into contact with pollutants prior to discharge:

- water line flushing
- landscape irrigation
- diverted stream flows
- rising groundwater
- uncontaminated groundwater infiltration
  (as defined in 40 CFR S35.2005(20)) to separate storm sewers
- uncontaminated pumped groundwater
- discharges from potable water sources
- foundation drains
- air conditioning condensation
- irrigation water
- springs
- water from crawl space pumps
- footing drains
- lawn watering
- individual residential car washing
- flows from riparian habitats and wetlands
- de-chlorinated swimming pool discharges

It should be noted that certain above-listed non-storm water discharges may be determined by the RWQCB to be significant sources of pollutants to waters of the State or physically interconnected MS4, or threaten water quality standards, at which point the City will be notified and the said discharge(s) would be removed from this authorized non-storm water discharge list.

**BMP 3-1:** The City will design a storm sewer map and database to monitor cleanups and address complaints of illicit fluid and solid waste dumping. The storm sewer map will include locations of all outfalls and receiving waters, and identify watersheds. The City will complete the database by June 2012. It will be maintained as tool for BMP 3-1, 3-2, and 3-6. Problem areas will be identified in Year 3.

**BMP 3-2:** The City will establish an Ordinance by which to track and enforce the prohibition of illicit discharges. Ordinance will address non-storm water discharges that are identified as significant contributors of pollutants to the City's storm system. The City will complete ordinance by Dec 31, 2011. Ordinance and enforcement mechanism will be in place by June 2012. Enforcement will be in a stepped approach, such as 1) education, 2) notification, 3) citation, and 4) fines. In addition, the City will identify new sources of pollution and revise previously sanctioned standards as appropriate.

**BMP 3-3:** The City will develop a taskforce assigned to responding to notices of illicit discharge into storm water inlets. The City will determine Wastewater/Storm Drain employees requiring training, and advertise the training as mandatory. 100% of applicable staff will be trained by Dec 2010. Training will be held annually thereafter.
BMP 3-4: The Lemoore Fire Department will continue to coordinate with various city departments in joining forces in response to notices of hazardous (HAZMAT) material spills. The City will determine public employees requiring training, and advertise the training as mandatory. 100% of applicable staff will be trained by Dec 2010. Training will be held annually thereafter. Records will be kept indicating persons and departmental attendance, and agendas or topics covered.

BMP 3-5: The City will create a 24-hour emergency response system, including hotline for public use, and will complete implementation by June 2011. The hotline will be advertised in our City newsletter and education materials distributed throughout the permit period. The sewer/stormwater on-call attendant will receive the calls and will be properly trained to address the situation. The City will track input, responses, and follow-up actions, including number of calls received, resulting enforcement actions, and actual illicit discharges.

BMP 3-6: The City will continue to distribute water conservation and educational information to stakeholders, citizen groups and the public. Stakeholders include applicable commercial and industrial establishments that can potentially discharge into waterways. Year 1 - One mailing to include information on illicit dumping into inlets. Years 2-5 semi-annually mailings on topic of landscape maintenance, water conservation, etc. as appropriate for current/seasonal issues. See BMP 1-3. The City will maintain a record of mailings and sample of materials sent to residents/groups. The City will track illicit discharge reports from commercial and industrial facilities that have received educational material.

BMP 3-7: The City will establish a program by which to track and enforce the prohibition of illicit discharges and illegal dumping using the hotline, new ordinance and a priority action list. Prioritization will occur through many avenues of City reporting, inspections, public complaints, industry and type of business targeting, and response to corrective measures will also play an integral part in creating the Priority action list. (Target date: Year 2)

BMP 3-8: The City shall provide training programs for building and construction inspectors, and any other related municipal staff (Target date: Year 2) regarding new illicit discharge control measures and requirements. Seminars and attendees will be logged and submitted with annual reports. Develop inspection procedures/checklists and include a section to help detect non-storm water discharge or illegal dumping. Training will occur at a minimum of one per year. (Target date: Year 4)

BMP 3-9: The City will establish protocols between the City’s first responders, including the Police Department, the Fire Department, and Public Works
Department to govern procedures to be implemented during a spill event. The City will train first responders in assessment, evaluation and implementation of Best Management Practices to be employed during a spill event. The City will review, revise and reinforce protocols for notification of appropriate County, State and Federal agencies regarding accidental discharges of potentially hazardous chemicals or material into the City’s storm drain system. (Target date: Year 2)

MCM - 4: CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

Per General Permit requirements, this MCM states that, "The Permittee must 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 inspections of construction sites and enforcement actions against violators."

BMP 4-1: The City will establish an erosion control ordinance requiring control of erosion sediment and other construction related pollutants at construction sites. The City will assist developers to prepare SWPPP forms for submission to the SWRCB. The City will provide sufficient authority for City staff to quickly address construction site run-off issues. Enforcement will be in a stepped approach, such as 1) education, 2) notification, 3) citation, and 4) fines. Code enforcement actions will follow department standards.

BMP 4-2: The City will establish guidelines for the creation of Storm Water Pollution Prevention Plans (SWPPP) for submission to the State Water Resources Control Board and shall be incorporated into the existing building permit process. City will requirement to file a Notice of Intent (NOI) with the SWRCB along with the SWPPP. Standards will follow supplemental provisions from Attachment 4 for high growth MS4s. Complete ordinance by June 2011. Ordinance will be completed after SWPPP Guidelines are completed (BMP 4-2). Tiered enforcement will include 1) fix-it tickets, 2) notices of violation, and 3) fines.

BMP 4-3: The City will train municipal inspectors on new requirements, implementation measures and enforcement actions related to storm water runoff control on construction sites exceeding 1 acre or more. The City will determine public employees requiring training, and advertise the training as mandatory. 100% of applicable staff will be trained by Dec 2010. Training will be held annually thereafter. The City will record the number and departmental representation of participants, agenda items, and training materials used for input to Annual Reports.
BMP 4-4: The City shall develop procedures for site plan review and a checklist form addressing enforcement of control measures that inspectors can take to the project site. Inspections will be conducted based on procedures, checklists, and training. The City will identify priority sites, establish construction site plan run-off prevention requirements, incorporate requirements into City’s design standards, train plan checkers on proper SWPPP submittals, create a detailed guide for developers to prepare SWPPPs, train City inspectors about SWPPPs and run-off prevention measures, and provide written procedures, checklist reports, daily logs, and notifications. The City will track the total number and percentage and sites that are in compliance. Complete procedures, requirements and checklist form will be created by June 2011. These procedures will be reviewed annually.

BMP 4-5: The City will establish a tracking system to implement procedures and enforcement policies for continual violations. The City will track the number of approved plans, assure that plan check review is consistent, and ensure that all developers in the City have proper SWPPPs. The City will complete database by June 2011.

BMP 4-6: Conduct public meetings for contractors beginning in Year 3, and maintain list of attendees/agendas/etc. for contractors meeting.

BMP 4-7: Develop recordkeeping system in the first year of the permit term to track public complaints and reports. Such records will include the nature of the complaint/report as well as the resolution of the complaint.

MCM – 5: POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

Per General Permit requirements, this MCM states that, "The Permittee must educate the public in its permitted jurisdiction about the importance of the storm water program and the public's role in the program."

BMP 5-1: The City will develop and write a new “Storm Water Criteria and BMP Standards Manual.” This manual will be written by year 3.

BMP 5-2: The City will provide technical assistance and outreach for developers and designers on new SWRCB mandates, ordinances and regulatory compliance related to provisions of construction site management. This will enhance awareness and cooperation amongst the public and private municipalities. City will put out an announcement to the public inviting attendance and participation in a workshop. Announcement will include information on how to obtain the new Storm Water Criteria and BMP Standards Manual. Workshop will provide an overview of Post-Construction Plan, and developers and designers will be encouraged to review the guidance procedures outlined in the Storm Water Criteria & BMP Standards Manual.
Workshop will be held before the public hearing held for ordinance approval.

**BMP 5-3:** The City will adopt an ordinance including enforcement for post construction runoff and establishing a tiered level of enforcement for violations. This will include implementing required of BMPs, and possible fees, and/or fines. The City will develop a planning process to incorporate new criteria, standards, and BMPs which will minimize, to the highest extent practical, the water quality impact for post-construction for new development and redevelopment. Standards will follow supplemental provisions from Attachment 4 for high growth MS4s. Ordinance will be completed by June 2011. Ordinance will be completed after SWPPP Guidelines and Post-Construction Plan are completed (BMP 4-2).

**BMP 5-4:** Training programs will be made mandatory for building and construction inspectors on post construction activities. Training of staff will be conducted through two-hour session held at Public Works conference room, and will be conducted by June 2011. All department staff assigned to tracking and enforcing violations will participate in training. The City will document training, attendees, and agendas. The City’s goal is for all BMP’s to be implemented and enforced, and for all detected violations to be investigated and followed-up to ensure violations do not reoccur.

**BMP 5-5:** The City will develop a procedures and checklist form that ensures compliance with the design standards and water limitations found in Attachment 4 of the General Permit. Complete procedures and checklist form will be created by June 2011. The City will track the total number and percentage and sites that are in compliance. Complete procedures, requirements and checklist form will be created by June 2011. These procedures will be reviewed annually.

**BMP 5-6:** The City will create a database of post construction BMPs pertinent to post construction building activities. Database will be completed by June 2011.

**BMP 5-7:** The City will establish a tracking system to implement procedures and enforcement policies for continual violations. Database will be completed by June 2011.

**BMP 5-8:** Establish regulatory requirements for maintenance of privately-owned controls. Develop a database for tracking private and public structural controls. Will likely be GIS, but other means may be used.
MCM – 6: POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

Per General Permit requirements, this MCM states that, "The Permittee must 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."

With an effort to reduce the pollutants, MS4 operators are proceeding to implement the following BMP's to account for the Pollution Prevention and Good Housekeeping minimum control measure.

BMP 6-1: The City will implement a Drainage Facility Maintenance Program - local drainage waterways, irrigation ditches, retention and detention basins, and all inlet structures shall be cleaned as needed. The City will determine public employees requiring training, and advertise the training as mandatory. Plan will created by June 2009. Employees will be trained and implementing plan by December 2009.

BMP 6-2: The City of Lemoore street sweeping operations will sweep every area of the town at least once every two weeks. This will minimize the potential for contaminants and storm water runoff from entering the storm drain system. Building inspectors will notify Refuse/Streets department of completed developments. Refuse/Streets will order sweeping within deadline and begin regular sweeping as appropriate. The City will maintain list of all completed developments with record made of date sweeping begins. The streets department will review street sweeping schedules annually to ensure that all areas of the City are covered. Extra focus will be placed on ensuring that all City streets are swept more frequently in the fall season and before major storm events.

BMP 6-3: An ‘Annual Administrative Report’ shall be submitted yearly to the Regional Water Quality Control Board concerning the implementation and effectiveness contained within the SWMP. The report will include development, incorporation, and use of ordinances and procedures, training programs for City employees and developers, information received (hotline calls) and resulting enforcement actions, and proposed changes and improvements to the City’s SWMP.

BMP 6-4: City departments will join forces to respond to notices of illegal dumping and establish ordinances by which to enforce and prosecute offenders. The City will perform routine inspections of its municipal facilities. The City will determine public employees requiring training, and advertise the training as mandatory. 100% of applicable staff will be trained by Dec 2010. Training will be held annually thereafter.
BMP 6-5: A SWMP Training Manual for Municipal Staff shall be created and distributed to all affected City employees. Employees on new requirements, implementation measures and enforcement actions related to storm water practices. The City will determine public employees requiring training, and advertise the training as mandatory. 100% of applicable staff will be trained by Dec 2011. Training will be held annually thereafter. Training will include proper use of fertilizers, pesticides, herbicides, and water use on City grounds. Crews will be trained to understand how their practices can affect the quality of run-off either from rainfall or irrigation. The City will document employee training with information regarding attendees, departments, and agendas.
CHAPTER 5  SWMP PERFORMANCE EVALUATION

5.1  Best Management Practices Evaluation

Measures of BMP effectiveness may begin once each BMP is implemented and/or functional. An annual report conducted by the Task Manager, designated by the City staff, and the RWQCB shall include findings, which evaluate each BMP’s effectiveness. The report shall review all aspects of current State and Federal Regulations against those applied to the SWMP, and outline necessary alterations to the SWMP. By the end of the five year permit term, the City anticipates to have a comprehensive, practical, and effective SWMP that may be utilized to begin the next five year term under NPDES permit regulations.

The review will be conducted amongst the department’s progress and feedback on each BMP measure’s success. The staff review will address the following criteria:

- **Effectiveness**: Is the BMP set up appropriately for City staff? Is there a better way of tracking/reporting? Is there a more appropriate staff person to handle part or all of the BMP responsibilities?
- **Partnerships**: Are state agencies, local municipalities, civic groups, etc. working together on storm water pollution prevention programs? Sharing information or cost?
- **Cost Analysis**: A rough cost-benefit analysis for each BMP scrutinized by staff, the public, or a regulatory agency will be encouraged so that determinations may be made as to what, if any, changes should be made.
- **Schedule**: Is the BMP implementation schedule adequate/appropriate or will the schedule need to be modified? Why?
- **Pollution Removal**: Is the BMP effective in improving storm water quality?
- **Regulatory Compliance**: Is the BMP compatible with environmental regulation?

5.2  Annual RWQCB SWMP Report

Annual reporting to the RWQCB is required to:

- Comply with permit requirements
- Collect data, research and records on BMP management
- Deliver results of BMP effectiveness or goal completion
- Identify BMPs to be modified, and why
- Provide schedule for next year’s SWMP implementation goals.
- Improve Measurable goals
- Notice stating ____________ current SWMP Task Manager
It is the responsibility of the SWMP Task Manager to take care of any and all interactions and reporting with the RWQCB.

It is important to mention the potential impact to pollution reduction other agencies or entities may have within the City. These include:

- Kings County Resource Management Agency
- School Districts within city
- John Heinlen Mutual Water company
- Lemoore Canal and Irrigation Company
CHAPTER 6 PROVISIONS OF PERMIT COMPLIANCE

6.1 Duty to Comply

The City of Lemoore accepts all responsibility to fully comply with all components of this SWMP. It is understood that the SWMP has set forth conditions that shall be instituted into the agencies structural organization for successful completion of the outlined BMPs and measurable goals. If the status of this permit is removed from the General permit for noncompliance or violations of both the Clean Water Act and the Porter-Cologne Water Quality Control Act it is understood that the authorized agents will need to pursue coverage under an individual or alternative general permit.

6.2 Authorized Agency

The agency responsible for the implementation and success of this SWMP is ultimately the City of Lemoore. The Public Works Director will assume the role and responsibility of the Task Manager to ensure operation and enforcement of the BMPs recognized under each Minimum Control Measure of the SWMP.

6.3 Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

[Signature]
Printed Name

City of Lemoore
Storm Water Management Plan (SWMP)
### MCM – 1: PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

<table>
<thead>
<tr>
<th>MCM OBJECTIVE</th>
<th>BMP NO.</th>
<th>BMP’s</th>
<th>MEASURABLE GOALS</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>The city must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies.</td>
<td>1-1</td>
<td>A storm water quality link will be developed and added to the City’s website for public information and education.</td>
<td>The effectiveness will be measured by a web counter recording the number of visitors to the page. The goal for this page will be 5 hits per month for the 5-yr permit term. Website will be completed by June 30, 2010.</td>
<td>City webmaster will add link that directs the user to page dedicate to the SWQMP. Will include all information from permit application as well as annual report info.</td>
</tr>
<tr>
<td></td>
<td>1-2</td>
<td>Mass mailings containing a storm water quality message will be distributed to local residents.</td>
<td>Effectiveness of the mailers will be measured by selecting a random sampling of City residents. They will be mailed a feedback questionnaire, with a measurable goal of 10% return. The questionnaire will be developed by December 2008.</td>
<td>One mailing each quarter to include information on current/seasonal stormwater issues specific to City of Lemoore. Should include info regarding actions residents can take to address current concerns.</td>
</tr>
<tr>
<td></td>
<td>1-3</td>
<td>The city will use existing water conservation pamphlets and acquire new material such as the EPA’s landscape maintenance brochure for public education.</td>
<td>Maintain list of resources for public education and samples of materials.</td>
<td>Acquire new resources each year for purposes of public education</td>
</tr>
<tr>
<td></td>
<td>1-4</td>
<td>The City will continue to distribute water conservation and educational information to stakeholders, citizen groups and the public.</td>
<td>Maintain a record of mailings and sample of materials sent to residents/groups.</td>
<td>Year 1 - One mailing to include information on illicit dumping into inlets. Years 2-5 semi-annually mailings on topic of landscape maintenance, water conservation, etc. as appropriate for current/seasonal issues. See BMP 1-3</td>
</tr>
</tbody>
</table>

Person to implement MCM: Public Works Director

<table>
<thead>
<tr>
<th>MCM-1 Requirements</th>
<th>Requirement met through BMPs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement 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 waterbodies and the steps that can be taken to reduce storm water pollution.</td>
<td>All</td>
</tr>
<tr>
<td>Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.</td>
<td>All</td>
</tr>
</tbody>
</table>
## MCM 2: PUBLIC INVOLVEMENT/PARTICIPATION

<table>
<thead>
<tr>
<th>MCM OBJECTIVE</th>
<th>BMP NO.</th>
<th>BMP’s</th>
<th>MEASURABLE GOALS</th>
<th>IMPLEMENTATION</th>
<th>IMPLEMENTATION SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per General Permit requirements, this MCM states that, &quot;The Permittee must comply with all State and local notice requirements when implementing a public involvement/participation program.&quot;</td>
<td>2-1</td>
<td>Comply with State and local public notice requirements</td>
<td>Maintain a record of notices and proof materials.</td>
<td>Prepare public notices as required through local media.</td>
<td>100% 100% 100% 100% 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The City will sponsor a storm drain-stenciling program for City-maintained storm drain structures.</td>
<td>All storm drains marked or stenciled by end of 5 year permit period at rate of 25% per year beginning Year 2, though % may vary based on participation by volunteer groups. Record total inlets marked.</td>
<td>Year 1 assessment of storm drains in need of stenciling, 25% stenciling per yr in remaining years, reassess at end of permit period</td>
<td>25% 50% 75% 100%*</td>
</tr>
<tr>
<td></td>
<td>2-2</td>
<td>City employees and citizens will continue to participate in an Annual Clean-Up Day</td>
<td>Maintain list of interested volunteers, number of volunteers trained, and equipment purchased.</td>
<td>Purchase equipment, train volunteers, and hold event yearly. In conjunction with BMP 2-1</td>
<td>100% 100% 100% 100% 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The City will continue to implement its existing oil and automobile coolant recycling program.</td>
<td>Year 1 Establish baseline of current disposal quantities. Year 2 - Yearly increase in the quantities of waste products disposed of through recycling program</td>
<td>Beginning Year 2 maintain record of quantities of waste products disposed of through recycling program</td>
<td>100% 100% 100% 100% 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The City will continue to distribute water conservation and educational information to stakeholders, citizen groups and the public.</td>
<td>Maintain a record of mailings and sample of materials sent to residents/groups.</td>
<td>Year 1 - One mailing to include information on illicit dumping into inlets. Years 2-5 semi-annual mailings on topic of landscape maintenance, water conservation, etc. as appropriate for current/seasonal issues. See BMP 1-4</td>
<td>100% 100% 100% 100% 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The City will conduct public stakeholders meetings.</td>
<td>Maintain list of attendees/agendas/etc. for meetings</td>
<td>Conduct stakeholder meetings beginning in Year 3 of plan</td>
<td>100% 100% 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The City will create a 24-hour emergency response system, including hotline for public use.</td>
<td>Complete implementation by June 2012.</td>
<td>Implementation is responsibility of Public Works Director.</td>
<td>100% 100%</td>
</tr>
</tbody>
</table>

**Person to implement MCM:** Public Works Director

### MCM-2 Requirements

<table>
<thead>
<tr>
<th>Requirement met through BMPs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comply with applicable State, Tribal, and local public notice requirements</td>
</tr>
<tr>
<td>Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.</td>
</tr>
<tr>
<td>MCM OBJECTIVE</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>Per General Permit requirements, this MCM states that, &quot;The Permittee must adopt and enforce ordinances or take equivalent measures that prohibit illicit discharges. The Permittee must also implement a program to detect illicit discharges.&quot; The definition of an illicit discharge is any discharge to a municipal separate storm sewer that is not composed entirely of storm water except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting activities. Illicit discharges constituents or pollutants of concern include the following: oil &amp; grease, suspended solids, metals, gasoline, pesticides, and pathogens.</td>
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<td>3-7</td>
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<td>3-8</td>
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<td>3-9</td>
</tr>
</tbody>
</table>

**Person to implement MCM:** Public Works Director

<table>
<thead>
<tr>
<th>MCM-3 Requirements</th>
<th>Requirement met through BMPs:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from these outfalls.</td>
<td>3-1</td>
</tr>
<tr>
<td>Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on non-storm water discharges into the MS4, and appropriate enforcement procedures and actions.</td>
<td>3-2, 3-3, 3-5</td>
</tr>
<tr>
<td>A plan to detect and address non-storm water discharges, including illegal dumping, into the MS4.</td>
<td>3-3, 3-4, 3-5</td>
</tr>
<tr>
<td>The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste.</td>
<td>3-3, 3-6</td>
</tr>
<tr>
<td>Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.</td>
<td>All</td>
</tr>
</tbody>
</table>
### MCM 4: CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

#### MCM OBJECTIVE

<table>
<thead>
<tr>
<th>BMP NO.</th>
<th>BMP's</th>
<th>MEASURABLE GOALS</th>
<th>IMPLEMENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-1</td>
<td>The City will establish an erosion control ordinance requiring control of erosion sediment and other construction related pollutants at construction sites.</td>
<td>Enforcement will be in a stepped approach, such as 1) education, 2) notification, 3) citation, and 4) fines. Code enforcement actions will follow department standards. This will be implemented by June 2011.</td>
<td>The City will assist developers to prepare SWPPP forms for submission to the SWRCB. The City will provide sufficient authority for City staff to quickly address construction site run-off issues.</td>
</tr>
<tr>
<td>4-2</td>
<td>The City will establish guidelines for the creation of Storm Water Pollution Prevention Plans (SWPPP) and shall be incorporated into the existing building permit process. Standards will follow supplemental provisions from Attachment 4 for high growth MS4s.</td>
<td>Complete SWPPP Guidelines and BMP Standards by June, 2011. Measurable goal will be for 100% of all grading plans for construction sites &gt;= 1 acre to follow SWPPP Guidelines and standards (check and enforced through the grading plan reviewers by June 2011)</td>
<td>Development of SWPPP Guidelines is responsibility of Public Works Director. Will include development of fees to make implementation self-financed.</td>
</tr>
<tr>
<td>4-3</td>
<td>Train municipal inspectors on new requirements, implementation measures and enforcement actions related to storm water runoff control on construction sites exceeding 1 acre or more.</td>
<td>100% applicable staff trained by Dec 2010. Training to be held annually.</td>
<td>Determine public employees requiring training, and advertise the training as mandatory.</td>
</tr>
<tr>
<td>4-4</td>
<td>The City shall develop a procedures and checklist form addressing enforcement of control measures that inspectors can take to the project site.</td>
<td>Complete procedures and checklist form by June 2011.</td>
<td>Form design to be at the direction of Public Works Director.</td>
</tr>
<tr>
<td>4-5</td>
<td>Establish a tracking system to implement procedures and enforcement policies for continual violations.</td>
<td>Complete database by June 2011.</td>
<td>Database design to be at the direction of Public Works Director.</td>
</tr>
<tr>
<td>4-6</td>
<td>Conduct public meetings for contractors.</td>
<td>Maintain list of attendees/ agendas/etc. for contractors meeting</td>
<td>Conduct contractors meetings beginning in Year 3 of plan</td>
</tr>
<tr>
<td>4-7</td>
<td>Develop recordkeeping system to track public complaints and reports.</td>
<td>This tracking system will be completed in Year 1.</td>
<td>Records will include the nature of the complaint/report as well as the resolution of the complaint.</td>
</tr>
</tbody>
</table>

#### Person to implement MCM: Public Works Director

### MCM-4 Requirements

- **Requirement met through BMPs:**
  - Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites. 4-1
  - Have procedures for site plan review of construction plans that consider potential water quality impacts. 4-2
  - Have procedures for site inspection and enforcement of control measures. 4-3, 4-4, 4-5
  - Establish procedures for the receipt and consideration of information submitted by the public. 4-6, 4-7
  - Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure. All
### MCM – 5: POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

<table>
<thead>
<tr>
<th>MCM OBJECTIVE</th>
<th>BMP NO.</th>
<th>BMP's</th>
<th>MEASURABLE GOALS</th>
<th>IMPLEMENTATION</th>
<th>IMPLEMENTATION SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per General Permit requirements, this MCM states that, &quot;The Permittee must educate the public in its permitted jurisdiction about the importance of the storm water program and the public's role in the program.&quot;</td>
<td>5-1</td>
<td>The City will develop and write a new &quot;Storm Water Criteria and BMP Standards Manual.&quot;</td>
<td>this manual will be written by Year 3.</td>
<td>The City will develop and write a new &quot;Storm Water Criteria and BMP Standards Manual.&quot;</td>
<td>YEAR 1 (2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide technical assistance and outreach for developers and designers on new SWRCB mandates, ordinances and regulatory compliance related to provisions of construction site management. This will enhance awareness and cooperation amongst the public and private municipalities.</td>
<td>Workshop will provide an overview of Post-Construction Plan, and developers and designers will be encouraged to review the guidance procedures outlined in the Storm Water Criteria &amp; BMP Standards Manual. Workshop to be held before the public hearing held for ordinance approval. and will be completed by year 4.</td>
<td>City will put out announcement to the public inviting attendance and participation in the workshop. Announcement will include information on how to obtain the new Storm Water Criteria and BMP Standards Manual.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5-3</td>
<td>The City will establish a control ordinance for the Post-Construction Plan. Code enforcement actions will follow department protocols. Standards will follow supplemental provisions from Attachment4 for high growth MS4s.</td>
<td>Complete ordinance by June, 2011. Ordinance will be completed after SWPPP Guidelines and Post-Construction Plan are completed (BMP 4-2). Tiered enforcement to include 1) fix-it tickets, 2) notices of violation, and 3) fines.</td>
<td>Preparation and submittal of ordinance is responsibility of Public Works Director.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5-4</td>
<td>Training programs will be made mandatory for building and construction inspectors on post construction activities.</td>
<td>Training to be conducted by June, 2011. All department staff assigned to tracking and enforcing violations are to participate in training. Goal is to have 100% of violations tracked and enforced.</td>
<td>Training of staff will be conducted through two-hour session held at Public Works conference room.</td>
<td></td>
</tr>
</tbody>
</table>
### MCM – 5: POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

<table>
<thead>
<tr>
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<th>MEASURABLE GOALS</th>
<th>IMPLEMENTATION</th>
<th>IMPLEMENTATION SCHEDULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-6</td>
<td>The City will create a database of post construction BMPs pertinent to post construction building activities.</td>
<td>Complete database by June 2011.</td>
<td>Database design to be at the direction of Public Works Director.</td>
<td>100%</td>
</tr>
<tr>
<td>5-7</td>
<td>Establish a tracking system to implement procedures and enforcement policies for continual violations.</td>
<td>Complete database by June 2011.</td>
<td>Database design to be at the direction of Public Works Director.</td>
<td>100%</td>
</tr>
<tr>
<td>5-8</td>
<td>Establish regulatory requirements for maintenance of privately-owned controls.</td>
<td>Complete regulatory requirements by June 2011.</td>
<td>Develop a database for tracking private and public structural controls. Will likely be GIS, but other means may be used.</td>
<td></td>
</tr>
</tbody>
</table>

**Person to implement MCM:** Public Works Director

**MCM-5 Requirements**

<table>
<thead>
<tr>
<th>Requirement met through BMPs:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs).</td>
<td>5-1, 5-2</td>
</tr>
<tr>
<td>Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal, or local law.</td>
<td>5-3</td>
</tr>
<tr>
<td>Ensure adequate long-term operation and maintenance of controls.</td>
<td>5-1, 5-4, 5-5, 5-6, 5-7</td>
</tr>
<tr>
<td>Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.</td>
<td>All</td>
</tr>
<tr>
<td>MCM OBJECTIVE</td>
<td>BMP NO.</td>
</tr>
<tr>
<td>---------------</td>
<td>---------</td>
</tr>
<tr>
<td>Per General Permit requirements, this MCM states that, &quot;The Permittee must 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.&quot;</td>
<td>6-1</td>
</tr>
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<td></td>
<td>6-2</td>
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<td></td>
<td>6-3</td>
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<td></td>
<td>6-4</td>
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<td></td>
<td>6-5</td>
</tr>
</tbody>
</table>

Person to implement MCM: Public Works Director

**MCM-6 Requirements**

- Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operation 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 storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from the EPA, their State or Tribe, or relevant organizations.
- Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

Requirement met through BMPs:

- 6-1, 6-2, 6-3, 6-5
- 6-4, 6-5

All
### MCM-1 Requirements
Implement 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 waterbodies and the steps that can be taken to reduce storm water pollution.

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

| Requirement met through BMPs: | All |

### MCM-2 Requirements
Comply with applicable State, Tribal, and local public notice requirements.

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

| Requirement met through BMPs: | 2-1 |

### MCM-3 Requirements
A storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from these outfalls.

Through an ordinance, or other regulatory mechanism, a prohibition (to the extent allowable under State, Tribal, or local law) on 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.

The education of public employees, businesses, and the general public about the hazards associated with illegal discharges and improper disposal of waste.

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

| Requirement met through BMPs: | 3-1, 3-2, 3-3, 3-5 |

### MCM-4 Requirements
Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites.

Have procedures for site plan review of construction plans that consider potential water quality impacts.

Have procedures for site inspection and enforcement of control measures.

Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism).

Establish procedures for the receipt and consideration of information submitted by the public.

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

| Requirement met through BMPs: | 4-1, 4-2, 4-3, 4-4, 4-5 |

### MCM-5 Requirements
Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs).

Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal, or local law.

Ensure adequate long-term operation and maintenance of controls.

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

| Requirement met through BMPs: | 5-1, 5-2, 5-3, 5-4, 5-5, 5-6, 5-7 |

### MCM-6 Requirements
Develop and implement an operation and maintenance program with the ultimate goal of preventing or reducing pollutant runoff from municipal operation 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 storm water system maintenance. To minimize duplication of effort and conserve resources, the MS4 operator can use training materials that are available from the EPA, their State or Tribe, or relevant organizations.

Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure.

| Requirement met through BMPs: | 6-1, 6-2, 6-3, 6-5, 6-5 |
Areas subject to high growth or serving a population of at least 50,000 must comply with the following provisions (for counties this threshold population applies to the population within the permit area).

A. RECEIVING WATER LIMITATIONS

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

2. The permittees shall comply with Receiving Water Limitations A.1 through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this permit including any modifications. The SWMP shall be designed to achieve compliance with Receiving Water Limitations A.1. If exceedance(s) of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittees shall assure compliance with Receiving Water Limitations A.1 by complying with the following procedure:

   a. Upon a determination by either the permittees or the RWQCB that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to the RWQCB that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated in the annual update to the SWMP unless the RWQCB directs an earlier submittal. The report shall include an implementation schedule. The RWQCB may require modifications to the report.

   b. Submit any modifications to the report required by the RWQCB within 30 days of notification.

   c. Within 30 days following approval of the report described above by the RWQCB, the permittees shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, implementation schedule, and any additional monitoring required.

   d. Implement the revised SWMP and monitoring program in accordance with the approved schedule.

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

B. DESIGN STANDARDS
Regulated Small MS4s subject to this requirement must adopt an ordinance or other document to ensure implementation of the Design Standards included herein or a functionally equivalent program that is acceptable to the appropriate RWQCB. The ordinance or other document must be adopted and effective prior to the expiration of this General Permit or, for Small MS4s designated subsequent to the Permit adoption, within five years of designation as a regulated Small MS4.

All discretionary development and redevelopment projects that fall into one of the following categories are subject to these Design Standards. These categories are:

- Single-Family Hillside Residences
- 100,000 Square Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with 10 or more housing units
- Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff

1. Conflicts With Local Practices
   Where provisions of the Design Standards conflict with established local codes or other regulatory mechanism, (e.g., specific language of signage used on storm drain stenciling), the Permittee may continue the local practice and modify the Design Standards to be consistent with the code or other regulatory mechanism, except that to the extent that the standards in the Design Standards are more stringent than those under local codes or other regulatory mechanism, such more stringent standards shall apply.

2. Design Standards Applicable to All Categories
   a. Peak Storm Water Runoff Discharge Rates
      Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion.
   b. Conserve Natural Areas
      If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:
      1) Concentrate or cluster Development on portions of a site while leaving the remaining land in a natural undisturbed condition.
      2) Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
      3) Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
4) Promote natural vegetation by using parking lot islands and other landscaped areas.
5) Preserve riparian areas and wetlands.

c. Minimize Storm Water Pollutants of Concern

Storm water runoff from a site has the potential to contribute oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system. The development must be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the storm water conveyance system as approved by the building official. Pollutants of concern 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, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

In meeting this specific requirement, “minimization of the pollutants of concern” will require the incorporation of a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in that runoff to the Maximum Extent Practicable. Those BMPs best suited for that purpose are those listed in the California Storm Water Best Management Practices Handbooks; Caltrans Storm Water Quality Handbook: Planning and Design Staff Guide; Manual for Storm Water Management in Washington State; The Maryland Stormwater Design Manual; Florida Development Manual: A Guide to Sound Land and Water Management; Denver Urban Storm Drainage Criteria Manual, Volume 3 – Best Management Practices and Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, USEPA Report No. EPA-840-B-92-002, as “likely to have significant impact” beneficial to water quality for targeted pollutants that are of concern at the site in question. However, it is possible that a combination of BMPs not so designated, may in a particular circumstance, be better suited to maximize the reduction of the pollutants.

d. Protect Slopes and Channels

Project plans must include BMPs consistent with local codes, ordinances, or other regulatory mechanism and the Design Standards to decrease the potential of slopes and/or channels from eroding and impacting storm water runoff:

1) Convey runoff safely from the tops of slopes and stabilize disturbed slopes.
2) Utilize natural drainage systems to the maximum extent practicable.
3) Stabilize permanent channel crossings.
4) Vegetate slopes with native or drought tolerant vegetation, as appropriate.
5) Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies.
with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.

e. Provide Storm Drain System Stenciling and Signage
Storm drain stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets. The stencil contains a brief statement that prohibits the dumping of improper materials into the storm water conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message. All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as: “NO DUMPING – DRAINS TO OCEAN”) and/or graphical icons to discourage illegal dumping. Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area. Legibility of stencils and signs must be maintained.

f. Properly Design Outdoor Material Storage Areas
Outdoor material storage areas refer to storage areas or storage facilities solely for the storage of materials. Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system, the following Structural or Treatment BMPs are required:

1) Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
2) The storage area must be paved and sufficiently impervious to contain leaks and spills.
3) The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.

g. Properly Design Trash Storage Areas
A trash storage area refers to an area where a trash receptacle or receptacles (dumpsters) are located for use as a repository for solid wastes. Loose trash and debris can be easily transported by the forces of water or wind into nearby storm drain inlets, channels, and/or creeks. All trash container areas must meet the following Structural or Treatment Control BMP requirements (individual single family residences are exempt from these requirements):

1) Trash container areas must have drainage from adjoining roofs and pavement diverted around the area(s).
2) Trash container areas must be screened or walled to prevent off-site transport of trash.

h. Provide Proof of Ongoing BMP Maintenance
Improper maintenance is one of the most common reasons why water quality controls will not function as designed or which may cause the system to fail entirely. It is important to consider who will be responsible for maintenance of a permanent BMP, and what equipment is required to perform the maintenance properly. As part of project review, if a project applicant has included or is required to include, Structural or Treatment Control BMPs in project plans, the Permittee shall require that the applicant provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.

For all properties, the verification will include the developer’s signed statement, as part of the project application, accepting responsibility for all structural and treatment control BMP maintenance until the time the property is transferred and, where applicable, a signed agreement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance. The transfer of property to a private or public owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner’s responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. For residential properties where the Structural or Treatment Control BMPs are located within a common area which will be maintained by a homeowner’s association, language regarding the responsibility for maintenance must be included in the project’s conditions, covenants and restrictions (CC&Rs). Printed educational materials will be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, signs that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information shall also be required with any subsequent sale of the property.

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

i. Design Standards for Structural or Treatment Control BMPs
The Permittees shall require that post-construction treatment control BMPs incorporate, at a minimum, either a volumetric or flow based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:

1) Volumetric Treatment Control BMP
a) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1998); or

b) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/Commercial, (2003); or

c) The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

2) Flow Based Treatment Control BMP

a) The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the area; or

b) The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

Limited Exclusion
Restaurants and Retail Gasoline Outlets, where the land area for development or redevelopment is less than 5,000 square feet, are excluded from the numerical Structural or Treatment Control BMP design standard requirement only.

3. Provisions Applicable to Individual Priority Project Categories

a. 100,000 Square Foot Commercial Developments

1) Properly Design Loading/Unloading Dock Areas

Loading/unloading dock areas have the potential for material spills to be quickly transported to the storm water conveyance system. To minimize this potential, the following design criteria are required:

a) Cover loading dock areas or design drainage to minimize run-on and runoff of storm water.

b) Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

2) Properly Design Repair/Maintenance Bays

Oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays can negatively impact storm water if allowed to come into contact with storm water runoff. Therefore, design plans for repair bays must include the following:
a) Repair/maintenance bays must be indoors or designed in such a way that doesn’t allow storm water runon or contact with storm water runoff.

b) Design a repair/maintenance bay drainage system to capture all washwater, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

3) Properly Design Vehicle/Equipment Wash Areas
The activity of vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for washing/steam cleaning of vehicles and equipment. The area in the site design must be:

   a) Self-contained and/ or covered, equipped with a clarifier, or other pretreatment facility, and
   b) Properly connected to a sanitary sewer or other appropriately permitted disposal facility.

b. Restaurants

   1) Properly Design Equipment/Accessory Wash Areas
   The activity of outdoor equipment/accessory washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for the washing/steam cleaning of equipment and accessories. This area must be:

      a) Self-contained, equipped with a grease trap, and properly connected to a sanitary sewer.
      b) If the wash area is to be located outdoors, it must be covered, paved, have secondary containment, and be connected to the sanitary sewer or other appropriately permitted disposal facility.

   c. Retail Gasoline Outlets

      1) Properly Design Fueling Area
      Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the storm water conveyance system. The project plans must include the following BMPs:

          a) The fuel dispensing area must be covered with an overhanging roof structure or canopy. The canopy’s minimum dimensions must be equal to or greater than the area within the grade break. The canopy must not drain onto the fuel dispensing area, and the canopy downspouts must be routed to prevent drainage across the fueling area.
b) The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface), and the use of asphalt concrete shall be prohibited.

c) The fuel dispensing area must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.

d) At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

d. Automotive Repair Shops

1) Properly Design Fueling Area

Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the storm water conveyance system. Therefore, design plans, which include fueling areas, must contain the following BMPs:

a. The fuel dispensing area must be covered with an overhanging roof structure or canopy. The canopy’s minimum dimensions must be equal to or greater than the area within the grade break. The canopy must not drain onto the fuel dispensing area, and the canopy downspouts must be routed to prevent drainage across the fueling area.

b. The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface), and the use of asphalt concrete shall be prohibited.

c. The fuel dispensing area must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.

d. At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

2) Properly Design Repair/Maintenance Bays

Oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays can negatively impact storm water if allowed to come into contact with storm water runoff. Therefore, design plans for repair bays must include the following:

a) Repair/maintenance bays must be indoors or designed in such a way that doesn’t allow storm water run-on or contact with storm water runoff.

b) Design a repair/maintenance bay drainage system to capture all wash-water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is
prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

3) Properly Design Vehicle/Equipment Wash Areas
The activity of vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for washing/steam cleaning of vehicles and equipment. This area must be:

a) Self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer or other appropriately permitted disposal facility.

4) Properly Design Loading/Unloading Dock Areas
Loading/unloading dock areas have the potential for material spills to be quickly transported to the storm water conveyance system. To minimize this potential, the following design criteria are required:

a) Cover loading dock areas or design drainage to minimize run-on and runoff of storm water.
b) Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

e. Parking Lots

1) Properly Design Parking Area
Parking lots contain pollutants such as heavy metals, oil and grease, and polycyclic aromatic hydrocarbons that are deposited on parking lot surfaces by motor-vehicles. These pollutants are directly transported to surface waters. To minimize the offsite transport of pollutants, the following design criteria are required:

a) Reduce impervious land coverage of parking areas.
b) Infiltrate or treat runoff.

2) Properly Design To Limit Oil Contamination and Perform Maintenance
Parking lots may accumulate oil, grease, and water insoluble hydrocarbons from vehicle drippings and engine system leaks:

a) Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used (e.g. fast food outlets, lots with 25 or more parking spaces, sports event parking lots, shopping malls, grocery stores, discount warehouse stores).
b) Ensure adequate operation and maintenance of treatment systems particularly sludge and oil removal, and system fouling and plugging prevention control.
4. Waiver

A Permittee may, through adoption of an ordinance, code, or other regulatory mechanism incorporating the treatment requirements of the Design Standards, provide for a waiver from the requirement if impracticability for a specific property can be established. A waiver of impracticability shall be granted only when all other Structural or Treatment Control BMPs have been considered and rejected as infeasible. Recognized situations of impracticability include, (i) extreme limitations of space for treatment on a redevelopment project, (ii) unfavorable or unstable soil conditions at a site to attempt infiltration, and (iii) risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than 10 feet from the soil surface. Any other justification for impracticability must be separately petitioned by the Permittee and submitted to the appropriate RWQCB for consideration. The RWQCB may consider approval of the waiver justification or may delegate the authority to approve a class of waiver justifications to the RWQCB EO. The supplementary waiver justification becomes recognized and effective only after approval by the RWQCB or the RWQCB EO. A waiver granted by a Permittee to any development or redevelopment project may be revoked by the RWQCB EO for cause and with proper notice upon petition.

5. Limitation on Use of Infiltration BMPs

Three factors significantly influence the potential for storm water to contaminate ground water. They are (i) pollutant mobility, (ii) pollutant abundance in storm water, (iii) and soluble fraction of pollutant. The risk of contamination of groundwater may be reduced by pretreatment of storm water. A discussion of limitations and guidance for infiltration practices is contained in, Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA (1994).

In addition, the distance of the groundwater table from the infiltration BMP may also be a factor determining the risk of contamination. A water table distance separation of ten feet depth in California presumptively poses negligible risk for storm water not associated with industrial activity or high vehicular traffic.

Site specific conditions must be evaluated when determining the most appropriate BMP. Additionally, monitoring and maintenance must be provided to ensure groundwater is protected and the infiltration BMP is not rendered ineffective by overload. This is especially important for infiltration BMPs for areas of industrial activity or areas subject to high vehicular traffic [25,000 or greater average daily traffic (ADT) on main roadway or 15,000 or more ADT on any intersecting roadway]. In some cases pretreatment may be necessary.

6. Alternative Certification for Storm Water Treatment Mitigation

In lieu of conducting detailed BMP review to verify Structural or Treatment Control BMP adequacy, a Permittee may elect to accept a signed certification from a Civil Engineer or a Licensed Architect registered in the State of California, that the plan meets
the criteria established herein. The Permittee is encouraged to verify that certifying person(s) have been trained on BMP design for water quality, not more than two years prior to the signature date. Training conducted by an organization with storm water BMP design expertise (e.g., a University, American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, or the California Water Environment Association) may be considered qualifying.
# Communities Anticipated to be Subject to Supplemental Provisions

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