

Storm Water Management Program

April 2007

**Submitted to:
Regional Water Quality Control Board
Central Valley Region
Fresno Office (5F)**

Submitted by:



Stantec

Merced Storm Water Group

Merced Storm Water Group
STORM WATER MANAGEMENT PROGRAM
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**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**



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STORM WATER MANAGEMENT PROGRAM**

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INTRODUCTION

GLOSSARY

BMP	Best Management Practice
HHW	Hazardous Household Waste
GIS	Geographic Information System
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MIS	Management Information System
MSWG	Merced Storm Water Group
NOI	Notice of Intent
PHF	Pesticides, Herbicides & Fertilizers
SIC	Standard Industry Classification
SUSMP	Standard Urban Storm water Management Plan
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
NPDES	National Pollutant Discharge Elimination System
U.S.	United States
WDID	Waste Discharge Identification

DEFINITIONS

Structural BMP	Structural BMPs are facilities designed and constructed for the treatment of storm water with respect to quality and quantity. Examples of structural controls are vegetative strips, detention/water quality basins, and swirl separators.
Non-Structural BMP	Non structural BMPs are policies and procedures that manage land use in order to lessen the impacts of resource development and redevelopment on storm impacts on storm water quality and quantity.

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1.0 Introduction

1.1 PURPOSE

The Storm Water Management Program (SWMP) will be implemented to limit, to the Maximum Extent Practicable (MEP), the discharge of pollutants from the Merced Storm Water Group (MSWG) storm sewer system. The MSWG is a coalition of municipalities acting as co-permittees consisting of the Cities of Atwater and Merced, Merced County and the Merced Irrigation District. The development and implementation of the SWMP is to fulfill requirements of storm water discharges from Small Municipal Separate Storm Sewer System (MS4) operators in accordance with Section 402(p) of the Federal Clean Water Act (CWA). The SWMP was developed to also comply with General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ.

1.2 SWMP COORDINATION

<u>Municipality</u>	<u>Contact</u>
City of Atwater	David Taylor, (209) 357-6334 Engineer Associate
City of Merced	John Raggio, (209) 769-3627 Public Works Director
County of Merced	Kellie Jacobs, (209) 385-7602 Administrative Engineer
Merced Irrigation District	Bob Acker, (209) 722-5761 Director of Facilities and Planning

1.3 SWMP REVIEW AND MODIFICATION

MSWG has prepared this SWMP to meet the requirements for coverage under General Permit Number CAS000004, Water Quality Order No. 2003-0005-DWQ issued April 30, 2003. The draft SWMP was prepared by March 10, 2003 to meet the Federal NPDES permit obligations. This SWMP includes Best Management Practices (BMPs) intended to reduce to the MEP, the quantity of storm water and the discharge of pollutants to the storm water system. The SWMP will be reviewed on an annual basis and any changes or modifications will be described and submitted to and approved by the California State Regional Water Quality Control Board Central Valley Region (5F). This review will include the following:

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- A review of the status of program implementation and compliance
- A review of any revision or change of BMPs during the year and an assessment of the effectiveness of such revision
- An overall assessment of the goals and direction of the SWMP and effectiveness of BMPs
- A review of monitoring data, any changes in monitoring methods and parameters, and an assessment of the overall monitoring program.

1.4 FUNDING SOURCES

Funding sources have been identified for each proposed BMP and in the Goals and Assessment tables within each section for all the participating communities.

1.5 PRIORITY POLLUTANTS

The MSWG has prepared this SWMP to address priority pollutants that are common in stormwater runoff from municipal areas. In accordance with General Permit requirements, site-specific stormwater analysis has not been completed. Listed in the table below are the priority pollutants that will be addressed with the SWMP, possible sources of the pollutant, and potential effects.

Pollutant	Possible Sources	Potential Effects
Sediment	Construction sites, disturbed and/or non vegetated lands, eroding banks	Increased turbidity, reduced clarity, lower dissolved oxygen, deposition of sediments, smothering of aquatic habitats, including spawning sites
Nutrients	Animal waste, fertilizers, failing septic systems, atmospheric deposition	Algal growth, reduced clarity, eutrophications
Organic Materials	Leaves, grass clippings	Oxygen deficit in receiving waters, fish kills, turbidity
Pathogens: Bacteria and Viruses	Animal waste, failing septic systems, dumpsters	Human health risks associated with drinking

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Pollutant	Possible Sources	Potential Effects
		water supply
Hydrocarbons: Oil and Grease, PAHs	Industrial processes, automobile wear, emissions and fluid leaks, waste oil	Toxicity of water column and sediment, bioaccumulation through the food chain
Metals	Industrial processes, normal wear or auto brake linings and tires, automobile emissions and fluid leaks, metal roofs	Toxicity of water column and sediment, bioaccumulation in aquatic species and through the food chain, fish kills
Synthetic Chemicals: PCBs and Pesticides	Pesticides (herbicides, insecticides, fungicides, rodenticides), industrial processes	Toxicity of water column and sediment, bioaccumulation in aquatic species and through the food chain, fish kills
Chlorides	Leaching from naturally occurring sources, septic tanks, fertilizers, and pesticides	Toxicity of water column and sediment
Trash and Debris	Litter washed through storm drain system, commercial parking lots adjacent to surface water	Degradation of surface water aesthetics, threat to wildlife

Source: Adopted from Minnesota Urban Small Sites BMP Manual

1.6 PROGRAM SUMMARY

The SWMP has been developed to meet the terms of the General Permit and consists of the six minimum control measures established by SWRCB for Phase II storm water discharges. Implementation of these control measures are expected to result in significant reductions of pollutants discharged into receiving water bodies. The six control measures are addressed in separate sections.



Each control measure contains BMPs necessary for proper storm water management. The BMPs contain specific tasks to meet the objective of that control

measure. This SWMP is intended to be a living document with BMPs added and deleted as new management practices arise and management practices are found not to work. A schedule for implementing each BMP is provided at the end of each section. The following provides a summary of each minimum control measure.

Section One – Public Education and Outreach on Storm Water Impacts Program

This measure is intended to ensure greater public support for the SWMP and greater compliance through education. An informed public can significantly contribute to the success of the program.

In general, the City is emphasizing education in the SWMP because it is a cost-effective BMP and is proactive in trying to reduce storm water pollutants rather than reactive by treating the storm water pollutants. The BMPs in this section include:

- Community programs
- Residential programs

Section Two – Public Involvement/Participation Program

This measure is intended to provide opportunities for the public to play an active role in both the development and implementation of the SWMP. An active community is important to the success of the program. The BMPs in this section not only serve to involve the public, but also function to educate the public on the SWMP and related regulations. The BMPs in this section include:

- Public involvement
- Public participation

Section Three – Illicit Discharge Detection and Elimination Program

This measure is intended to minimize illicit discharges into the storm sewer system. Illicit discharges are discharges that are not composed entirely of storm water. Storm sewer systems are not designed to accept process or discharge such non-storm water wastes. Minimizing these discharges can help to prevent high levels of pollutants from entering receiving waters. The BMPs in this section include:

- Storm sewer system map
- Storm water ordinance
- Dry weather screening program

- Public information program
- Employee training program

Section Four – Construction Site Storm Water Runoff Control Program

This measure is intended to minimize polluted storm water runoff from construction activities. Construction activities can contribute significant levels of sediment to storm water runoff if erosion and sediment controls are not implemented. The BMPs in this section include:

- Erosion and sediment control ordinance
- Program development
- Program implementation

Section Five – Post-Construction Storm Water Management in New Development and Redevelopment Program

This measure is intended to minimize the impact to storm water quality caused by development and redevelopment. The increase in impervious areas caused by development can cause an increase in the type and quantity of pollutants in storm water runoff. Prior planning and design to minimize pollutants in runoff from these areas is an important component to storm water quality management. The BMPs in this section include:

- Program development
- Post-construction implementation
- Post-construction maintenance

Section Six – Pollution Prevention/Good Housekeeping for Municipal Operations Program

This measure is intended to ensure a reduction in the amount and type of storm water pollutants by establishing routine activities in the operation and maintenance of municipal operations that address storm water runoff. Setting particular guidelines for source controls and materials management is an important component to storm water quality management. The BMPs in this section include:

- Source reduction
- Materials management

2.0 City of Atwater

2.1 SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACT PROGRAM

The Public Education and Outreach on Storm Water Impacts Program of the SWMP addresses increasing public awareness of water quality concerns and BMPs that may be implemented with respect to protection of storm water. The BMPs described in this section of the SWMP include education of the public sector through the use of newsletters and displays. The public education will introduce the SWMP and focus on known contaminant sources and how to control these sources.

This program also integrates many other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the City of Atwater (City) for the Public Education and Outreach on Storm Water Impacts Program. An overall implementation schedule for the SWMP is provided in Figure 1.

Objective: Reduce pollutants to receiving waters by increased public awareness of problems and solutions.

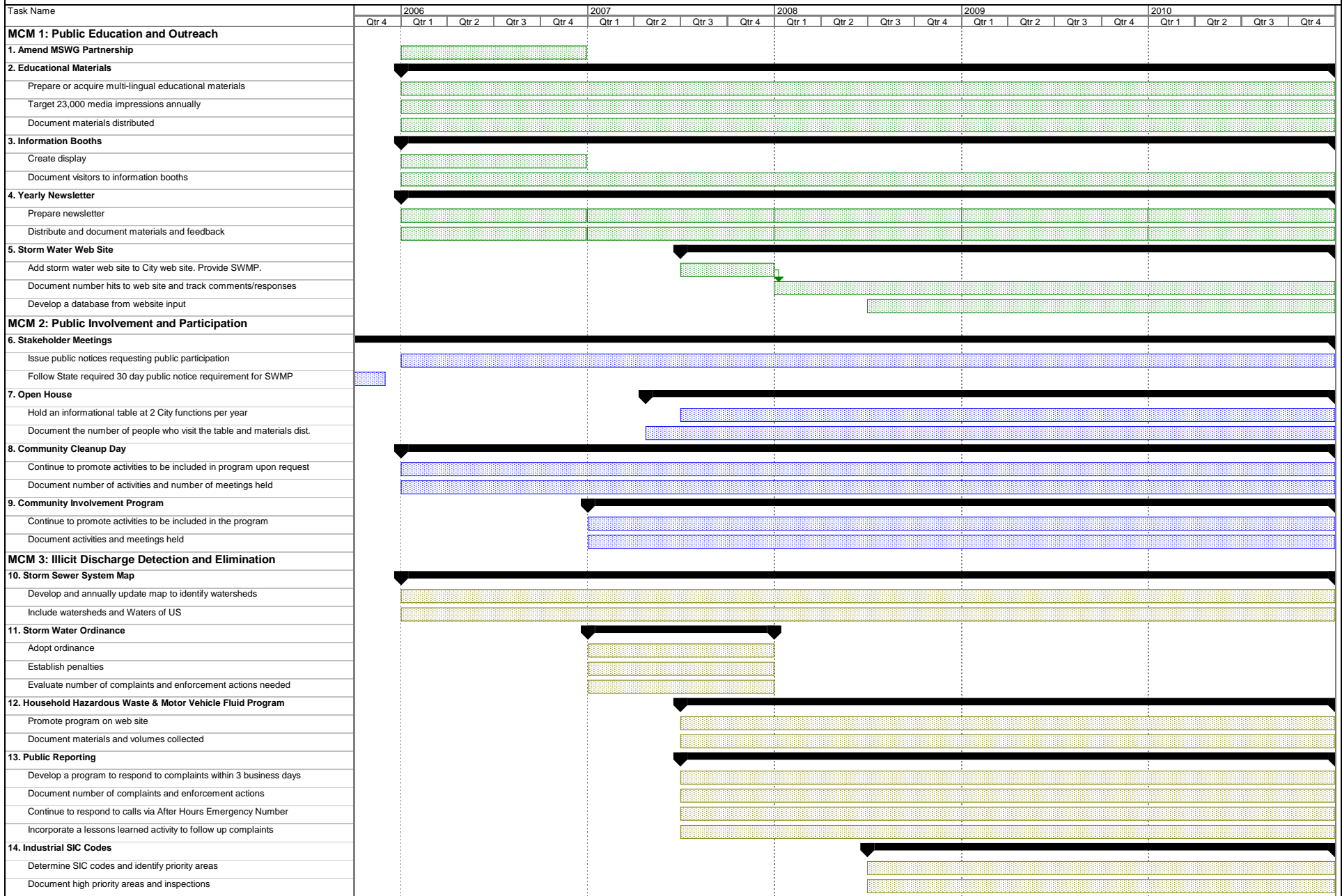
Permit Requirement: D.2.a. – Public Education and Outreach on Storm Water Impacts.

Description of Tasks:

Amend Merced Storm Water Group: The Merced Storm Water Group (MSWG) entered into an agreement to implement the NPDES Phase II stormwater program in June 2002. The MSWG will amend the agreement to include more details for BMP implementation, including costs. Formalize future relationship with the Merced Storm Water Group and participate with the group to share resources in the development and implementation of BMPs. The formation of the MSWG will allow for more effective public education and outreach by providing a consistent stormwater education message throughout the County.

Educational Materials: Provide the public with educational materials, displays, newsletters and outreach activities regarding the impact of daily activities on storm water quality. The target audience for much of the educational material will be grade school age children. The types of media and timing for distribution are discussed with the community so that the public can be targeted during the spring

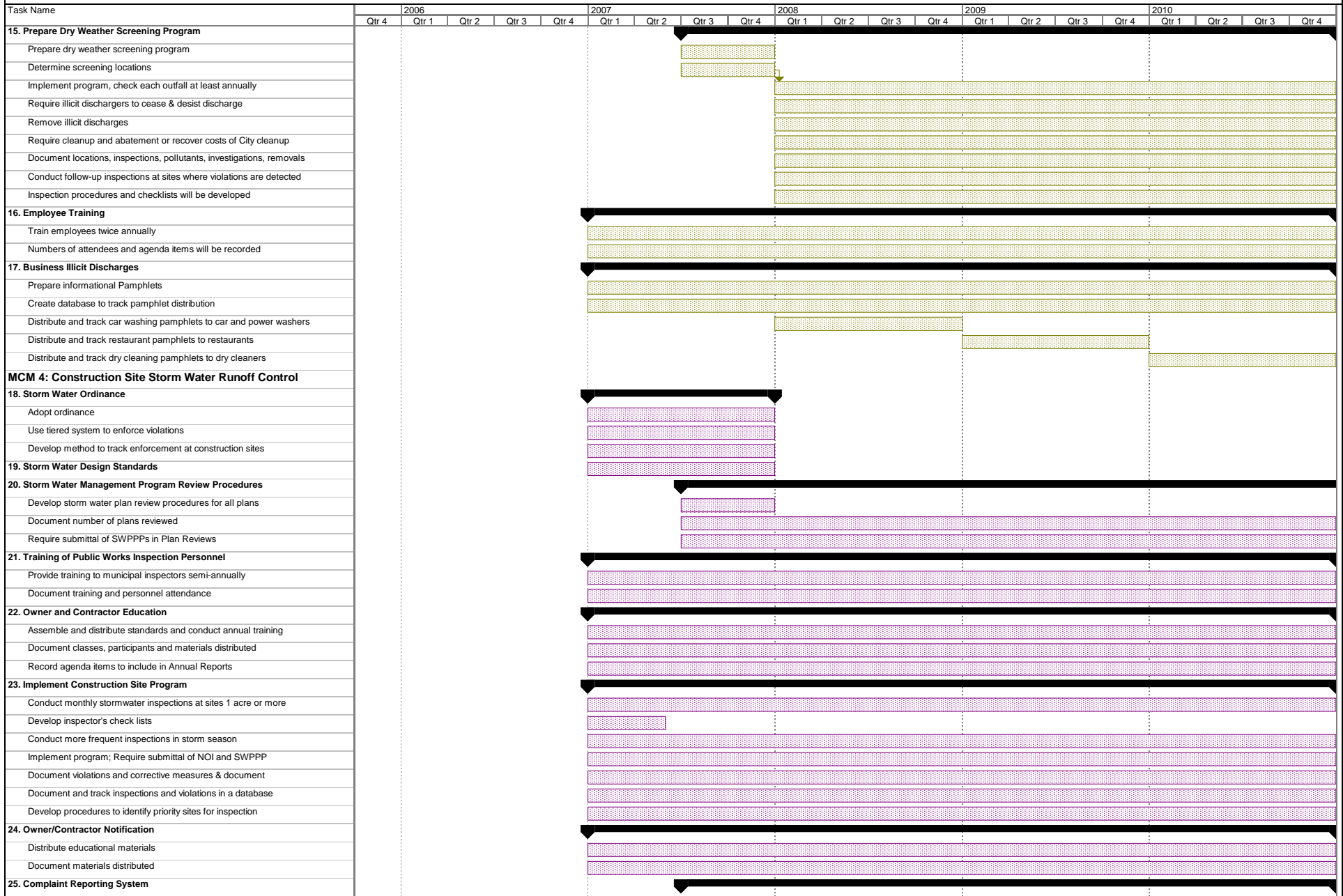
City of Atwater Storm Water Management Program Implementation Schedule



Project: Atwater march sch Date: Tue 9/20/05	Task Split 	Progress Milestone 	Summary Project Summary 	External Tasks External Milestone 	Deadline ↓
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Figure 1

City of Atwater Storm Water Management Program Implementation Schedule



Project: Atwater march sch
Date: Tue 9/20/05

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			

Figure 1

City of Atwater Storm Water Management Program Implementation Schedule

Task Name	2006				2007				2008				2009				2010					
	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	
Develop and implement a complaint reporting system																						
Document complaints received and respond to complaints w/in 3 days																						
Conduct follow up inspections at violating sites. Document inspections.																						
MCM 5: Post Construction Storm Water Management in New Development and Redevelopment																						
26. Develop Stormwater Ordinance																						
Adopt ordinance																						
Require development standards in planning phase																						
Address funding for long term maintenance																						
Develop method to track and document the maintenance activities																						
27. Develop and Implement Post Construction Program																						
Implement ordinance and document compliance in annual report																						
Provide design improvements to developers and designers																						
Require maintenance of privately owned BMPs																						
Develop tracking mechanism																						
28. Municipal Employee Training -Tran staff twice annually																						
29. Comprehensive Land Use Master Plan - Document updates																						
30. Post-Construction Development Standards																						
Adopt standards requiring post-construction runoff control																						
Develop and implement tracking mechanism for post-construction BMPs																						
31. Structural Controls																						
Continue to require detention for all new construction sites																						
Develop new requirements in concert with developers																						
MCM 6: Pollution Prevention and Good Housekeeping Practices																						
32. Municipal Employee Training																						
Develop and implement training program, including feedback provisions																						
Provide training four times annually																						
Document attendance and topics																						
Document feedback received from employees																						
33. Storm Sewer System Maintenance and Floatable Controls																						
Develop cleanout schedule for MS4																						
Implement and document cleanout schedule																						
34. PHF Program - Continue to implement and document																						
35. Spill Prevention and Response Program																						
Assess existing program																						
Document training, education, spill locations and responses																						
36. Water Quality Assessment for Flood Control Projects																						
Develop water quality assessment program																						
Ensure projects are assessed and project plans are revised																						
Document water quality assessment of capital improvements																						
37. Street Sweeping																						
Sweep all streets in City at least weekly																						
Document miles swept and amount of material removed																						
Document roads that are swept																						
38. Prepare, Implement and Document SWPPP for Corp Yard																						
39. Green Waste Program - Continue to Implement																						

Project: Atwater march sch Date: Tue 9/20/05	Task		Progress		Summary		External Tasks		Deadline
	Split		Milestone		Project Summary		External Milestone		

Figure 1

**MERCED STORM WATER GROUP
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SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACT PROGRAM

and the fall. Other factors that are taken into consideration in choosing the types of media are the average number of times that a person will see the advertisement. The materials will be obtained in a multi-lingual format. Examples of the types of educational materials that are developed are:

- ❑ Television commercials
- ❑ Radio commercials
- ❑ Newspaper advertisements
- ❑ Bus board advertisements
- ❑ Tabloids
- ❑ Pencils and pads of paper
- ❑ Posters
- ❑ Magnets
- ❑ Activity books
- ❑ Movie theater advertisements

Information Booths: Create a display to educate the public about the importance of stormwater quality to display at the City. Coordinate with MSWG to create a display regarding storm water information for use at the City. Participate in the Public Works Week celebration with an information booth. The booth display will include a graphic panel illustrating the hydrologic cycle in an urban setting and is accompanied by a series of pamphlets or other educational materials that explain how the public can help reduce pollutants exposed to rainfall. The materials distributed through informational booths will be included in calculating the total percent of the population reached.

Newsletter in Utility Bill: Develop a newsletter intended to provide information to the public regarding the impacts of their activities on storm water quality and ultimately the receiving waters. The newsletter will also instruct the public how to access the City's website to obtain more information. The newsletter will be sent with all utility bills.

Storm Water Website: The City will create a storm water page on the City's website. The storm water page will provide the current copy of the SWMP, identify educational materials and outreach programs.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACT PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
1	2006	Amend the MSWG for SWMP Implementation	Amend MOU and other agreements	MSWG/ MSWG	David Taylor
2	2006-2010	Educational Materials	Prepare or acquire multi-lingual educational materials	MSWG/ MSWG	David Taylor
			Target number media impressions of 23,000 per year, or prorated part thereof. The City will target grade school children		
			Document materials distributed		
3	2006-2010	Information Booths	Create display to distribute information at functions such as Public Works Week and the Utility Collection Area (City Hall)	MSWG/ MSWG	David Taylor
			Document number of visitors and information distributed		
4	2006-2010	Yearly Newsletter with Utility Bill	Prepare newsletter and distribute annually with all utility bills	MSWG/ MSWG	David Taylor
			Document feedback		
5	2007-2010	Storm Water Website	Add a storm water page to the City website. Provide an electronic copy of the Storm Water Management Program.	MSWG/ MSWG	David Taylor



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SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACT PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Document number of hits to site and track comments/responses		
			Develop a database from website input as an analysis tool to follow up comments and responses		

2.2 SECTION TWO – PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

The Public Involvement/Participation Program section of the SWMP addresses the importance of public involvement with respect to protection of storm water. Community participation provides for broader public support, shorter implementation schedules, a broader base of expertise and the development of important relationships with other community and government programs. The BMPs described in this section of the SWMP includes opportunities for the public to play an active role in the development and implementation of the SWMP. Such opportunities include the public notice process and efforts to reach out and engage all economic and ethnic groups, and additional community programs to foster public input.

This program will be integrated with the Public Education and Outreach on Storm Water Impacts Program to incorporate education with hands-on programs. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Public Education Involvement/ Participation Program.

Objective: Involve the public in the development and implementation of the SWMP.

Permit Requirement: D.2.b. – Public Involvement/Participation.

Description of Tasks:

Stakeholder Meetings: The City of Atwater held two public meetings in the process of developing the SWMP. Public notices will be issued to announce public involvement and requests for participation. In addition, a public notification process will be followed prior to final approval of the SWMP by the Regional Water Quality Control Board Executive Officer.

Open House: An informational table will be set up and staffed at two City meetings. The purpose of the open house will be to provide educational materials regarding storm water to the general public. The open house will also provide a forum for the public to comment on the City's storm water program.

Community Involvement: The City will continue to implement community involvement programs to enlist the services of parties such as school groups and the Boy Scouts to participate in activities such as stencil existing storm drains, Community Clean Up Day, dry weather screening and monitoring, and the reporting of illicit dumping. The City also has a seasonal leaf collection program. The purpose of these activities is to not only educate the community on the function of the storm drain system and potential pollutants, the SWMP, and

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CITY OF ATWATER
SECTION TWO – PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

associated regulations, but through involvement induce a sense of ownership and consequently a respect of the storm water quality.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
6	2006-2010	Stakeholder Meetings	Hold two public outreach meetings while developing the SWMP. Public notices will be issued to announce public involvement and requests for participation.	MSWG/ MSWG	David Taylor
			Post SWMP on State Water Resources Control Board web site		
7	2007-2010	Open House	Hold an informational table at 2 City functions per year	MSWG/ MSWG	David Taylor
			Document the number of people who visit the table and informational material distributed		
8	2006-2010	Community Cleanup Day	Develop and implement an annual Community Cleanup Day	MSWG/ MSWG	David Taylor
9	2007-2010	Community Involvement	Continue to promote activities to be included in the program based upon community input.	MSWG/ MSWG	David Taylor

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 SECTION TWO – PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Document number of activities evaluated and number of meetings held		

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

2.3 SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Illicit Discharge Detection and Elimination Program section of the SWMP addresses non-storm water flows that are discharged to receiving waters via storm water conveyance systems. The program will implement BMPs to assist in the identification of illicit discharges and removal of these discharges from the system. This program will also focus on prevention of new illicit discharges to the storm water system by means of education, regulations, and through spill prevention and response.

This program will also be integrated with the Public Education and Outreach program to promote awareness of the importance of protecting the storm water system from illicit discharge and the resultant impact to receiving waters. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Illicit Discharge and Elimination Program.

Objective: Detect and eliminate illicit discharges to the storm sewer system.

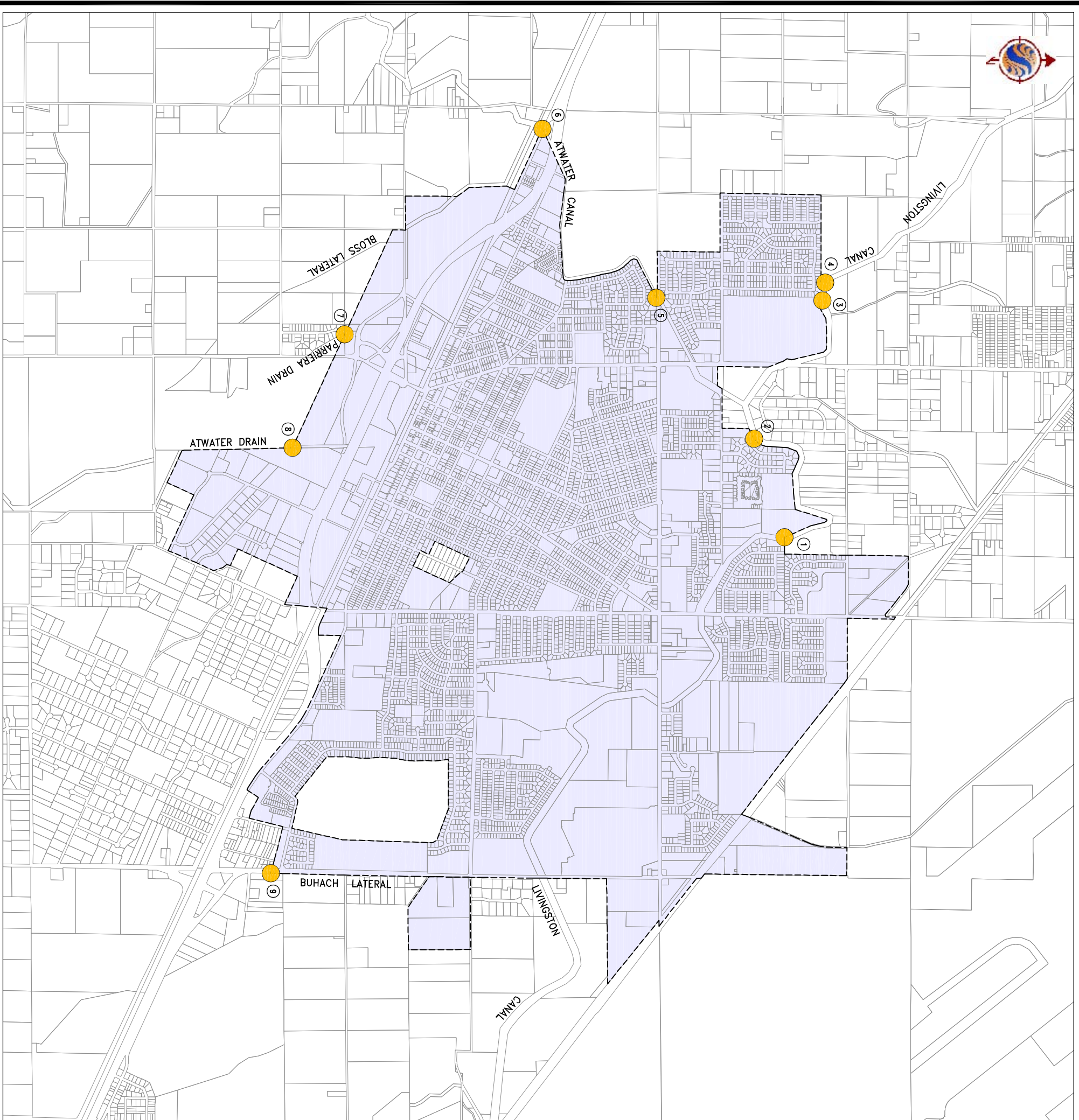
Permit Requirement: D.2.c. – Illicit Discharge Detection and Elimination.

Description of Tasks:

Storm Sewer System Map: Maintain a current map that identifies the City's storm sewer system, (see Figure 2). The map will be updated annually. The purpose of the storm sewer map is to provide accurate location information to City personnel implementing the Illicit Discharge detection and Elimination Program. This includes identifying the location of watersheds, associated outfalls, and waters of the U.S. that receive discharges from those outfalls. This document will allow City personnel to better determine the source of pollutants contained in storm water.

Ordinance: An ordinance or other regulatory mechanism will be developed to prohibit non-storm water discharges to the storm sewer system. The ordinance will include provisions for enforcement of the program.

Hazardous Household Waste and Waste Oil Program: This program includes Household Hazardous Wastes (HHW) and used oil collection programs that are administered by the City and the County of Merced.



CITY OF ATWATER STORM WATER MANAGEMENT PROGRAM (SWMP) STORM SEWER SYSTEM MAP

FIGURE 2

PREPARED BY:



LEGEND



PROGRAM BOUNDARIES



DISCHARGE POINT

- ① LIVINGSTON CANAL
- ② LIVINGSTON CANAL
- ③ LIVINGSTON CANAL
- ④ LIVINGSTON CANAL
- ⑤ ATWATER CANAL
- ⑥ ATWATER CANAL
- ⑦ PARRIERA DRAIN
- ⑧ ATWATER DRAIN
- ⑨ BUHACH LATERAL

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Public Reporting: The City will maintain an After Hours Emergency phone number to central dispatch. If a call comes in regarding a complaint associated with the storm sewer system, the proper City personnel are notified to investigate the complaint. The phone number will be advertised on the stormwater web site.

SIC Codes: The City will use existing databases to determine the SIC codes for all industries within the City. The City will use this information to assist with identifying possible locations of non-storm water discharges. These areas can then be targeted for dry weather screening.

Dry Weather Screening: The City will develop and implement a Dry Weather Screening Program to detect and address non-storm water discharges and illegal dumping to the storm sewer system. The Dry Weather Screening Program will also address industries that are prone to discharge to the storm drain system such as power washers. Problem areas will be identified using citizen complaints, field screening, and SIC codes for suspect industries. Municipal training will be an integral part of the illicit discharge program. The Dry Weather Screening Program will establish a system and procedures for enforcement of violations and will establish a tracking system for inspections and violations. Enforcement tools will be used to (1) require illicit discharges to immediately cease and desist discharging to receiving waters or the storm drain system; (2) remove illicit detections as soon as practicable; and (3) require clean up and abatement or recover costs of the City to cleanup and abate discharge.

Employee Training: As part of the municipal employee training program, the City will educate employees regarding spill prevention and response and how to recognize illicit connections and illegal discharges.

Allowable Discharges: The City does not anticipate that any of the discharges that are allowable in the General Permit are a significant source of pollutants within the City.

Business Illicit Discharge Elimination: City will prepare informational pamphlets to distribute to businesses that may discharge to the storm drain system such as power washers, car washers, dry cleaners, restaurants, etc. The City will distribute the information for a business type to all registered business owners annually.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
10	2006-2010	Storm Sewer System Map	Develop and annually update map to identify watersheds, outfalls and receiving waters	Public Works/ Drainage Fee	David Taylor
			Include watersheds and Waters of the US that receive discharges from outfalls on Storm Sewer Maps		
11	2007	Storm Water Ordinance	Implement Ordinance which gives the City the authority to implement BMPs and enforce the illegal dumping and illicit discharge prohibitions	City Attorney/ General Fund	Salvador V. Navarrete
			Establish and enforce penalties		
			Evaluate the number of complaints and number requiring further investigation/enforcement actions		
12	2007-2010	Used Motor Vehicle Fluids and Household Hazardous Waste Materials	Promote program on website	Solid Waste JPA / JPA	David Church
			Document materials and volumes collected		

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
13	2007-2010	Public Reporting	Develop program to respond to complaints within 3 business days	Building Division/ General Fund	David Taylor
			Document the number of complaints and enforcement actions		
			Continue to respond to complaints about the storm sewer system via the After Hours Emergency number	Engineering/ General Fund	
			Incorporate a lessons learned activity to follow up complaints and enforcements and update practices		
14	2008-2010	Industrial SIC Codes	Determine the SIC codes of industries within the City and their Industrial permitting obligation.	Public Works/ General Fund	David Church
			Implement visual screening and inspections to help prioritize areas of concern for training and enforcement		
			Document the high priority areas and document number of actions taken		
15	2007-2010	Dry Weather Screening	Prepare a program to screen outfalls within the City for dry weather flows	Street, Sewer & Storm Drain/ Drainage District Fee	Eric Sorenson
			Determine screening locations using prioritization from SIC codes and land use map		

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**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Implement Dry Weather Screening Plan. Check each outfall at least once a year.		
			Require illicit dischargers to immediately cease and desist discharge		
			Remove illicit discharges		
			Require cleanup and abatement or recover costs of City to cleanup and abate discharge		
			Document number of screening locations, inspections, pollutants discovered, and efforts undertaken to identify and remove possible pollutant sources		
			Conduct follow-up inspections at sites with violations		
			Inspection procedures and checklists will be developed to assist in prioritizing areas and enforcing BMPs		
16	2007-2010	Employee Training	Provide training to public employees twice annually	Public Works/ General Fund	David Church
			Numbers of attendees and agenda items will be recorded and included in the Annual Report		

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
17	2007	Business Illicit Discharges	Prepare informational pamphlets	MSWG/ MSWG	David Taylor
	2007		Create database to track pamphlet distribution		
	2008		Distribute and track car washing pamphlets to car washers and power washers		
	2009		Distribute and track restaurant pamphlets to restaurants		
	2010		Distribute and track dry cleaning pamphlets to dry cleaners		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF ATWATER

SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

**2.4 SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF
CONTROL PROGRAM**

The Construction Site Storm Water Runoff Control Program section of the SWMP addresses water quality concerns for construction sites greater than or equal to one acre. Polluted storm water runoff from construction sites often flow to storm sewers and into receiving waters. This runoff can contribute more sediment to receiving waters than can be deposited naturally during several decades. The resulting situation can cause physical, chemical and biological harm to receiving waters. The BMPs described in this section of the SWMP includes the development of a construction site program designed to reduce pollutants in storm water runoff from construction activities. This program will include procedures for construction site plan review, site inspections, public reporting, and notification of specific requirements to all construction site operators of greater than or equal to one acre, and sites less than one acre if part of a larger development, or common plan.

This program will also be integrated with other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Construction Site Storm Water Runoff Control Program.

Objective: Reduce pollutants in storm water runoff from construction sites.

Permit Requirement: D.2.d. – Construction Site Storm Water Runoff Control

Description of Tasks:

Storm Water Ordinance: The City will adopt a Storm Water Ordinance to address the regulatory programs required under Phase II of the NPDES Storm Water Program, including Construction Site Runoff Control. This ordinance will include provisions to address both erosion/sediment control and construction site materials and wastes. It will address not only grading disturbing one acre or more, but also land clearing. The ordinance will also include financial guarantees to ensure compliance and site stabilization.

Storm Water Design Standards: The City will develop Construction Site BMPs and will utilize its Improvement and Construction Standards to require construction site runoff control measures and to specify, installation and maintenance requirements for those measures.

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

Storm Water Management Program Review Procedures: The City will review all site plans for construction activity water quality controls. To assist developers and contractors in preparing effective plans, the City will distribute standards to specify submittal requirements to ensure adequate information is provided for plan review staff. The standards will provide technical guidance to project owners and contractors to ensure compliance with the program, as well as a regulatory basis on which to condition approval of projects. The City will require either a Waste Discharge Identification (WDID) number on the plans or a copy of the submitted Notice of Intent (NOI) for all projects that occur in the City. The City will also require Storm Water Pollution Prevention Plans (SWPPP) with all Plan Reviews.

Training of Public Works Inspection Personnel: City Public Works inspection personnel will be educated on the storm water regulations and the requirements for storm water controls at construction sites. Information on specific storm water best management practices and new regulations will be provided. The training will be provided twice annually. The City will partner with the MSWG and the Regional Water Quality Control Board to provide training for both public works personnel and contractors.

Owner/Contractor Education: Information will be provided to owners and contractors regarding storm water controls for construction sites. The standards will be distributed and workshops will be conducted annually. The City will partner with the MSWG and the Regional Water Quality Control Board to provide training for both public works personnel and contractors. The California Storm Water Quality Association Storm Water Best Management Practices Handbook for Construction Activity contains guidance in the implementation of BMPs. The City will provide contractors with information on how to access the document.

Construction Site Implementation Program: The City will implement the construction site program with field inspectors and enforcement items. All construction sites will be inspected for erosion controls and materials management. The City will enforce the construction site program according to the ordinance. The City will document the inspections and corresponding enforcement actions. The program will include an erosion and sediment control ordinance to enforce the program, mechanisms for site plan review, public input, site inspections and enforcement of the program. The violations, corrected measures and enforcement actions will be documented in the Annual Report.

Owner and Contractor Notification: The City will notify all construction site owners and contractors of their obligations under the State Water Resources Control Board General Construction Permit.

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

Complaint Reporting System: The City will develop and implement a complaint reporting system to respond to stormwater related public complaints. The City will respond to complaints within three working days.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
18	2007	Storm Water Ordinance	Adopt ordinance which gives the City the authority to implement BMPs and enforce erosion/sediment controls and prohibit discharge of construction site materials and wastes	City Attorney/ General Fund	Salvador V. Navarrete
			A tiered system will be used to enforce violations of the BMPs implemented under the ordinance		
			Develop method to track enforcement actions at construction sites		
19	2007	Storm Water Design Standards	Adopt new standards to require construction site runoff control measures and to specify installation and maintenance requirements for those measures. The City will implement measures to inspect that the controls are being implemented.	Engineering/ Development Fee	David Taylor

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STORM WATER MANAGEMENT PROGRAM**

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
20	2007	Storm Water Management Program Review Procedures	Develop storm water plan review procedures for all plans processed through the City	Engineering/ Development Fee	David Taylor
			Document number of plans reviewed and ensure copy of NOI is included or a WDID is received from SWRCB		
			Require submittal of SWPPPs in Plan Reviews		
21	2007-2010	Training of Public Works Inspection Personnel	Provide training to all Public Works Department inspection personnel 2 times a year to educate them on the new storm water regulations.	Engineering/ Development Fee	David Taylor
			Document personnel attendance and agenda items to include in Annual Reports		
22	2007-2010	Owner and Contractor Education	Assemble and distribute standards and conduct training classes annually	Engineering/ Development Fee	David Taylor
			Document number of classes held, number of participants, and material distributed		
			Record agenda items to include in Annual Reports		

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
23	2007-2010	Implement Construction Site Program	Conduct monthly stormwater inspections at construction sites 1 acre or greater. Follow up inspections will be conducted where violations occur.	Engineering/ Development Fee	David Taylor
			Develop inspector's check lists		
			Conduct more frequent stormwater inspections during storm season.		
			Implement construction site program. Require submitting NOI and SWPPP		
			Document violations and corrective measures & document in Annual Report		
			Document and track inspections and violations in a database		
			Develop procedures to identify priority sites for inspection and enforcement based on past non-compliance, proximity to surface water, topography, size, etc. Priority sites will be inspected bi-weekly during the rainy season.		
24	2007-2010	Owner and Contractor Notification	Distribute informational flier with all grading and building permits.	Engineering/ Development Fee	David Taylor

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Document number of fliers distributed with permits.		
25	2007-2010	Complaint Reporting System	Develop and implement complaint reporting system to respond to stormwater related public complaints	Engineering/ Development Fee	David Taylor
			Document the number of complaints and responses. Respond to complaints within three working days		
			Conduct follow up inspections at sites with violations. Document inspections.		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF ATWATER

**SECTION FIVE – POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT
AND REDEVELOPMENT PROGRAM**

**2.5 SECTION FIVE – POST-CONSTRUCTION STORM WATER
MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
PROGRAM**

The Post-Construction Storm Water Management in New Development and Redevelopment Program addresses the importance of storm water runoff management in new development and redevelopment projects. This includes land disturbances of greater than or equal to one acre and projects less than one acre that are part of a larger common plan of development or sale. Substantial impacts of post-construction runoff are caused by an increase in the type and quantity of pollutants in storm water runoff. The BMPs described in this section of the SWMP include the development of structural and non-structural storm water runoff strategies and the development of post-construction programs that consider water quality impacts of new development and redevelopment projects in the comprehensive land use master planning process.

This program will also be integrated with the Construction Site Storm Water Runoff Control Program of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Post-Construction Storm Water Management in New Development and Redevelopment Program.

Objective: Reduce pollutants in post-construction storm water runoff from new and redevelopment.

Permit Requirement: D.2.e. – Post-Construction Storm Water Management in New Development and Redevelopment.

Description of Tasks:

Storm Water Ordinance: A storm water ordinance will be developed to reduce pollutants in storm water from new and redevelopment projects and insure that adequate long term funding is available for operation and maintenance of the BMPs. Potential strategies for ensuring long-term operation and maintenance that will be considered include City funded and maintained, developing special maintenance districts, relying on home owner's associations or local property owners. The City will also address how to track and document the maintenance activities

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**SECTION FIVE – POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT
AND REDEVELOPMENT PROGRAM**

Post Construction Storm Water Management Program: The City will develop a program to address post construction storm water runoff with both structural and nonstructural controls. The City currently requires that developers restrict their storm water discharge by requiring detention. The City will coordinate with planners to incorporate water quality controls. For example, the City could develop standards to minimize directly connected impervious areas.

Municipal Employee Training: The City will train their staff regarding post-construction requirements and conditions of approval twice annually. The training will include maintenance requirements for the BMPs and water quality considerations as they relate to maintenance.

Comprehensive Land Use Master Plan: Water quality impacts of new and significant redevelopment will be addressed in the Comprehensive Land Use Master Plan.

Structural/Non Structural Controls: The City will develop a program to address post construction storm water runoff with both structural and nonstructural controls. The City currently requires that developers restrict their storm water discharge by requiring site-specific detention/retention basins for all new projects. As the City defines other requirements, workshops will be held with contractors and developers so that the requirements are developed in concert with the local community.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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CITY OF ATWATER

SECTION FIVE – POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
26	2007	Develop Storm Water Ordinance	Adopt proposed ordinance which authorizes the City to implement and enforce post construction BMPs	City Attorney/ General Fund	Salvador V. Navarrete
			Require development standards to be considered in the planning phase		
			Include provisions to address responsibility and funding for long term maintenance		
			Develop method to track and document the maintenance activities		
27	2008-2010	Develop and Implement Post Construction Storm Water Management Program	Implement ordinance and document compliance in annual report Develop guidance for planning and public works departments' design review	Engineering/ Development Fee	David Taylor
			Design improvements and new technology will be made available to developers and designers		
			City will enforce the BMPs to incorporate these functions to lessen the effects of runoff from development and redevelopment projects		
			Require maintenance of privately owned BMPs		

**MERCED STORM WATER GROUP
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CITY OF ATWATER

SECTION FIVE – POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Develop tracking mechanism		
28	2008-2010	Municipal Employee Training	Train staff twice annually regarding post-construction requirements and conditions of approval	Engineering/ Development Fee	David Taylor
29	2008-2010	Comprehensive Land Use Master Plan	Document Plan updates with GIS	Planning and Redevelopment/ General Fund	Mo Khatami
30	2008-2010	Post-Construction Development Standards	Adopt new standards to require post construction runoff control measures and to specify installation and maintenance requirements for those measures. The City will implement measures to inspect the controls are being implemented.	Planning and Redevelopment/ General Fund	Mo Khatami
			Develop and implement tracking mechanism for post-construction BMPs		
31	2008-2010	Structural Controls	Continue to require structural controls on all new projects. Document locations.	Community Development/ General Fund	Mo Khatami
			Develop additional controls in concert with developers		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF ATWATER

SECTION SIX – POLLUTION/PREVENTION GOOD HOUSEKEEPING FOR MUNICIPAL
OPERATIONS

**2.6 SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR
MUNICIPAL OPERATIONS**

The Pollution Prevention/Good Housekeeping for Municipal Operations addresses routine activities in the operation and maintenance for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. This Program includes a training component to prevent and reduce storm water pollution from municipal operations. The BMPs can be separated into two broad categories: source controls and materials management. Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, road crew training, flood control projects and litter ordinances. Materials management BMPs are designed to reduce pollutants with non-structural controls such as pesticide education and spill prevention control.

This program will also be integrated with the Public Education and Outreach, Public Involvement/Participation and Illicit Discharge Detection and Elimination Programs to promote awareness of water quality concerns in performing routine roadway maintenance and operation, and other practices.

Objective: Reduce pollutants in storm water runoff from municipal operations.

Permit Requirement: D.2.f. – Pollution Prevention/Good Housekeeping for Municipal Operations.

Description of Tasks:

Municipal Employee Training: A training program for municipal operations employees will be developed regarding pollutants that may be discharged to the storm sewer system and the potential impacts. Proper training can reduce pollutants from such activities as storm sewer system maintenance, park and landscape maintenance, tack oil application, excess concrete, concrete truck washout and spill clean up. Training will occur at a minimum of four times per year and will occur during the monthly safety meetings. The purpose of the training is to update operations personnel and parks and golf course employees on storm water issues and to provide a platform for a roundtable discussion on current practices and procedures and how they impact storm water quality.

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**SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL
OPERATIONS**

To ensure the effectiveness of a long-term training program the City will elicit feedback from employees who receive the training program. The feedback will likely be an evaluation form that is completed by attendees at the end of each training session.

Storm Sewer System Maintenance: The existing drainage system operation, maintenance and cleaning procedures will be evaluated for the purpose of reducing pollutants in storm water runoff. Areas of chronic problems will be identified and corrective actions for these areas will be developed and implemented. Implementation of BMPs shall reference appropriate guidance materials. Proper system maintenance and employee training will help to reduce storm water impacts from such activities as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

The current disposal procedures for waste removed from the storm sewer system will be reviewed and assessed. Such wastes include dredge spoil, accumulated sediments, floatables and other debris. Controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots, maintenance and storage yards and waste transfer stations will help to reduce the discharge of pollutants to receiving water bodies.

Floatable Control Program: Develop a program designed to utilize structural and non-structural controls where necessary to reduce the discharge of floatables to the MEP. Adequate floatable controls will help to ensure a reduction in the amount and type of pollutant that is discharge into local waterways. Current programs to promote recycling and trash removal to minimize floatables in storm water will continue.

Pesticide, Herbicide, Fertilizer Program: Current BMPs will be evaluated and implemented as appropriate to reduce the discharge of pollutants related to the application of pesticides, herbicides and fertilizers (PHF) applied by municipal employees or contractors to public right-of-ways, parks and other municipal facilities. All applicators have received Qualified Applicator Certificate (QAC) training.

Spill Prevention and Response Program: The City will respond to reports of spills or illegal discharges and initiate enforcement actions. The City fire department is also equipped to respond to spills, to mitigate spills and to eliminate the danger to human health. The current program will be evaluated for effectiveness, and will

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**SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL
OPERATIONS**

be modified as necessary. Personnel training is an important component to this program.

Water Quality Assessment for Flood Control Projects: The City currently utilizes detention basins to reduce peak discharges to receiving waters. This reduction in flow reduces potential erosion to receiving waters. It also decreases the amount of sediment, floatables and hydrocarbons from the discharge. The City will continue to require attenuation of storm water discharges and in the future may require the addition of other water quality features in the design and construction of detention basins.

Street Sweeping: The City will continue to sweep residential streets on a regular schedule. The City will document the miles of streets swept per month and the amount of material swept. Document roads that are swept.

Pollution Prevention at Corp Yards: The City of Atwater will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the City Corp yard.

Green Waste Program: The County of Merced currently has a two (2) can system for collecting wastes that will continue to be implemented and documented. Each week the City collects green waste and trash from residences.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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STORM WATER MANAGEMENT PROGRAM**

CITY OF ATWATER

SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
32	2006-2010	Municipal Employee Training	Develop and implement a training program for all municipal operations employees including a feedback system	Public Works/ General Fund	David Church
			Provide training four times a year.		
			Document attendance and topics		
			Document feedback received from employees		
33	2006-2010	Storm Sewer System Maintenance and Floatable Controls	Develop a cleanout schedule for MS4 components, including detention basins, pump stations, catch basins, and storm sewer lines	Street, Sewer & Storm Drain/ General Fund	Eric Sorenson
			Implement storm sewer system maintenance schedule and document activities.		
34	2006-2010	Pesticide, Herbicide, Fertilizer (PHF) Program	Continue to implement program. Document training and education.	Parks Dept./ General Fund	Doug Tilly
35	2006-2010	Spill Prevention and Response Program	Assess existing program	Street, Sewer & Storm Drain/ General Fund	Eric Sorenson
			Document training, education and spill locations and response actions		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF ATWATER

SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
36	2006-2010	Water Quality Assessment for Flood Control Projects	Develop water quality assessment program	Street, Sewer & Storm Drain/ General Fund	Eric Sorenson
			Ensure that projects are assessed and project plans are revised accordingly		
			Document water quality assessment of capital improvements by identifying water quality treatment in detention basins. Assessment could be based on return period storm event that is treated in detention basins.		
37	2006-2010	Street Sweeping	Sweep all public streets weekly	Street, Sewer & Storm Drain/ General Fund	Eric Sorenson
			Document miles swept per month and amount of material removed from roads		
			Document roads that are swept		
38	2007-2010	Pollution Prevention Plan for Corp Yard	Prepare, implement and document SWPPP for Corp yard inspect corp yard annually before net season	Street, Sewer & Storm Drain/ General Fund	Eric Sorenson
39	2006-2010	Green Waste Program	Continue collection of green wastes and document actions	Street, Sewer & Storm Drain/ General Fund	Eric Sorenson

3.0 City of Merced

3.1 PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

The Public Education and Outreach on Storm Water Impacts Program of the SWMP addresses increasing public awareness of water quality concerns and BMPs that may be implemented with respect to protection of storm water. The BMPs described in this section of the SWMP include education of the public sector through the use of newsletters and displays. The public education will introduce the SWMP and focus on known contaminant sources and how to control these sources.

This program also integrates many other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the City of Merced (City) for the Public Education and Outreach on Storm Water Impacts Program. An overall implementation schedule for the SWMP is provided in Figure 1.

Objective: Reduce pollutants to receiving waters by increased public awareness of problems and solutions.

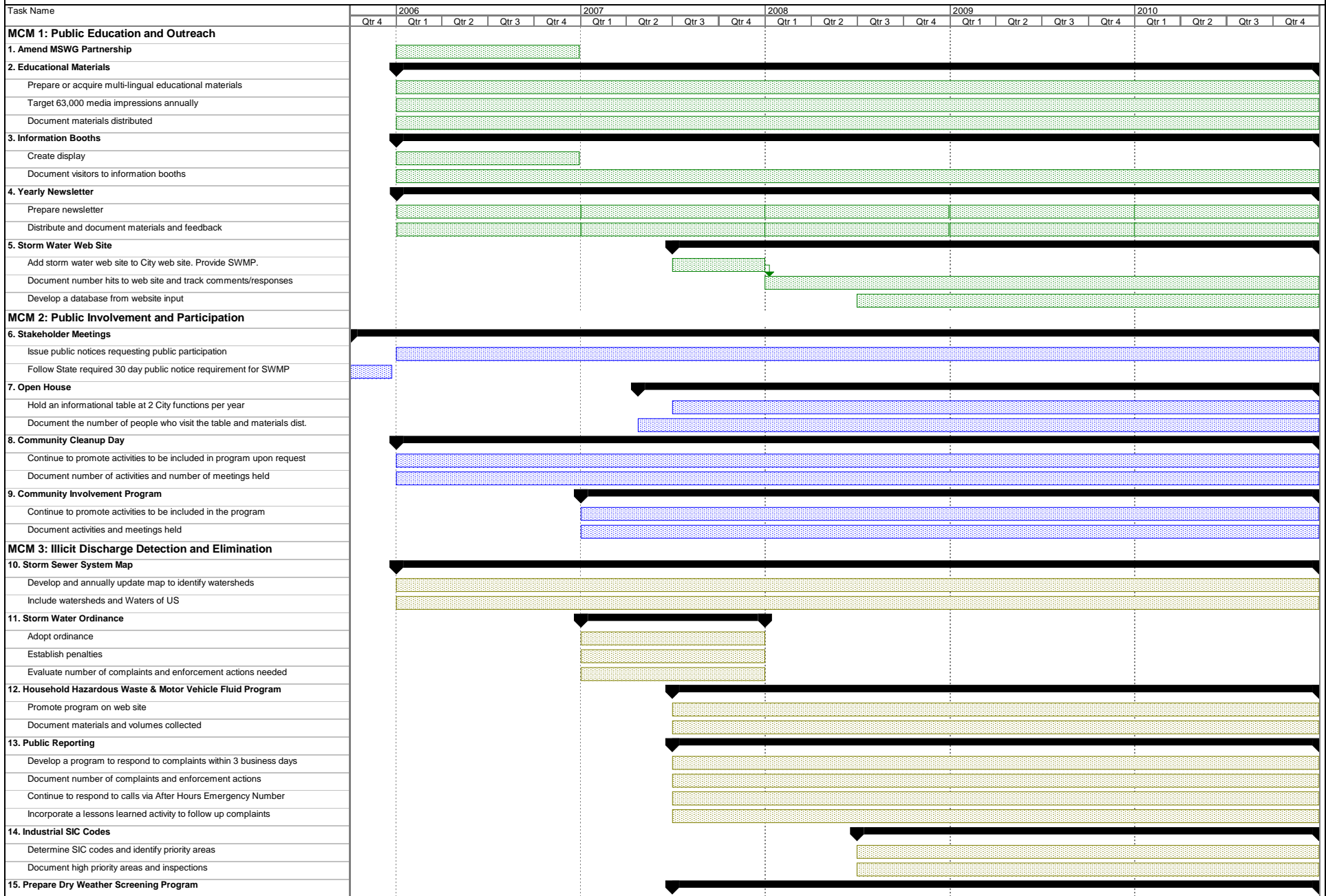
Permit Requirement: D.2.a. – Public Education and Outreach on Storm Water Impacts

Description of Tasks:

Amend Merced Storm Water Group: The Merced Storm Water Group (MSWG) entered into an agreement to implement the NPDES Phase II stormwater program in June 2002. The MSWG will amend the agreement to include more details for BMP implementation, including costs. Formalize future relationship with the Merced Storm Water Group and participate with the group to share resources in the development and implementation of BMPs. The formation of the MSWG will allow for more effective public education and outreach by providing a consistent stormwater education message throughout Merced County.

Educational Materials: Provide the public with educational materials, displays, newsletters and outreach activities regarding the impact of daily activities on storm water quality. The target audience for much of the educational material will be grade school age children. The types of media and timing for distribution are discussed with the community so that the public can be targeted during the spring

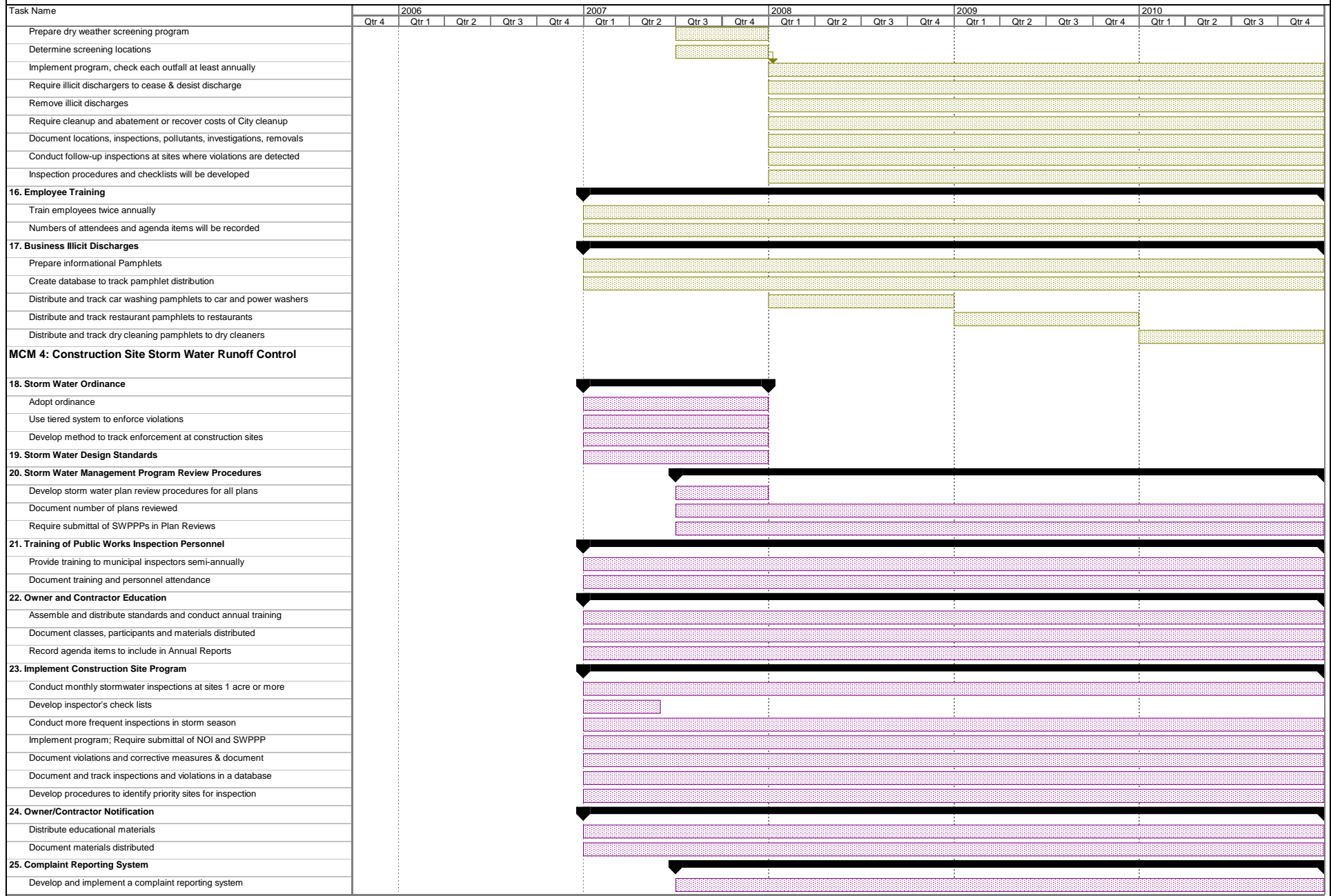
City of Merced Storm Water Management Program Implementation Schedule



Project: Merced City march sch Date: Tue 9/20/05	Task Split	Progress Milestone	Summary Milestone	Project Summary Milestone	External Tasks External Milestone	Deadline
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Figure 1

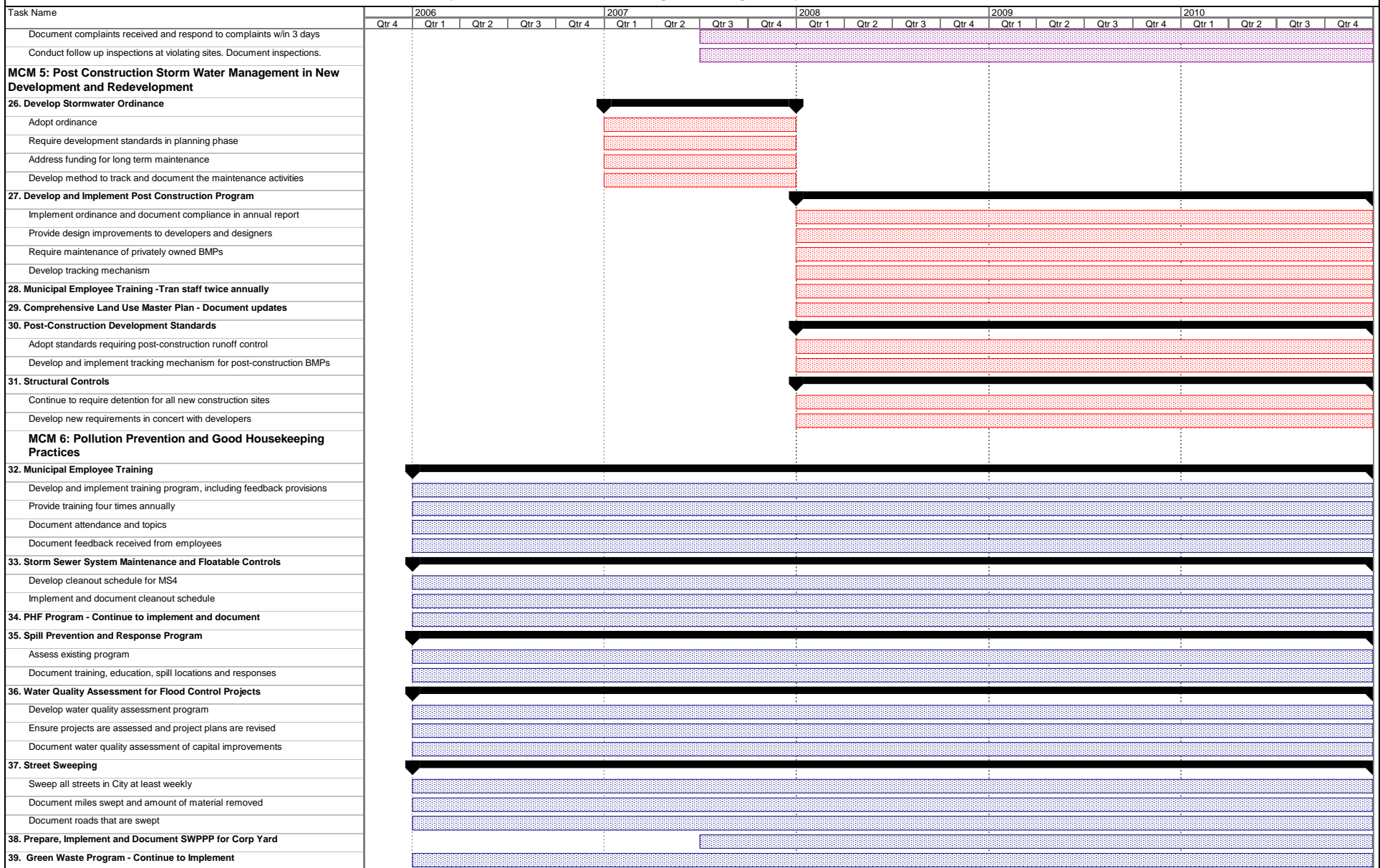
City of Merced Storm Water Management Program Implementation Schedule



Project: Merced City march sch Date: Tue 9/20/05	Task Progress Split Milestone	Summary Project Summary	External Tasks External Milestone	Deadline
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Figure 1

City of Merced Storm Water Management Program Implementation Schedule



Project: Merced City march sch Date: Tue 9/20/05	Task Split	Progress Summary External Tasks Milestone External Milestone	Project Summary External Milestone	Deadline
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Figure 1

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF MERCED

SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

and the fall. Other factors that are taken into consideration in choosing the types of media are the average number of times that a person will see the advertisement. The materials will be prepared/obtained in a multi-lingual format. Examples of the types of educational materials that are developed are:

- ❑ Television commercials
- ❑ Radio commercials
- ❑ Newspaper advertisements
- ❑ Bus board advertisements
- ❑ Tabloids
- ❑ Pencils and pads of paper
- ❑ Posters
- ❑ Magnets
- ❑ Activity books
- ❑ Movie theater advertisements

Information Booths/County Fair: Create a display to educate the public about the importance of stormwater quality to display at the City. Coordinate with MSWG to participate in the County Fair celebration and Earth Day with an information booth. The booth display will include a graphic panel illustrating the hydrologic cycle in an urban setting and is accompanied by a series of pamphlets or other educational materials that explain how the public can help reduce pollutants exposed to rainfall. The materials distributed through the information booths will be included in calculating the total percent of the population reached.

Newsletter in Utility Bill: Develop a newsletter intended to provide information to the public regarding the impacts of their activities on storm water quality and ultimately the receiving waters. The newsletter will also instruct the public how to access the City's website to obtain more information. The newsletter will be sent with all utility bills.

Storm Water Website: The City will create a storm water page on the City's website. The storm water page will provide the current copy of the SWMP, identify educational materials and outreach programs.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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STORM WATER MANAGEMENT PROGRAM**

CITY OF MERCED

SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
1	2006	Amend the MSWG for SWMP Implementation	Amend MOU or other agreements	MSWG/ MSWG	David Tucker
2	2006-2010	Prepare Educational Materials	Prepare or acquire multi-lingual educational materials	MSWG/ MSWG	David Tucker
			Target 63,000 media impressions per year, or prorated portion thereof. The City will target grade school children.		
			Document materials distributed		
3	2006-2010	Information Booths	Create display to distribute information at events such as Earth Day or in the City lobby	MSWG/ MSWG	David Tucker
			Document number of visitors and informational items distributed		
4	2006-2010	Yearly Newsletter	Prepare newsletter and distribute annually with all utility bills	MSWG/ MSWG	David Tucker
			Distribute and document materials and feedback		
5	2007-2010	Storm Water Website	Add a storm water page to the City website. Provide an electronic copy of the Storm Water Management Plan.	Information Systems/ General Fund	Jeff Lewis
			Document number of hits to site and track comments/responses		

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**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF MERCED

SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Develop a database from website input as an analysis tool to follow up comments and responses		

3.2 PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

The Public Involvement/Participation Program section of the SWMP addresses the importance of public involvement with respect to protection of storm water. Community participation provides for broader public support, shorter implementation schedules, a broader base of expertise and the development of important relationships with other community and government programs. The BMPs described in this section of the SWMP includes opportunities for the public to play an active role in the development and implementation of the SWMP. Such opportunities include the public notice process and efforts to reach out and engage all economic and ethnic groups, and additional community programs to foster public input.

This program will be integrated with the Public Education and Outreach Program on Storm Water Impacts to incorporate education with hands-on programs. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Public Education Involvement/ Participation Program.

Objective: Involve the public in the development and implementation of the SWMP.

Permit Requirement: D.2.b. – Public Involvement/Participation

Description of Tasks:

Stakeholder Meetings: The City of Merced held two public meetings in conjunction with the MSWG during the process of developing the SWMP. Public notices will be issued to announce public involvement and requests for participation. In addition, a public notification process will be followed prior to final approval of the SWMP by the Regional Water Quality Control Board Executive Officer.

Open House: An informational table will be set up and staffed at two City meetings. The purpose of the open house will be to provide educational materials regarding storm water to the general public. The open house will also provide a forum for the public to comment on the City's storm water program.

Community Involvement: The City will continue to implement community involvement programs to enlist the services of parties such as school groups and the Boy Scouts to participate in activities such as stencil existing storm drains, "Clean Bear Creek Day", dry weather screening and monitoring, and the reporting of illicit dumping. The City currently has a Spring Clean Up day that the citizens have an opportunity to participate in. The purpose of these activities is to not only

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educate the community on the function of the storm drain system and pollutants that should not be introduced into it, the SWMP, and associated regulations, but through involvement induce a sense of ownership and consequently a respect of the storm water quality.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
6	2006-2010	Stakeholder meetings	Hold two public outreach meetings while developing the SWMP. Public notices will be issued to announce public involvement and requests for participation.	MSWG/ MSWG	David Tucker
			Post SWMP on the State Water Resources Control Board's website for 30 days		
7	2007-2010	Open House	Hold an informational table at 2 City functions per year	MSWG/ MSWG	David Tucker
			Document the number of people who visit the table		
8	2006-2010	Community Cleanup Day	Develop and implement an annual Community Cleanup Day	MSWG/ MSWG	Alexander Hall
9	2007-2010	Community Involvement	Continue to promote activities to be included in the program based upon community input	MSWG/ MSWG	Gordon Gray
			Document number of activities and number of meetings held		

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Illicit Discharge Detection and Elimination Program section of the SWMP addresses non-storm water flows that are discharged to receiving waters via storm water conveyance systems. The program will implement BMPs to assist in the identification of illicit discharges and removal of these discharges from the system. This program will also focus on prevention of new illicit discharges to the storm water system by means of education, regulations, and through spill prevention and response.

This program will also be integrated with the Public Education and Outreach program to promote awareness of the importance of protecting the storm water system from illicit discharge and the resultant impact to receiving waters. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Illicit Discharge and Elimination Program.

Objective: Detect and eliminate illicit discharges to the storm sewer system.

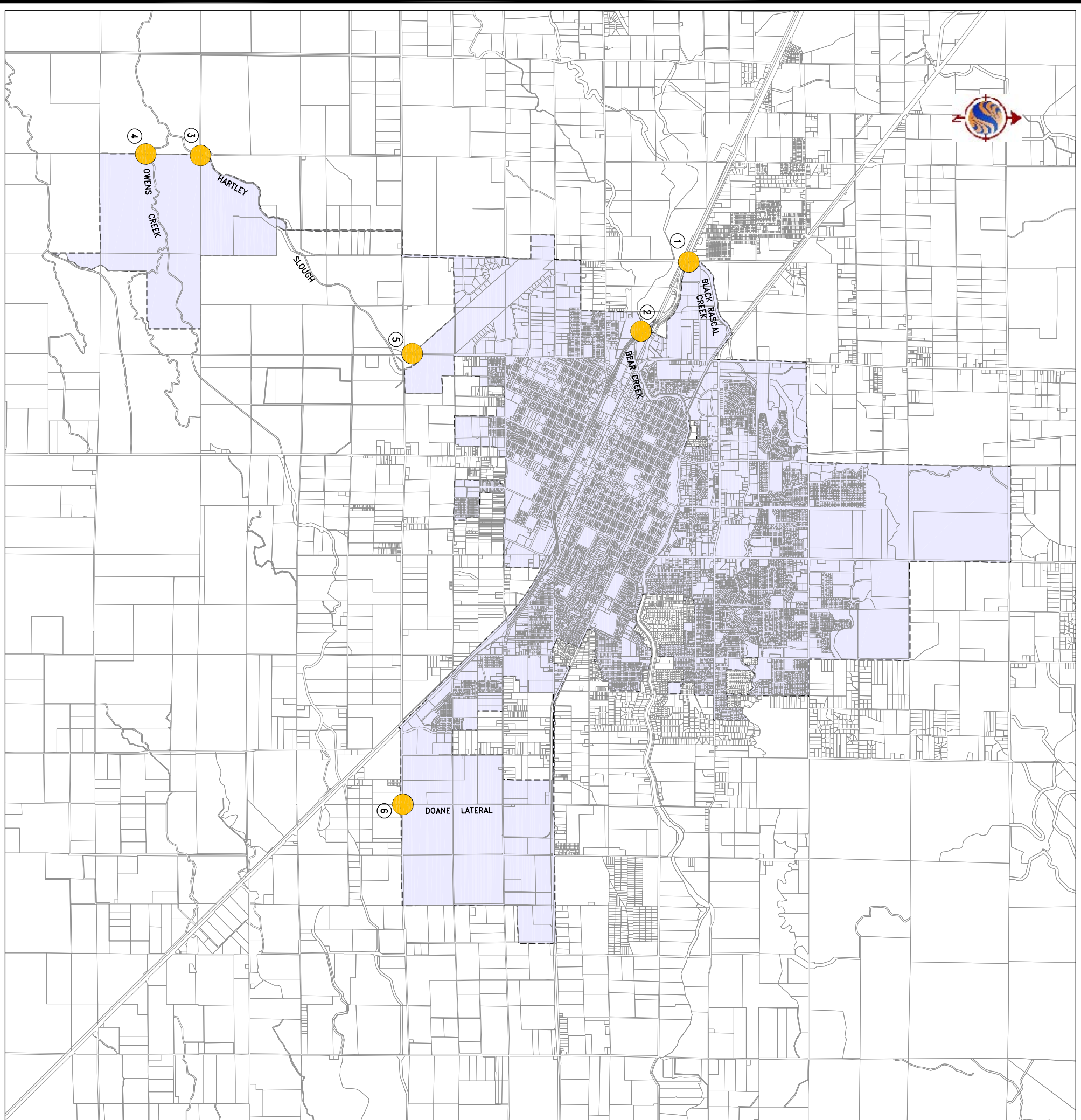
Permit Requirement: D.2.c. – Illicit Discharge Detection and Elimination.

Description of Tasks:

Storm Sewer System Map: Maintain a current map that identifies the City's storm sewer system, (see Figure 2). The map will be updated annually. The purpose of the storm sewer map is to provide accurate location information to City personnel implementing the Illicit Discharge detection and Elimination Program. This includes identifying the location of watersheds, associated outfalls, and waters of the U.S. that receive discharges from those outfalls. This document will allow City personnel to better determine the source of pollutants contained in storm water.

Ordinance: An ordinance or other regulatory mechanism will be developed to prohibit non-storm water discharges to the storm sewer system. The ordinance will include provisions for enforcement of the program.

Hazardous Household Waste and Waste Oil Program: This program includes Household Hazardous Wastes (HHW) and used oil collection programs that are administered by the City and the County of Merced.



CITY OF MERCED STORM WATER MANAGEMENT PROGRAM (SWMP) STORM SEWER SYSTEM MAP


FIGURE 2


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LEGEND

PROGRAM BOUNDARIES 

DISCHARGE POINT 

BLACK RASCAL CREEK ①

BEAR CREEK ②

HARTLEY SLOUGH ③

OWENS CREEK ④

HARTLEY SLOUGH ⑤

DOANE LATERAL ⑥

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Public Reporting: The City will maintain an After Hours Emergency phone number to central dispatch. If a call comes in regarding a complaint associated with the storm sewer system, the proper City personnel are notified to investigate the complaint. The phone number will be advertised on the stormwater website.

SIC Codes: The City will use existing databases to determine the SIC codes for all industries within the City. The City will use this information to assist with identifying possible locations of non-storm water discharges. These areas can then be targeted for dry weather screening.

Dry Weather Screening: The City will develop and implement a Dry Weather Screening Program to detect and address non-storm water discharges and illegal dumping to the storm sewer system. The Dry Weather Screening Program will also address industries that are prone to discharge to the storm drain system such as power washers. Problem areas will be identified using citizen complaints, field screening, and SIC codes for suspect industries. Municipal training will be an integral part of the illicit discharge program. The Dry Weather Screening Program will establish a system and procedures for enforcement of violations and will establish a tracking system for inspections and violations. Enforcement tools will be used to (1) require illicit discharges to immediately cease and desist discharging to receiving waters or the storm drain system; (2) remove illicit detections as soon as practicable; and (3) require clean up and abatement or recover costs of the City to cleanup and abate discharge.

Employee Training: As part of the municipal employee training program, the City will educate employees regarding spill prevention and response and how to recognize illicit connections and illegal discharges.

Allowable Discharges: The City does not anticipate that any of the discharges that are allowable in the General Permit are a significant source of pollutants within the City.

Business Illicit Discharge Elimination: City will prepare informational pamphlets to distribute to businesses that may discharge to the storm drain system such as power washers, car washers, dry cleaners, restaurants, etc. The City will distribute the information for a business type to all registered business owners annually.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
10	2006-2010	Storm Sewer System Map	Develop and annually update a map to identify watersheds, outfalls and receiving waters	Engineering/ General Fund	Joe Cardoto
			Include watersheds and Waters of the US that receive discharges from Storm Water outfalls on the Storm Sewer Maps		
11	2007	Storm Water Ordinance	Adopt and implement Ordinance which gives the City the authority to implement BMPs and enforce the illegal dumping and illicit discharge prohibitions	City Attorney/ General Fund	Jeanne Schecter
			Establish and enforce penalties		
			Evaluate the number of complaints and number requiring further investigation/enforcement actions		
12	2007-2010	Used Motor Vehicle Fluids and Household Hazardous Waste Materials	Promote program on website	Solid Waste JPA/ JPA	Dan Arnold
			Document materials and volumes collected		
13	2007-2010	Public Reporting	Develop a program to respond to complaints within 3 business days	Public Works/ General Fund	Humberto Molina
			Document the number of complaints and enforcement actions		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Continue to respond to complaints about the storm sewer system via the After Hours Emergency number	Fire Department/ General Fund	Chief Mitten
			Incorporate a lessons learned activity to follow up complaints and update practices		
14	2008-2010	Industrial SIC Codes	Determine the SIC codes of industries within the County and their Industrial permitting obligation.	Public Works/ General Fund	Humberto Molina
			Implement visual screening and inspections to help prioritize areas of concern for training and enforcement		
			Document high priority areas on storm drain map. Document number of inspections and enforcement actions.		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
15	2007-2010	Dry Weather Screening	Prepare a program to screen outfalls within the City for dry weather flows	Public Works/ General Fund	John Raggio
			Determine screening locations using prioritization from SIC codes and land use map		John Raggio
			Implement Dry Weather Screening Plan. Check each outfall at least once a year		John Raggio, Mike Wegley
			Require illicit dischargers to immediately cease and desist discharge		John Raggio, Mike Wegley
			Remove illicit discharges		
			Require cleanup and abatement or recover costs of City to cleanup and abate discharge		
			Document number of screening locations, inspections, pollutants discovered, and efforts undertaken to identify and remove possible pollutant sources		John Raggio, Mike Wegley
			Conduct follow-up inspections at sites where violations are detected		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Inspection procedures and checklists will be developed to assist in prioritizing areas and enforcing BMPs		
16	2007-2010	Employee Training	Provide training to public employees twice annually	Public Works/ General Fund	John Raggio
			Numbers of attendees and agenda items will be recorded and included in Annual Reports		
17	2007	Business Illicit Discharges	Prepare informational pamphlets	MSWG/ MSWG	John Raggio
	2007		Create database to track pamphlet distribution		
	2008		Distribute and track car washing and power washing pamphlets to car washers and power washers		
	2009		Distribute and track restaurant pamphlets to restaurants		
	2010		Distribute and track dry cleaning pamphlets to dry cleaners		

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

3.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

The Construction Site Storm Water Runoff Control Program section of the SWMP addresses water quality concerns for construction sites greater than or equal to one acre. Polluted storm water runoff from construction sites often flow to storm sewers and into receiving waters. This runoff can contribute more sediment to receiving waters than can be deposited naturally during several decades. The resulting situation can cause physical, chemical and biological harm to receiving waters. The BMPs described in this section of the SWMP includes the development of a construction site program designed to reduce pollutants in storm water runoff from construction activities. This program will include procedures for construction site plan review, site inspections, public reporting, and notification of specific requirements to all construction site operators of greater than or equal to one acre, and sites less than one acre if part, or a larger development of common plan.

This program will also be integrated with other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Construction Site Storm Water Runoff Control Program.

Objective: Reduce pollutants in storm water runoff from construction sites

Permit Requirement: D.2.d. – Construction Site Storm Water Runoff Control

Description of Tasks:

Storm Water Ordinance: The City will adopt a Storm Water Ordinance to address the regulatory programs required under Phase II of the NPDES Storm Water Program, including Construction Site Runoff Control. This ordinance will include provisions to address both erosion/sediment control and construction site materials and wastes. It will address not only grading disturbing one acre or more, but also land clearing. The ordinance will also include financial guarantees to ensure compliance and site stabilization.

Storm Water Design Standards: The City will develop Construction Site BMPs and will utilize its Improvement and Construction Standards to require construction site runoff control measures and to specify, installation and maintenance requirements for those measures.

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Storm Water Management Program Review Procedures: The City will review all site plans for construction activity water quality controls. To assist developers and contractors in preparing effective plans, the City will distribute standards to specify submittal requirements to ensure adequate information is provided for plan review staff. The standards will provide technical guidance to project owners and contractors to ensure compliance with the program, as well as a regulatory basis on which to condition approval of projects. The City will require a copy of the submitted Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) for all projects of at least one acre that occur in the City. *Training of Public Works Inspection Personnel:* City Public Works Inspection personnel will be educated on the storm water regulations and the requirements for storm water controls at construction sites. Information on specific storm water best management practices and new regulations will be provided. The training will be provided twice annually. The City will partner with the MSWG and the Regional Water Quality Control Board to provide training for both public works personnel and contractors.

Owner/Contractor Education: Information will be provided to owners and operators regarding storm water controls for construction sites. The standards will be distributed and workshops will be conducted annually. The City will partner with the MSWG and the Regional Water Quality Control Board to provide training for both public works personnel and contractors. The California Storm Water Quality Association Storm Water Best Management Practices Handbook for Construction Activity contains guidance in the implementation of BMPs. The City will provide contractors with information on how to access the document.

Construction Site Implementation Program: The City will implement the construction site program with field inspectors and enforcement items. All construction sites will be inspected for erosion controls and materials management. The City will enforce the construction site program according to the ordinance. The City will document inspections and corresponding enforcement actions. The program will include an erosion and sediment control ordinance to enforce the program, mechanisms for site plan review, public input, site inspections, and enforcement of the program. The violations, correction measures and enforcement actions will be documented in the Annual Report.

Owner and Contractor Notification: The City will notify all construction site owners/ operators of their obligations under the State Water Resources Control Board General Construction Permit.

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Complaint Reporting System: The City will develop and implement a complaint reporting system to respond to stormwater related public complaints. The City will respond to complaints within three working days.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
18	2007	Storm Water Ordinance	Adopt ordinance which gives the City the authority to implement BMPs and enforce the erosion/ sediment controls and prohibit the discharge of construction materials and wastes	City Attorney/ General Fund	Jeanne Schecter
			A tiered system will be used to enforce violations of the BMPs implemented under the ordinance		
			Develop method to track enforcement at construction sites		
19	2007	Storm Water Design Standards	Adopt new standards to require construction site runoff control measures and to specify installation and maintenance requirements for those measures. The City will implement measures to inspect that the controls are being implemented.	Development Services/ Development Fee	Jack Lesch

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
20	2007	Storm Water Management Program Review Procedures	Develop storm water plan review procedures for all plans processed through the City	Building Services/ Development Fee	Don Spiva
			Document number of plans reviewed and ensure copy of NOI is included or a WDID is received from SWRCB		
21	2007-2010	Training of Public Works Inspection Personnel	Provide training to all Public Works Department inspection personnel 2 times a year to educate them on the new storm water regulations and what to watch for in the field	Public Works/ General Fund	John Raggio
			Document personnel attendance and agenda items to include in Annual Reports		
22	2007-2010	Owner and Contractor Education	Assemble and distribute standards and conduct training classes annually	Engineering Services/ General Fund and Development Fee	Don Spiva
			Document number of classes held, number of participants and material distributed		
			Record agenda items for inclusion in Annual Reports		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
23	2007-2010	Implement Construction Site Program	Implement construction site program. Require submitting NOI and SWPPP	Inspection Services/ Development Fee	Don Spiva
			Conduct monthly stormwater inspections at constructions sites 1 acre or greater. Follow up inspections will be conducted where violations occur		
			Develop inspector's checklists		
			Document violations, corrective measures and enforcement actions in Annual Report		
			Document and track inspections and violations in a database		
			Develop procedures to identify priority sites for inspection based on past non-compliance, proximity to surface water, topography, size, etc. Priority sites will be inspected bi-weekly during the rainy season.		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
24	2007-2010	Owner and Contractor Notification	Distribute informational flier with all grading and building permits.	Inspection Services/ Development Fee	Jack Lesch, Don Spiva
			Document number of fliers distributed with permits.		
25	2007-2010	Complaint Reporting System	Develop and implement a complaint reporting system to respond to stormwater related public complaints	Public Works/ General Fund and Development Fee	Don Spiva
			Document number of complaints and respond to complaints within three working days		
			Conduct follow up inspections at sites with violations. Document violations.		

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SECTION FIVE – POST-CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT
AND RE-DEVELOPEMENT

**3.5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW
DEVELOPMENT AND REDEVELOPMENT PROGRAM**

The Post-Construction Storm Water Management in New Development and Redevelopment Program addresses the importance of storm water runoff management in new development and redevelopment projects. This includes land disturbances of greater than or equal to one acre and projects less than one acre that are part of a larger common plan of development or sale. Substantial impacts of post-construction runoff are caused by an increase in the type and quantity of pollutants in storm water runoff. The BMPs described in this section of the SWMP include the development of structural and non-structural storm water runoff strategies and the development of post-construction programs that consider water quality impacts of new development and redevelopment projects in the comprehensive land use master planning process.

This program will also be integrated with the Construction Site Storm Water Runoff Control Program of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the City for the Post-Construction Storm Water Management in New Development and Redevelopment Program.

Objective: Reduce pollutants in post-construction storm water runoff from new and redevelopment.

Permit Requirement: D.2.e. – Post-Construction Storm Water Management in New Development and Redevelopment.

Description of Tasks:

Storm Water Ordinance: A storm water ordinance will be developed to reduce pollutants in storm water from new and redevelopment projects and insure that adequate long term funding is available for operation and maintenance of the BMPs. Potential strategies for ensuring long-term operation and maintenance that will be considered include City funded and maintained, developing special maintenance districts, relying on home owners associations or local property owners. The City will also address how to track and document the maintenance activities. The Ordinance will require the adoption of the Standard Urban Storm Water Mitigation Plan (SUSMP) as set forth in Attachment 4 of the General

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Permit. The ordinance will allow for compensatory mechanisms to ensure enforcement.

Development Design Standards: The City will develop during the first five-year permit period design standards in accordance with Attachment 4 of the General Permit. The design standards will be implemented by the fourth year of the permit term and will include the following categories of standards:

- ❑ Peak Storm Water Runoff Discharge Rates
- ❑ Conserving Natural Areas
- ❑ Minimizing Storm Water Pollutants of Concern
- ❑ Protecting Slopes and Channels
- ❑ Providing Storm Drain System Stenciling and Signage
- ❑ Properly Designing Outdoor Material Storage Areas
- ❑ Properly Designing Trash Storage Areas
- ❑ Providing Proof of Ongoing BMP Maintenance
- ❑ Design Standards for Structural or Treatment Control BMPs

Municipal Employee Training: The City will train staff regarding post-construction requirements and conditions of approval twice annually. The training will include maintenance requirements for the BMPs and water quality considerations as they relate to maintenance.

Comprehensive Land Use Master Plan: Water quality impacts of new and significant redevelopment will be addressed in the Comprehensive Land Use Master Plan.

Structural/Non Structural Controls: The City will develop a program to address post construction storm water runoff with both structural and nonstructural controls. The City currently requires that developers restrict their storm water discharge by requiring site-specific detention/retention basins for all new projects. As the City defines other requirements, workshops will be held with contractors and developers so that the requirements are developed in conjunction with the local community.

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Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable

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goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
26	2007	Storm Water Ordinance for Development Design Standards	Adopt ordinance that gives the City the authority to implement and enforce BMPs	City Attorney/ General Fund	Jeanne Schecter
			Require development standards to be considered in the planning phase		
			Include provisions to address responsibility and funding for long term maintenance		
			Develop method to track and document the maintenance activities		
27	2008-2010	Develop and adopt Design Standards utilizing structural and non	Develop an ordinance that gives MSWG the authority to adopt and enforce development standards utilizing structural and non-structural controls in accordance with Attachment 4 of the General Permit	Engineering/ General Fund	David Tucker
			Implement and document plan development and progress in Annual Report		
			Require maintenance of privately owned BMPs		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Develop tracking mechanism		
28	2008-2010	Municipal Employee Training	Train staff twice annually regarding post-construction requirements and conditions of approval	Engineering/ General Fund	John Raggio
29	2008-2010	Comprehensive Land Use Master Plan	Document Plan updates	Development Services/ General Fund	Jack Lesch
30	2008-2010	Post-Construction Development Standards	Adopt new standards to require post construction runoff control measures and to specify installation and maintenance requirements for those measures. The City will implement measures to inspect the controls are being implemented.	Engineering/ General Fund	David Tucker
			Develop and implement tracking mechanism for post-construction BMPs		
31	2008-2010	Structural Controls	Continue to require structural controls as necessary. Document locations.	Engineering/ General Fund	Ciro Castaneda
			Develop additional structural requirements in coordination with developers		

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SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

3.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The Pollution Prevention/Good Housekeeping for Municipal Operations addresses routine activities in the operation and maintenance for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. This Program includes a training component to prevent and reduce storm water pollution from municipal operations. The BMPs can be separated into two broad categories: source controls and materials management. Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, road crew training, flood control projects and litter ordinances. Materials management BMPs are designed to reduce pollutants with non-structural controls such as pesticide education and spill prevention control.

This program will also be integrated with the Public Education and Outreach on Storm Water Impacts, Public Involvement/Participation and Illicit Discharge Detection and Elimination Programs to promote awareness of water quality concerns in performing routine roadway maintenance and operation, and other practices.

Objective: Reduce pollutants in storm water runoff from municipal operations.

Permit Requirement: D.2.f. – Pollution Prevention/Good Housekeeping for Municipal Operations

Description of Tasks:

Municipal Employee Training: A training program for municipal operations employees will be developed regarding pollutants that may be discharged to the storm sewer system and the potential impacts. Proper training can reduce pollutants from such activities as storm sewer system maintenance, park and landscape maintenance, tack oil application, excess concrete, concrete truck washout and spill clean up. Training will occur at a minimum of four times per year and will occur during the monthly safety meetings. The purpose of the training is to update operations personnel and parks and golf course employees on storm water issues and to provide a platform for a roundtable discussion on current practices and procedures and how they impact storm water quality.

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To ensure the effectiveness of a long-term training program, the City will elicit feedback from employees who receive the training program. The feedback will likely be an evaluation form that is completed by attendees at the end of each training session.

Storm Sewer System Maintenance: The existing drainage system operation, maintenance and cleaning procedures will be evaluated for the purpose of reducing pollutants in storm water runoff. Areas of chronic problems will be identified and corrective actions for these areas will be developed and implemented. Implementation of BMPs shall reference appropriate guidance materials. Proper system maintenance and employee training will help to reduce storm water impacts from such activities as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

The current disposal procedures for waste removed from the storm sewer system will be reviewed and assessed. Such wastes include dredge spoil, accumulated sediments, floatables and other debris. Controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots, maintenance and storage yards and waste transfer stations will help to reduce the discharge of pollutants to receiving water bodies.

Develop a program designed to utilize structural and non-structural controls where necessary to reduce the discharge of floatables to the MEP. Adequate floatable controls will help to ensure a reduction in the amount and type of pollutant that is discharge into local waterways. Current programs to promote recycling and trash removal to minimize floatables in storm water will continue.

The City currently has one Corp yard. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented.

Pesticide, Herbicide, Fertilizer Program: Current BMPs will be evaluated and implemented as appropriate to reduce the discharge of pollutants related to the application of pesticides, herbicides and fertilizers (PHF) applied by municipal employees or contractors to public right-of-ways, parks and other municipal facilities. All applicators have received Qualified Applicator Certificate (QAC) training.

Spill Prevention and Response Program: The City will respond to reports of spills or illegal discharges and initiate enforcement actions. The City fire department is also equipped to respond to spills, to mitigate spills and to eliminate the danger to

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human health. The current program will be evaluated for effectiveness, and will be modified as necessary. Personnel training is an important component to this program.

Water Quality Assessment for Flood Control Projects: The City currently utilizes detention basins to reduce peak discharges to receiving waters. This reduction in flow reduces potential erosion to receiving waters. It also decreases the amount of sediment, floatables and hydrocarbons from the discharge. The City will continue to require attenuation of storm water discharges and in the future may require the addition of other water quality features in the design and construction of detention basins.

Street Sweeping: The City will continue to sweep residential streets. The City will document the miles of streets swept and the amount of material swept. Document the roads that are swept.

The City is in the process of adopting an ordinance to prevent vehicles from parking on the streets during scheduled street sweeping operations.

Pollution Prevention at Corp Yards: The City of Merced will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the City maintenance yard.

Recycling, Green Waste and Leaf Collection Program: The City currently has a three (3) can system for collecting wastes that will continue to be implemented and documented. Each week the City collects three types of materials from residences: green waste/composting, recycling and trash. The City also currently has a fall/winter leaf collection program to remove fallen leaves from City streets before they can enter the storm drain system. The City will document the amount of material collected.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

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SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
32	2006-2010	Municipal Employee Training	Develop and implement a training program for all municipal operations employees, including a feedback system	Public Works/ General Fund	John Raggio
			Provide training four times a year. Document attendance and topics.		
			Document attendance and topics		
			Document feedback received from employees		
33	2006-2010	Storm Sewer System Maintenance and Floatable Controls	Develop a cleanout schedule for MS4 components, including detention basins, pump stations, catch basins, and storm sewer lines	Public Works/ General Fund	John Raggio
			Implement storm sewer system maintenance schedule and document activities.		
34	2006-2010	Pesticide, Herbicide, Fertilizer (PHF) Program	Continue to implement program. Document training and education.	Parks and Rec./ General Fund Grants	Gordon Gray
35	2006-2010	Spill Prevention and Response Program	Assess existing program	Environment al Health/ General Fund	Humberto Molina
			Document training, education and spill locations and response actions		
36	2007-2010	Water Quality Assessment for Flood Control Projects	Develop water quality assessment program	Public Works/ Special Projects	Humberto Molina
			Ensure that projects are assessed and project plans are revised accordingly		

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**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

CITY OF MERCED

SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Document water quality assessment of capital improvements by identifying water quality treatment in detention basins. Assessment could be based on return period storm event that is treated in detention basins.		
37	2006-2010	Street Sweeping	Sweep City streets on a weekly basis	Public Works/ General Fund	John Raggio
			Document miles swept per month and amount of material removed from roads		
			Document roads that are swept		
			Adopt ordinance regarding parking in the street during scheduled sweeping operations		
38	2007-2010	Pollution Prevention Plan for Corp Yard	Prepare, implement and document SWPPP for maintenance yard inspect corp yard annually before wet season	Public Works/ General Fund	Dan Arnold
39	2006-2010	Recycling, Green Waste and Leaf Collection Program	Continue weekly collection of green wastes and recycling and document actions	Public Works/ General Fund	Stan Murdock
			Collect leaves piled by property owners in the street and document the materials collected		John Raggio

4.0 County of Merced

4.1 PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

The Public Education and Outreach on Storm Water Impacts Program of the SWMP addresses increasing public awareness of water quality concerns and BMPs that may be implemented with respect to protection of storm water. The BMPs described in this section of the SWMP include education of the public sector through the use of newsletters and displays. The public education will introduce the SWMP and focus on known contaminant sources and how to control these sources.

This program also integrates many other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the County of Merced (County) for the Public Education and Outreach on Storm Water Impacts Program. An overall implementation schedule for the SWMP is provided in Figure 1.

Objective: Reduce pollutants to receiving waters by increased public awareness of problems and solutions.

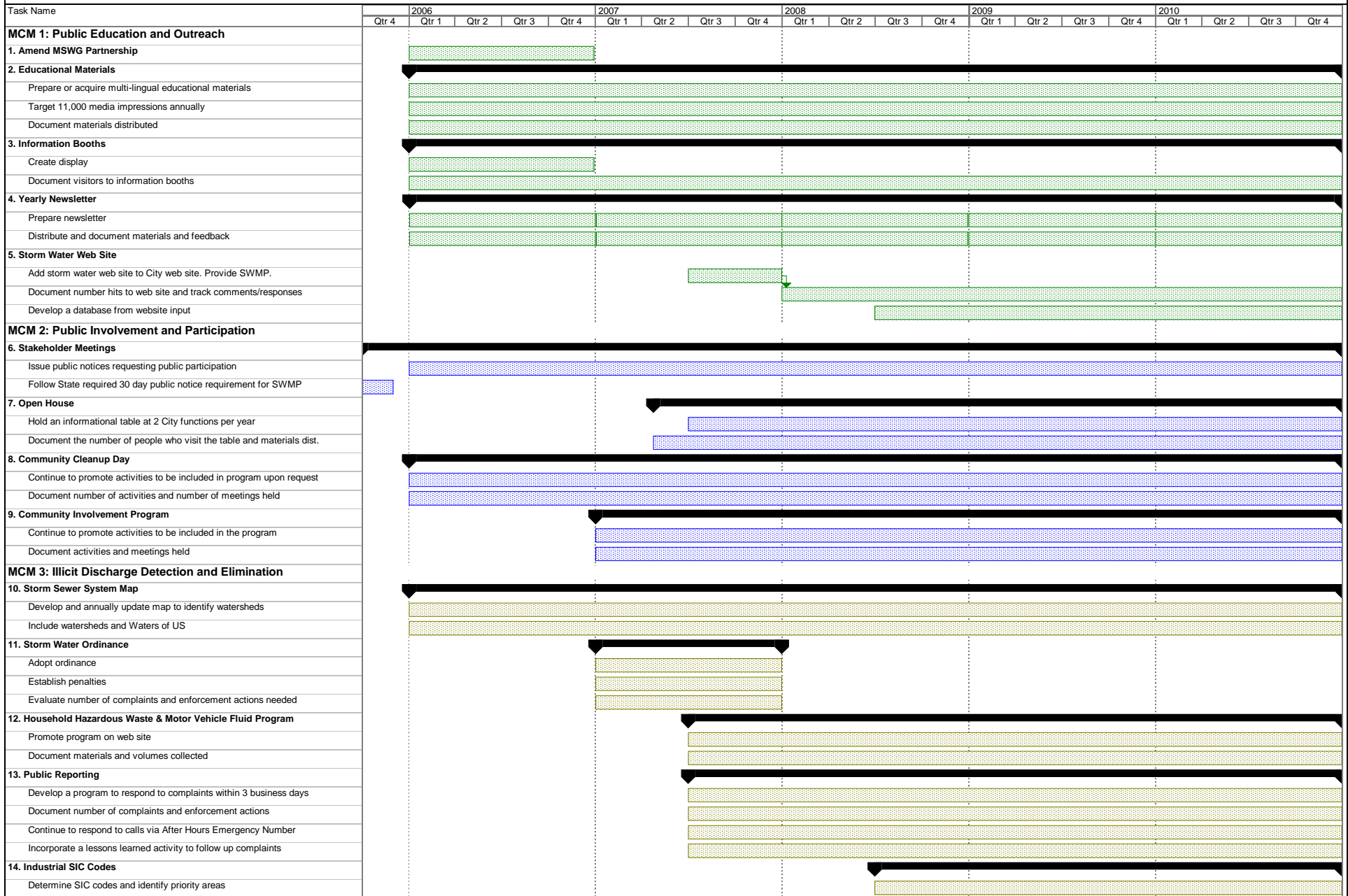
Permit Requirement: D.2.a. – Public Education and Outreach on Storm Water Impacts

Description of Tasks:

Amend Merced Storm Water Group: The Merced Storm Water Group (MSWG) entered into an agreement to implement the NPDES Phase II stormwater program in June 2002. The MSWG will amend the agreement to include more details for BMP implementation, including costs. Formalize future relationship with the Merced Storm Water Group and participate with the group to share resources in the development and implementation of BMPs. The formation of the MSWG will allow for more effective public education and outreach by providing a consistent stormwater education message throughout the County.

Educational Materials: Provide the public with educational materials, displays, newsletters and outreach activities regarding the impact of daily activities on storm water quality. The target audience for much of the educational material will be grade school age children. The types of media and timing for distribution are discussed with the community so that the public can be targeted during the spring

County of Merced Storm Water Management Program Implementation Schedule

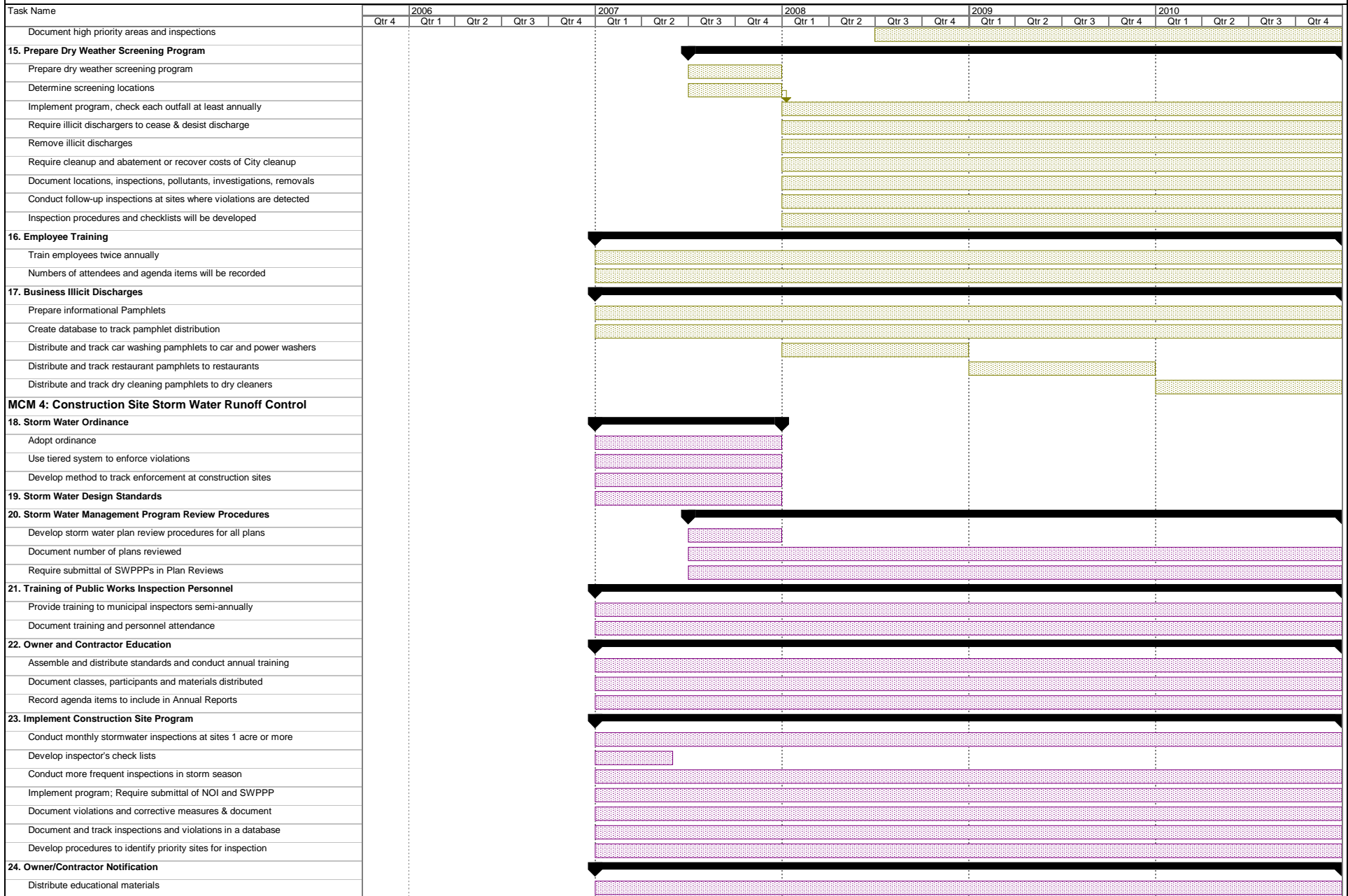


Project: Merced County march sch
Date: Tue 9/20/05

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			

Figure 1

County of Merced Storm Water Management Program Implementation Schedule

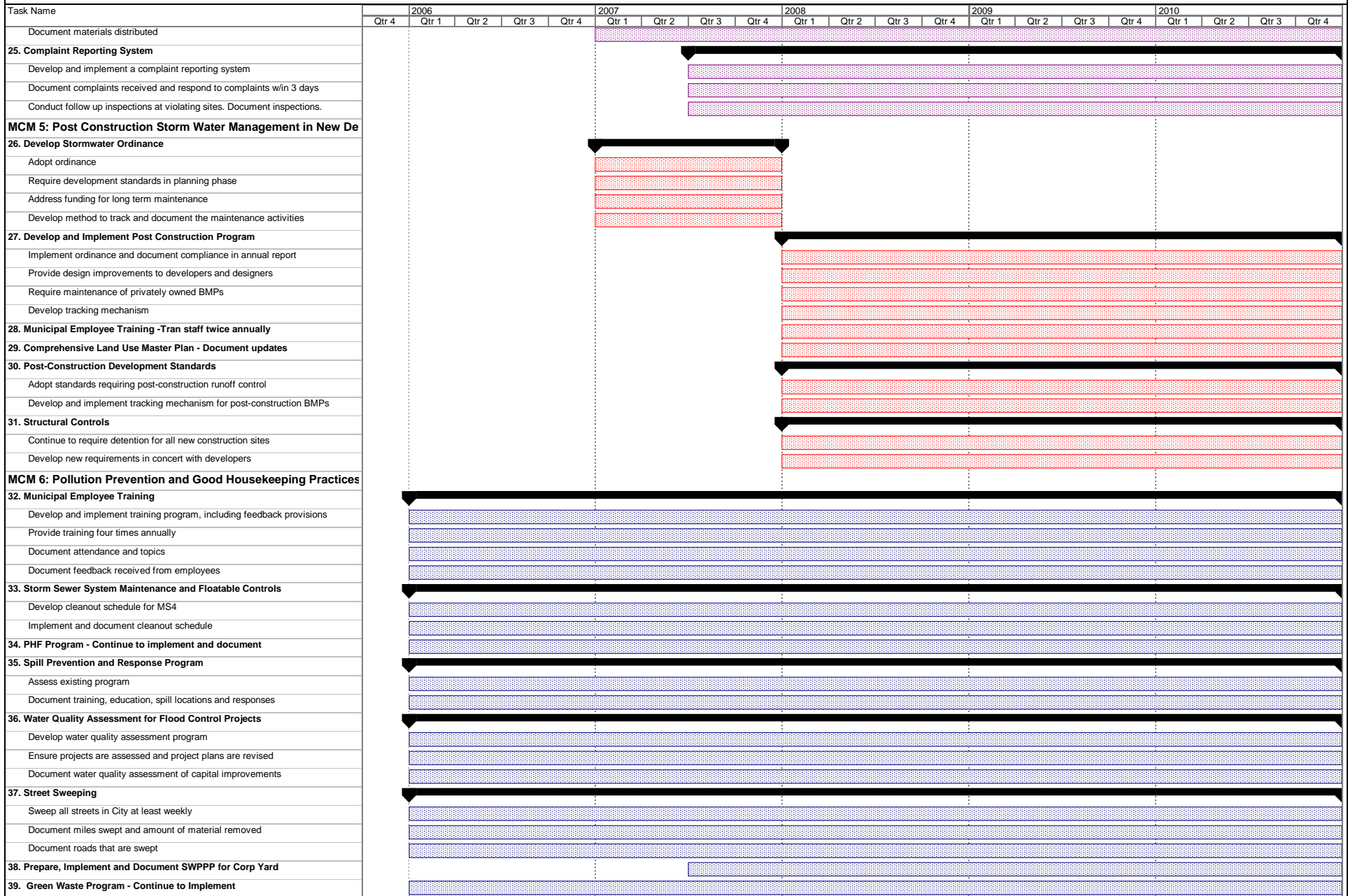


Project: Merced County march sch
Date: Tue 9/20/05

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			

Figure 1

County of Merced Storm Water Management Program Implementation Schedule



Project: Merced County march sch
Date: Tue 9/20/05

Task		Progress		Summary		External Tasks		Deadline
Split		Milestone		Project Summary		External Milestone		

Figure 1

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

and the fall. Other factors that are taken into consideration in choosing the types of media are the average number of times that a person will see the advertisement. The materials will be prepared/obtained in a multi-lingual format. Examples of the types of educational materials that are developed are:

- Television commercials
- Radio commercials
- Newspaper advertisements
- Bus board advertisements
- Tabloids
- Pencils and pads of paper
- Posters
- Magnets
- Activity books
- Movie theater advertisements

Information Booths/County Fair: Create a display to educate the public about the importance of stormwater quality to display at the City. Coordinate with MSWG to participate in the County Fair with an information booth. The booth display will include a graphic panel illustrating the hydrologic cycle in an urban setting and is accompanied by a series of pamphlets or other educational materials that explain how the public can help reduce pollutants exposed to rainfall. The materials distributed through the informational booths will be included in calculating the total percent of the population reached.

Newsletter in Utility Bill: Develop a newsletter intended to provide information to the public regarding the impacts of their activities on storm water quality and ultimately the receiving waters. The newsletter will also instruct the public how to access the County's website to obtain more information. The newsletter will be sent with all utility bills.

Storm Water Website: The County will create a storm water page on the County's website. The storm water page will provide the current copy of the SWMP, identify educational materials and outreach programs.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
1	2006	Amend the MSWG for SWMP Implementation	Amend MOU or other agreements	MSWG/ MSWG	Kellie Jacobs
2	2006-2010	Prepare Educational Materials	Prepare or acquire multi-lingual educational materials	MSWG/ MSWG	Kellie Jacobs
			Target number media impressions of 11,000 per year, or prorated part thereof. The County will target grade school children.		
			Document materials distributed		
3	2006-2010	Information Booths	Create display to distribute information at events such as County Fair and community halls	MSWG/ MSWG	Kellie Jacobs
			Document number of visitors and informational items distributed		
4	2006-2010	Yearly Newsletter	Prepare newsletter and distribute annually with all utility bills	MSWG/ MSWG	Kellie Jacobs
			Distribute and document materials and feedback		
5	2007-2010	Storm Water Website	Add a storm water page to the County website. Provide an electronic copy of the Storm Water Management Program.	MSWG/ MSWG	Kellie Jacobs
			Document number of hits to site and track comments/responses		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

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SECTION ONE – PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Develop a database from website input as an analysis tool to follow up comments and responses		

4.2 PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

The Public Involvement/Participation Program section of the SWMP addresses the importance of public involvement with respect to protection of storm water. Community participation provides for broader public support, shorter implementation schedules, a broader base of expertise and the development of important relationships with other community and government programs. The BMPs described in this section of the SWMP includes opportunities for the public to play an active role in the development and implementation of the SWMP. Such opportunities include the public notice process and efforts to reach out and engage all economic and ethnic groups, and additional community programs to foster public input.

This program will be integrated with the Public Education and Outreach Program on Storm Water Impacts to incorporate education with hands-on programs. The following BMPs describe implementation tasks and assessment tasks to be completed by the County for the Public Education Involvement/ Participation Program.

Objective: Involve the public in the development and implementation of the SWMP.

Permit Requirement: D.2.b. – Public Involvement/Participation

Description of Tasks:

Stakeholder Meetings: The County of Merced held two public meetings in the process of developing the SWMP. Public notices will be issued to announce public involvement and requests for participation. In addition, a public notification process will be followed prior to final approval of the SWMP by the Regional Water Quality Control Board Executive Officer.

Open House: An informational table will be set up and staffed at two County meetings. The purpose of the open house will be to provide educational materials regarding storm water to the general public. The open house will also provide a forum for the public to comment on the County's storm water program.

Evaluate Community Involvement: The County will develop community involvement programs to enlist the services of parties such as school groups and the Boy Scouts to participate in activities such as stencil existing storm drains, dry weather screening and monitoring, and the reporting of illicit dumping. The County currently has a community clean up day that citizens have an opportunity to participate in. The purpose of these activities is to not only educate the

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STORM WATER MANAGEMENT PROGRAM
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SECTION TWO – PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

community on the function of the storm drain system and pollutants that should not be introduced into it, the SWMP, and associated regulations, but through involvement induce a sense of ownership and consequently a respect of the storm water quality.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
6	2006-2010	Stakeholder Meetings	Hold two public outreach meetings while developing the SWMP. Public notices will be issued to announce public involvement and requests for participation.	MSWG/ MSWG	Kellie Jacobs
			Post SWMP on State Water Resources Control Board's web site for 30 days		
7	2007-2006	Open House	Hold an informational table at 2 County functions per year	MSWG/ MSWG	Kellie Jacobs
			Document the number of people who visit the table		
8	2007-2010	Community Cleanup Day	Develop and implement an annual Community Cleanup Day	MSWG/ MSWG	Kellie Jacobs
9	2007-2010	Community Involvement	Continue to promote activities to be included in the program based upon community input.	MSWG/ MSWG	Kellie Jacobs
			Document number of activities evaluated and number of meetings held		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

4.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Illicit Discharge Detection and Elimination Program section of the SWMP addresses non-storm water flows that are discharged to receiving waters via storm water conveyance systems. The program will implement BMPs to assist in the identification of illicit discharges and removal of these discharges from the system. This program will also focus on prevention of new illicit discharges to the storm water system by means of education, regulations, and through spill prevention and response.

This program will also be integrated with the Public Education and Outreach on Storm Water Impacts program to promote awareness of the importance of protecting the storm water system from illicit discharge and the resultant impact to receiving waters. The following BMPs describe implementation tasks and assessment tasks to be completed by the County for the Illicit Discharge and Elimination Program.

Objective: Detect and eliminate illicit discharges to the storm sewer system.

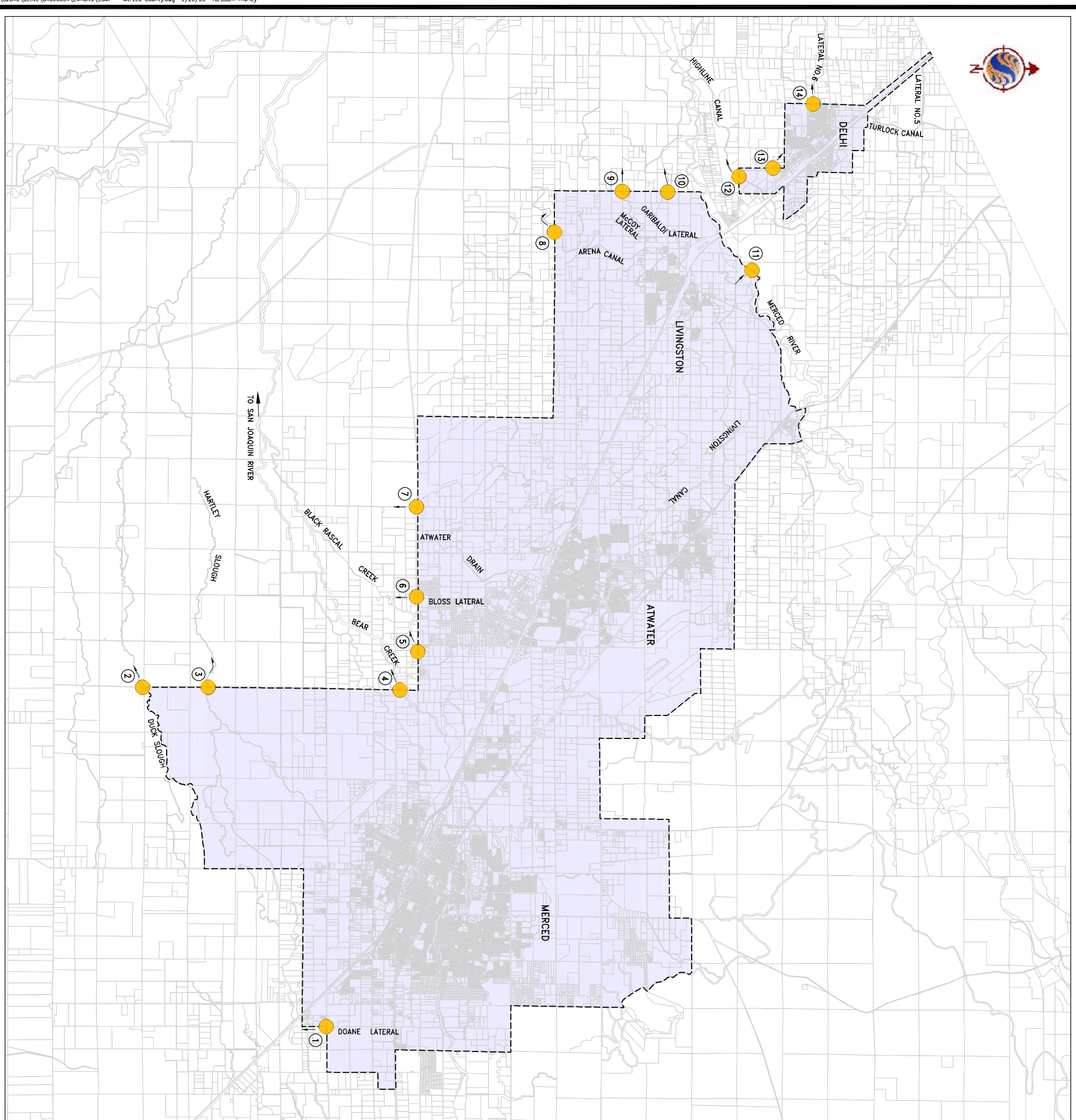
Permit Requirement: D.2.c. – Illicit Discharge Detection and Elimination.

Description of Tasks:

Storm Sewer System Map: Initiate the development of a map that identifies the County's storm sewer system, (see Figure 2). The map will be updated annually. The purpose of the storm sewer map is to provide accurate location information to County personnel implementing the Illicit Discharge detection and Elimination Program. This includes identifying the location of watersheds, associated outfalls, and waters of the U.S. that receive discharges from those outfalls. This document will allow County personnel to better determine the source of pollutants contained in storm water.

Ordinance: An ordinance or other regulatory mechanism will be developed to prohibit non-storm water discharges to the storm sewer system. The ordinance will include provisions for enforcement of the program.

Hazardous Household Waste and Waste Oil Program: This program includes Household Hazardous Wastes (HHW) and used oil collection programs that are administered by the County.





COUNTY OF MERCED STORM WATER MANAGEMENT PROGRAM (SWMP) STORM SEWER SYSTEM MAP

FIGURE 2

PREPARED BY:



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LEGEND	
PROGRAM BOUNDARIES	
DISCHARGE POINT	
DOANE LATERAL	①
DUCK SLOUGH	②
HARTLEY SLOUGH	③
BEAR CREEK	④
BLACK RASCAL CREEK	⑤
BLOSS LATERAL	⑥
ATWATER DRAIN	⑦
ARENA CANAL	⑧
MCCOY LATERAL	⑨
GARIBALDI LATERAL	⑩
LIVINGSTON CANAL	⑪
HIGHLINE CANAL	⑫
HIGHLINE CANAL & LATERAL NO. 6 INTERCONNECTOR	⑬
LATERAL NO. 6	⑭

**MERCED STORM WATER GROUP
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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Public Reporting: The County will maintain an After Hours Emergency phone number to central dispatch. If a call comes in regarding a complaint associated with the storm sewer system, the proper County personnel are notified to investigate the complaint. The phone number will be advertised on the stormwater web site.

SIC Codes: The County will use existing databases to determine the SIC codes for all industries within the County. The County will use this information to assist with identifying possible locations of non-storm water discharges. These areas can then be targeted for dry weather screening.

Dry Weather Screening: The County will develop and implement a Dry Weather Screening Program to detect and address non-storm water discharges to the storm sewer system. The Dry Weather Screening Program will also address industries that are prone to discharge to the storm drain system such as power washers. Problem areas will be identified using citizen complaints, field screening, and SIC codes for suspect industries. Municipal training will be an integral part of the illicit discharge program. The Dry Weather Screening Program will establish a system and procedures for enforcement of violations and will establish a tracking system for inspections and violations. Enforcement tools will be used to (1) require illicit discharges to immediately cease and desist discharging to receiving waters or the storm drain system; (2) remove illicit detections as soon as practicable; and (3) require clean up and abatement or recover costs of the City to cleanup and abate.

Employee Training: As part of the municipal employee training program, the County will educate employees regarding spill prevention and response and how to recognize illicit connections and illegal discharges.

Allowable Discharges: The City does not anticipate that any of the discharges that are allowable in the General Permit are a significant source of pollutants within the City.

Business Illicit Discharge Elimination: City will prepare informational pamphlets to distribute to businesses that may discharge to the storm drain system such as power washers, car washers, dry cleaners, restaurants, etc. The City will distribute the information for a business type to all registered business owners annually.

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Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
10	2006-2010	Storm Sewer System Map	Develop and annually update a map to identify watersheds, outfalls and receiving waters	Public Works/ CSA / General Fund	Kellie Jacobs
			Include watersheds and Waters of the US that receive discharges from Storm Water outfalls on Storm Sewer Maps		
11	2007	Storm Water Ordinance	Adopt and implement ordinance which gives the County the authority to implement BMPs and enforce the illegal dumping and illicit discharge prohibitions	County Counsel/ General Fund	Fernanda Saude
			Establish and enforce penalties		
			Evaluate the number of complaints and number requiring further investigation/ enforcement actions		
12	2007-2010	Used Motor Vehicle Fluids and Household Hazardous Waste Materials	Promote program on website	Solid Waste JPA/ JPA	Scott Johnson

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Document materials and volumes collected		
13	2007-2010	Public Reporting	Develop a program to respond to complaints within 3 business days	Building/ General Fund	Richard Graves
			Document the number of complaints and enforcement actions		
			Continue to respond to complaints about the storm sewer system via the After Hours Emergency number	Environment al Health/ General Fund	Jeff Palsgard
			Incorporate a lessons learned activity to follow up complaints and enforcements and update practices		
14	2008-2010	Industrial SIC Codes	Determine the SIC codes of industries within the County and their Industrial permitting obligation.	Environment al Health/ General Fund	Jeff Palsgard
			Implement visual screening and inspections to help prioritize areas of concern for training and enforcement		
			Document high priority areas on storm drain map. Document number of inspections and enforcement actions. Use GIS coverage to track.		

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STORM WATER MANAGEMENT PROGRAM**

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SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
15	2007-2010	Dry Weather Screening	Prepare a program to screen outfalls within the County for dry weather flows	MSWG/ MSWG	Kellie Jacobs
			Determine screening locations using prioritization from SIC codes and land use map		
			Implement Dry Weather Screening Plan. Check each outfall at least once a year		
			Require illicit dischargers to immediately cease and desist discharge		
			Remove illicit discharges		
			Require cleanup and abatement or recover costs of County to cleanup and abate discharge		
			Document number of screening locations, inspections, pollutants discovered, and efforts undertaken to identify and remove possible pollutant sources		
			Conduct follow-up inspections at sites where violations are detected		

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STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION THREE – ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			Inspection procedures and checklists will be developed to assist in prioritizing areas and enforcing BMPs		
16	2007-2010	Employee Training	Provide training to all public employees twice annually	MSWG/ MSWG	Kellie Jacobs
			Numbers of attendees and agenda items will be recorded and included in Annual Reports		
17	2007	Business Illicit Discharges	Prepare informational pamphlets	MSWG/ MSWG	Kellie Jacobs
	2007		Create database to track pamphlet distribution		
	2008		Distribute and track car washing and power washing pamphlets to car washers and power washers		
	2009		Distribute and track restaurant pamphlets to power washers restaurants		
	2010		Distribute and track dry cleaning pamphlets to dry cleaners		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

4.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

The Construction Site Storm Water Runoff Control Program section of the SWMP addresses water quality concerns for construction sites greater than or equal to one acre. Polluted storm water runoff from construction sites often flow to storm sewers and into receiving waters. This runoff can contribute more sediment to receiving waters than can be deposited naturally during several decades. The resulting situation can cause physical, chemical and biological harm to receiving waters. The BMPs described in this section of the SWMP includes the development of a construction site program designed to reduce pollutants in storm water runoff from construction activities. This program will include procedures for construction site plan review, site inspections, public reporting, and notification of specific requirements to all construction site operators of greater than or equal to one acre, and sites less than one acre if part of a larger development, or common plan.

This program will also be integrated with other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the County for the Construction Site Storm Water Runoff Control Program.

Objective: Reduce pollutants in storm water runoff from construction sites

Permit Requirement: D.2.d. – Construction Site Storm Water Runoff Control

Description of Tasks:

Storm Water Ordinance: The County will adopt a Storm Water Ordinance to address the regulatory programs required under Phase II of the NPDES Storm Water Program, including Construction Site Runoff Control. This ordinance will include provisions to address both erosion/sediment control and construction site materials and wastes. It will address not only grading disturbing one acre or more, but also land clearing. The ordinance will also include financial guarantees to ensure compliance and site stabilization.

Storm Water Design Standards: The County will develop Construction Site BMPs and will utilize its Improvement and Construction Standards to require construction site runoff control measures and to specify, installation and maintenance requirements for those measures.

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

Storm Water Management Program Review Procedures: The County will review all site plans for construction activity water quality controls. To assist developers and contractors in preparing effective plans, the County will distribute standards to specify submittal requirements to ensure adequate information is provided for plan review staff. The standards will provide technical guidance to project owners and contractors to ensure compliance with the program, as well as a regulatory basis on which to condition approval of projects. The County will require either a Waste Discharge Identification (WDID) number or a copy of the submitted Notice of Intent (NOI) for all projects that occur in the County.

Training of Public Works Inspection Personnel: County Public Works Inspection personnel will be educated on the storm water regulations and the requirements for storm water controls at construction sites. Information on specific storm water best management practices and new regulations will be provided. The training will be provided twice annually. The County will partner with the MSWG and the Regional Water Quality Control Board to provide training for both public works personnel and contractors.

Owner/Contractor Education: Information will be provided to operators regarding storm water controls for construction sites. The standards will be distributed and workshops will be conducted annually. The County will partner with the MSWG and the Regional Water Quality Control Board to provide training for both public works personnel and contractors. The California Storm Water Quality Association Storm Water Best Management Practices Handbook for Construction Activity contains guidance in the implementation of BMPs. The County will provide contractors with information on how to access the document.

Construction Site Implementation Program: The County will implement the construction site program with field inspectors and enforcement items. The program will include an erosion and sediment control ordinance to enforce the program, mechanisms for site plan review, public input, site inspections, and enforcement of the program. The violations, corrective measures and enforcement actions will be documented in the Annual Report.

Owner and Contractor Notification: The County will notify construction site owners/ operators of their obligations under the State Water Resources Control Board General Construction Permit.

Complaint Reporting System: The County will develop and implement a complaint reporting system to respond to stormwater related public complaints. The County will respond to complaints within three working days.

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
18	2007	Storm Water Ordinance	Adopt ordinance which gives the County the authority to implement BMPs and enforce erosion/ sediment controls and prohibit the discharge of construction materials and wastes	County Counsel/ General Fund	Fernanda Saude
			A tiered system will be used to enforce violations of the BMPs implemented under the ordinance		
			Develop method to track enforcement actions at construction sites		
19	2007	Storm Water Design Standards	Adopt new standards to require construction site runoff control measures and to specify installation and maintenance requirement for those measures. The County will implement measures to inspect that the controls are being implemented.	Public Works/ General Fund	Steve Rough

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STORM WATER MANAGEMENT PROGRAM**

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
20	2007	Storm Water Management Program Review Procedures	Develop storm water plan review procedures for all plans processed through the County	Building/ General Fund	Kellie Jacobs
			Document number of plans reviewed and ensure copy of NOI is included or a WDID is received from SWRCB		
			Require submittal of SWPPPs in Plan Reviews		
21	2007-2010	Training of Public Works Inspection Personnel	Provide training to all Public Works Department inspection personnel 2 times a year to educate them on the new storm water regulations and what to watch for in the field	Public Works/ General Fund	Kellie Jacobs
			Document personnel attendance and agenda items to include in Annual Reports		
22	2007-2010	Owner and Contractor Education	Assemble and distribute standards and conduct training classes annually	Public Works/ General Fund	Steve Rough
			Document number of classes held, number of participants and material distributed		
			Record agenda items to include in Annual Reports		

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STORM WATER MANAGEMENT PROGRAM**

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SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
23	2006-2010	Implement Construction Site Program	Conduct monthly stormwater inspections at construction sites one acre or greater. Follow up inspections will be conducted where violations occur.	Building/ Development Fee	Richard Graves
			Develop inspector's checklists		
			Implement construction site program. Require submitting NOI and SWPPP		
			Document violations, corrective measures and enforcement actions in Annual Report		
			Document and track inspections and violations in database		
			Develop procedures to identify priority sites for inspection and enforcement based on past non-compliance, proximity to surface water, topography, size, etc. Priority sites will be inspected bi-weekly during the rainy season.		

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STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION FOUR – CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
24	2007-2010	Owner and Contractor Notification	Distribute informational fliers with grading and building permits.	Building/ Development Fee	Richard Graves
			Document number of informational fliers distributed with permits.		
25	2007-2010	Complaint Reporting System	Develop and implement complaint reporting system to respond to stormwater related public complaints	Public Works/ General Fund	Kellie Jacobs
			Document number of complaints and responses. Respond to complaints with three working days.		
			Conduct follow-up inspections at sites with violations. Document inspections.		

**MERCED STORM WATER GROUP
STORM WATER MANAGEMENT PROGRAM**

COUNTY OF MERCED

SECTION FIVE – POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT
AND RE-DEVELOPMENT

**4.5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW
DEVELOPMENT AND REDEVELOPMENT PROGRAM**

The Post-Construction Storm Water Management in New Development and Redevelopment Program addresses the importance of storm water runoff management in new development and redevelopment projects. This includes land disturbances of greater than or equal to one acre and projects less than one acre that are part of a larger common plan of development or sale. Substantial impacts of post-construction runoff are caused by an increase in the type and quantity of pollutants in storm water runoff. The BMPs described in this section of the SWMP include the development of structural and non-structural storm water runoff strategies and the development of post-construction programs that consider water quality impacts of new development and redevelopment projects in the comprehensive land use master planning process.

This program will also be integrated with the Construction Site Storm Water Runoff Control Program of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the County for the Post-Construction Storm Water Management in New Development and Redevelopment Program.

Objective: Reduce pollutants in post-construction storm water runoff from new and redevelopment.

Permit Requirement: D.2.e. – Post-Construction Storm Water Management in New Development and Redevelopment.

Description of Tasks:

Storm Water Ordinance: A storm water ordinance will be developed to reduce pollutants in storm water from new and redevelopment projects and insure that adequate long term funding is available for operation and maintenance of BMPs. Potential strategies for ensuring long-term operation and maintenance that will be considered include County funded and maintained, developing special maintenance districts, relying on home owners associations or local property owners. The County will also address how to track and document the maintenance activities.

Post Construction Storm Water Management Program: The County will develop a program to address post construction storm water runoff with both structural

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and nonstructural controls. The County currently requires that developers restrict their storm water discharge by requiring detention. Coordinate with planners to incorporate water quality controls. Minimize directly connected impervious areas.

Municipal Employee Training: The County will train staff regarding post-construction requirements and conditions of approval twice annually. The training will include maintenance requirements for the BMPs and water quality considerations as they relate to maintenance.

Comprehensive Land Use Master Plan: Water quality impacts of new and significant redevelopment will be addressed in the Comprehensive Land Use Master Plan.

Structural/Non Structural Controls: The County will develop a program to address post construction storm water runoff with both structural and nonstructural controls. The County currently requires that developers restrict their storm water discharge by requiring site-specific detention/retention basins for all new projects. At the County defines other requirements, workshops will e held with contractors and developers so that the requirements are developed in concert with the local community.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
26	2007	Develop storm water ordinance	Adopt ordinance which authorizes the County to implement and enforce BMPs.	County Counsel/ General Fund	Fernanda Saude
			Require development standards to be considered in the planning phase		
			Include provisions to address responsibility and funding for long term maintenance		
			Develop method to track and document the maintenance activities		
27	2008-2010	Develop and Implement Post Construction Storm Water Management Program	Implement ordinance and document compliance in annual report. Develop guidance for planning and public works departments' design review	Public Works/ Development Fee	Kellie Jacobs
			Design improvements and new technology will be made available to developers and designers County will enforce the BMPs to incorporate these functions to lessen the effects of runoff from development and redevelopment projects		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
			RB staff wonder if MSWG considered adding the Merced County Fairgrounds (Attachment 3 Non-traditional MS4) as an entity to the County's SWMP		
			Require maintenance of privately owned BMPs		
			Develop tracking mechanism		
28	2008-2010	Municipal Employee Training	Train staff twice annually regarding post-construction requirements and conditions of approval	Public Works/ General Fund	Kellie Jacobs
29	2008-2010	Comprehensive Land Use Master Plan	Document Plan updates	Planning/ General Fund/ Development Fee	Bill Nicholson
30	2008-2010	Post-Construction Development Standards.	Adopt new standards to require post construction runoff control measures and to specify installation and maintenance requirements for those measures. The County will implement measures to inspect the controls are being implemented	Public Works/ General Fund	Steve Rough
			Develop and implement tracking mechanism for post-construction BMPs		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
31	2008-2010	Structural Controls	Continue to require structural controls on all new projects. Document locations.	Public Works/ General Fund	Kellie Jacobs
			Develop additional controls in concert with developers.		

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SECTION SIX – POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

4.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The Pollution Prevention/Good Housekeeping for Municipal Operations addresses routine activities in the operation and maintenance for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. This Program includes a training component to prevent and reduce storm water pollution from municipal operations. The BMPs can be separated into two broad categories: source controls and materials management. Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, road crew training, flood control projects and litter ordinances. Materials management BMPs are designed to reduce pollutants with non-structural controls such as pesticide education and spill prevention control.

This program will also be integrated with the Public Education and Outreach on Storm Water Impacts, Public Involvement/Participation and Illicit Discharge Detection and Elimination Programs to promote awareness of water quality concerns in performing routine roadway maintenance and operation, and other practices.

Objective: Reduce pollutants in storm water runoff from municipal operations.

Permit Requirement: D.2.f. – Pollution Prevention/Good Housekeeping for Municipal Operations

Description of Tasks:

Municipal Employee Training: A training program for county operations employees will be developed regarding pollutants that may be discharged to the storm sewer system and the potential impacts. Proper training can reduce pollutants from such activities as storm sewer system maintenance, park and landscape maintenance, tack oil application, excess concrete, concrete truck washout and spill clean up. Training will occur at a minimum of four times per year and will occur during the monthly safety meetings. The purpose of the training is to update operations personnel and Parks employees on storm water issues and to provide a platform for a roundtable discussion on current practices and procedures and how they impact storm water quality.

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OPERATIONS

To ensure the effectiveness of a long-term training program the County will elicit feedback from employees who receive the training program. The feedback will likely be an evaluation form that is completed by attendees at the end of each training session.

Storm Sewer System Maintenance: The existing drainage system operation, maintenance and cleaning procedures will be evaluated for the purpose of reducing pollutants in storm water runoff. Areas of chronic problems will be identified and corrective actions for these areas will be developed and implemented. Implementation of BMPs shall reference appropriate guidance materials. Proper system maintenance and employee training will help to reduce storm water impacts from such activities as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

The current disposal procedures for waste removed from the storm sewer system will be reviewed and assessed. Such wastes include dredge spoil, accumulated sediments, floatables and other debris. Controls for reducing or eliminating the discharge of pollutants from areas such as roads and parking lots, maintenance and storage yards and waste transfer stations will help to reduce the discharge of pollutants to receiving water bodies.

Develop a program designed to utilize structural and non-structural controls where necessary to reduce the discharge of floatables to the MEP. Adequate floatable controls will help to ensure a reduction in the amount and type of pollutant that is discharge into local waterways. Current programs to promote recycling and trash removal to minimize floatables in storm water will continue.

The County currently has one maintenance yard. A Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented.

Pesticide Herbicide Fertilizer Program: Current BMPs will be evaluated and implemented as appropriate to reduce the discharge of pollutants related to the application of pesticides, herbicides and fertilizers (PHF) applied by municipal employees or contractors to public right-of-ways, parks and other municipal facilities. All applicators have received Qualified Applicator Certificate (QAC) training.

Spill Prevention and Response Program: The County will respond to reports of spills or illegal discharges and initiate enforcement actions. The County fire department is also equipped to respond to spills, to mitigate spills and to eliminate

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the danger to human health. The current program will be evaluated for effectiveness, and will be modified as necessary. Personnel training is an important component to this program.

Water Quality Assessment for Flood Control Projects: All present and future flood control projects will also be evaluated for water quality benefits.

Pollution Prevention at Corp Yards: The County of Merced will prepare and implement a Storm Water Pollution Prevention Plan (SWPP) for the County maintenance yard.

Green Waste Program: The County of Merced currently has two (2) can system for collecting waste that will continue to be implemented and documented. Each week the County collects green waste and trash from residences.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
32	2008-2010	Municipal Employee Training	Develop and implement a training program for all municipal operations employees, including a feedback system.	Public Works/ General Fund	Kellie Jacobs
			Provide training at monthly safety meetings.		
			Document attendance and topics.		
			Document feedback received from employees		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
33	2006-2010	Storm Sewer System Maintenance and Floatable Controls	Develop a cleanout schedule for MS4 components, including detention basins, pump stations, catch basins, and storm sewer lines	PW Roads/ General Fund and CSA	Gary Mendonca
			Implement storm sewer system maintenance schedule and document activities		
34	2006-2010	Pesticide, Herbicide and Fertilizer (PHF) Program	Continue to implement program. Document Training and education.	Public Works/ General Fund	Kellie Jacobs
35	2006-2010	Spill Prevention and Response Program	Assess existing program	Env. Health and Fire Dept./ General Fund	Jeff Palsgard
			Document training, education and spill locations and response actions		
36	2006-2010	Water Quality Assessment for Flood Control Projects	Develop water quality assessment program	Public Works/ General Fund	Kellie Jacobs
			Ensure that projects are assessed and project plans are revised accordingly		
			Document water quality assessment of capital improvements by identifying water quality treatment in detention basins. Assessment could be based on return period storm event that is treated in detention basins.		

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
37	2007-2010	Pollution Prevention Plan for Corp Yard	Prepare, implement and document SWPPP for maintenance yard Inspect corp yard annually before wet season	Public Works/ General Fund	Kellie Jacobs
38	2006-2010	Green Waste Program	Continue collection of green wastes	Public Works/ General Fund	Kellie Jacobs

5.0 Merced Irrigation District

5.1 PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS PROGRAM

The Public Education and Outreach on Storm Water Impacts Program will be developed and implemented by Separate Implementing Entities (SIE) consisting of the balance of co-permittees comprising the MSWG. An overall implementation schedule for the SWMP is provided in Figure 1.

5.2 PUBLIC INVOLVEMENT/PARTICIPATION PROGRAM

The Public Involvement/Participation Program will be developed and implemented by Separate Implementing Entities (SIE) consisting of the balance of co-permittees comprising the MSWG.

5.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Illicit Discharge and Elimination Program will be developed and implemented by Separate Implementing Entities (SIE) consisting of the balance of co-permittees comprising the MSWG.

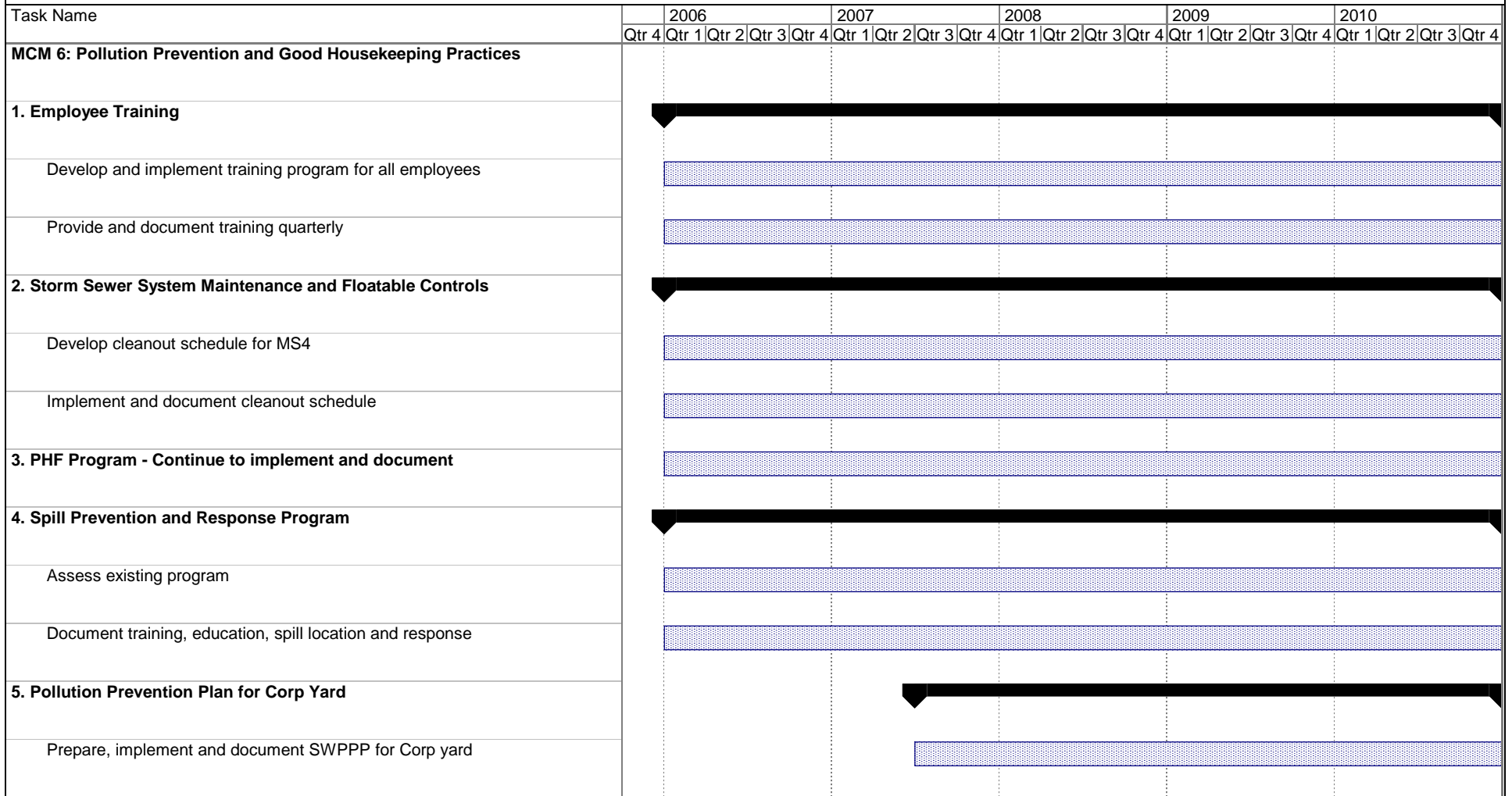
5.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

The Construction Site Storm Water Runoff Control Program will be developed and implemented by Separate Implementing Entities (SIE) consisting of the balance of co-permittees comprising the MSWG.

5.5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT PROGRAM

The Post-Construction Storm Water Management in New Development and Redevelopment Program will be developed and implemented by Separate Implementing Entities (SIE) consisting of the balance of co-permittees comprising the MSWG.

Merced Irrigation District Storm Water Management Program Implementation Schedule



Project: MID march sch Date: Tue 9/20/05	Task	Milestone	External Tasks
	Split	Summary	External Milestone
	Progress	Project Summary	Deadline

Figure 1

5.6 POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The Pollution Prevention/Good Housekeeping for Municipal Operations addresses routine activities in the operation and maintenance for drainage systems, roadways, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. This Program includes a training component to prevent and reduce storm water pollution from municipal operations. The BMPs can be separated into two broad categories: source controls and materials management. Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, and flood control projects. Materials management BMPs are designed to reduce pollutants with non-structural controls such as pesticide education and spill prevention control.

This program will also be integrated with the Public Education and Outreach, Public Involvement/Participation and Illicit Discharges and Improper Disposal Programs to promote awareness of water quality concerns in performing routine maintenance and operation, and other practices.

Objective: Reduce pollutants in storm water runoff from municipal operations.

Permit Requirement: D.2.f. – Pollution Prevention/Good Housekeeping for Municipal Operations

Description of Tasks:

Employee Training: A training program for MID operations employees will be developed regarding pollutants that may be discharged to the storm sewer system and the potential impacts. Proper training can reduce pollutants from such activities as storm sewer system maintenance, tack oil application, excess concrete, concrete truck washout and spill clean up. Training will occur on a quarterly basis and will occur during the monthly safety meetings. The purpose of the training is to update operations personnel and employees on storm water issues and to provide a platform for a roundtable discussion on current practices and procedures and how they impact storm water quality.

To ensure the effectiveness of a long-term training program, MID will elicit feedback from employees who receive the training program. The feedback will likely be an evaluation form that is completed by attendees at the end of each training session.

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Irrigation System Maintenance for Canals Used to Convey Storm Water: The existing irrigation system operation, maintenance and cleaning procedures will be evaluated for the purpose of reducing pollutants in storm water runoff. Areas of chronic problems will be identified and corrective actions for these areas will be developed and implemented. Implementation of BMPs shall reference appropriate guidance materials. Proper system maintenance and employee training will help to reduce storm water impacts from such activities as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

The current disposal procedures for waste removed from the portion of the irrigation system used to convey storm water will be reviewed and assessed. Such wastes include dredge spoil, accumulated sediments, floatables and other debris.

Develop a program designed to utilize structural and non-structural controls where necessary to reduce the discharge of floatables to the MEP. Adequate floatable controls will help to ensure a reduction in the amount and type of pollutant that is discharge into local waterways. Current programs to promote recycling and trash removal to minimize floatables in storm water will continue and will be coordinated through the MSWG.

Pesticide Herbicide and Fertilizer Program: MID currently submits report to the Agriculture commissioner regarding PHF use on a monthly basis. These reports will continue to be prepared and submitted and a summary of the reports will be provided in the Annual Report. All applicators have received Qualified Applicator Certificate (QAC) training.

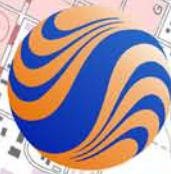
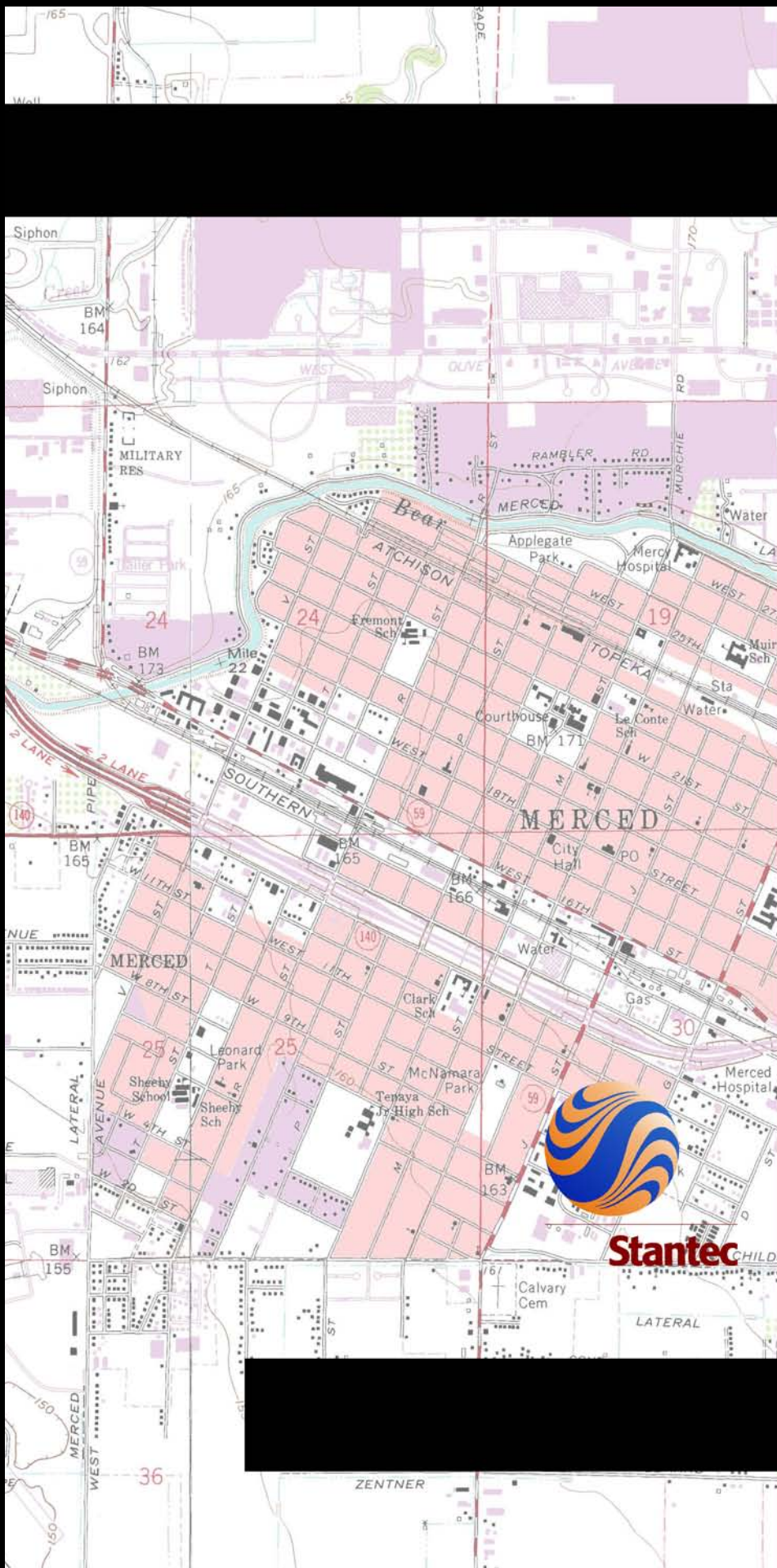
Spill Prevention and Response Program: The District will respond to reports of spills or illegal discharges and initiate enforcement actions. Personnel training is an important component to this program.

Pollution Prevention at Corp Yards: MID will prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) for the maintenance yard.

Goals and Assessment: The table below represents measurable goals for the BMPs to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

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BMP #	Year	BMP	Measurable Goal	Lead Entity/ Funding	Contact
1	2007-2010	Employee Training	Develop and implement a training program for maintenance operations employees, including a feedback system	MID Drainage Imp. Dist. #1	Robert Acker
			Provide training quarterly Document attendance and agenda items to include in Annual Reports		
			Document feedback received from employees		
2	2006	Irrigation System Maintenance	Develop a cleanout schedule for irrigation canals used to convey storm water	MID Drainage Imp. Dist. #1	Robert Acker
			Document canal cleaning activities associated with storm drainage use		
3	2006-2010	Pesticide Herbicide and Fertilizer Program	Continue to implement program. Document training and education.	MID Drainage Imp. Dist. #1	Robert Acker
4	2008-2010	Spill Prevention and Response Program	Assess existing program	MID Drainage Imp. Dist. #1	Robert Acker
			Document training, education and spill locations and response actions		
5	2007-2010	Pollution Prevention Plan for Corp Yard	Prepare, implement and document SWPPP for Corp yard	MID Drainage Imp. Dist. #1	Robert Acker



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