

**CITY OF DAVIS**

**STORMWATER MANAGEMENT  
PLAN**

**SEPTEMBER 2006**





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## ABBREVIATIONS AND ACRONYMS

**BMP** – Best Management Practice

**CEQA** – California Environmental Quality Act

**NPDES** – National Pollutant Discharge Elimination System

**SWMP** – Stormwater Management Program

**SWPPP** – Storm Water Pollution Prevention Plan

**USEPA** – United States Environmental Protection Agency

## GLOSSARY

**Best Management Practices (BMPs)** –BMPs are maintenance procedures, prohibitions of practices, and other management practices to prevent or reduce the pollution of ‘Waters of the United States.’ BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

**Design Standards** – Design Standards are post-construction requirements to incorporate specific structural BMPs into construction projects. Examples of design standards include specifying an amount of runoff that must be retained on a site, and prohibiting the direct connection of truck wells in loading docks to the storm drain system.

**Maximum Extent Practicable (MEP)**– MEP is the technology-based standard established in the Clean Water Act that dischargers of stormwater must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally a result of emphasizing pollution prevention and source control BMPs primarily but possibly in combination with other treatment methods. The MEP approach is an ever evolving, flexible and advancing concept, which considers technical and economic feasibility. As knowledge about controlling pollutants in stormwater continues to evolve so does that which constitutes MEP. The way in which MEP is met varies between communities. The individual and collective activities elucidated in this SWMP become the proposal for reducing or eliminating pollutants in stormwater to the MEP.

**Measurable Goal** – definable tasks or accomplishments that are associated with implementing BMPs.

**Minimum Control Measure** – A stormwater program area that must be addressed (BMPs implemented to accomplish the program goal) by all regulated Small MS4s. The six minimum control measures required to be addressed by regulated Small MS4s are defined in section 3.

**Notice of Intent** – Notification statement that the city will comply with an NPDES permit to follow certain discharge conditions

**Outfall** – a point source at the point where a municipal separate stormwater drainage discharges to Waters of the United States and does not include open conveyances connecting two municipal separate stormwater drainages, or pipes, tunnels or other conveyances which connect segments of the same stream or other Waters of the United States and are used to convey Waters of the United States.

**Point Source** – any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater.

**Performance Standards** – Performance Standards are the level of implementation necessary to demonstrate the control of pollutants in stormwater to MEP.

**Small Municipal Separate Storm Sewer System (Small MS4)** – Means a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:

- (i) Owned or operated by the United States, a State, County, town, boroughs, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to Waters of the United States.
- (ii) Not defined as “large” or “medium” municipal separate storm sewer systems.
- (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

MS4s are also referred to as storm drain systems.

**Storm Water Pollution Prevention Plan (SWPPP)** – a documented step-by-step process for ensuring that pollutants from a site and its activities are not making their way into the stormwater discharges from the site. Specifically, the pollution prevention plan requires that you select and implement BMPs, including schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollutants in stormwater from the site.

**Waters of the United States** – any surface water or groundwater, including saline waters, within the boundaries of the United States.

## EXECUTIVE SUMMARY

The city of Davis (“city”) has developed this Stormwater Management Program (SWMP) Planning Document to address stormwater quality within the city’s jurisdiction. The SWMP will address a wide variety of activities conducted in urbanized areas of the city that are sources of pollutants in stormwater.

Although many of the city’s ongoing activities are aimed at protecting stormwater quality, federal regulations have made this program a requirement. The city was formally required to develop a program when the State Water Resources Control Board issued the Small MS4

General NPDES Permit. This Stormwater Management Plan has been submitted to the Central Valley Regional Water Quality Control Board and indicates its commitment to managing properties, facilities and operations within its jurisdiction to protect water resources and comply with the permit.

Many of the city’s existing environmental programs and activities have been incorporated into the SWMP as program elements. The city’s SWMP is comprised of seven program elements with specific goals, namely:

- **Commercial and Industrial** – Inventories and identifies opportunities to control pollutants associated with business activities.
- **Illicit Discharges** – Establishes a program to identify and eliminate illicit discharge to the stormwater sewer system.
- **Construction Activities** – Establishes controls to reduce pollutants from construction activities.
- **New Development and Redevelopment** – Creates opportunities for the installation of permanent stormwater BMPs in new development and redevelopment projects.
- **Municipal Operations** – Improves municipal operations at city facility and in maintenance practices throughout the urban area to reduce pollutant accumulation and discharge into the stormwater sewer system.
- **Public Education, Outreach and Participation** – Educates the general population and businesses about stormwater quality, recommends pollution prevention measures that the public can implement, and provides opportunities for public input in the development and implementation of the SWMP.
- **Public Agency Legal Authority** – Provides a legal foundation for enforcing requirements of the permit and the SWMP.

Program element consists of the control measures in Table 1

Each control measure consists of recommended best management practices (BMPs). for controlling, preventing, reducing, or removing pollutants in urban stormwater. Measurable goals for modifying or developing new BMPs are designed to address regulatory requirements or sources of pollutants that are not adequately addressed through existing activities.

Table 1: Program Element Control Measures

Program Element	Control Measure Acronym	Control Measure Title
<i>Commercial and Industrial Program</i>	CI1	Business Outreach and Recognition program
<i>Illicit Discharges Program</i>	ID1	Detection, Elimination and Training
<i>Construction Activities Program</i>	CA1	Land Development Plan Review Process
	CA2	Erosion and Sediment Control
	CA3	Construction Site Inspection Program
	CA4	Municipal Construction Projects – Contractor Requirements
<i>New Development / Redevelopment</i>	NDR1	Private land Development Plan Review Process

<b>Program Element</b>	<b>Control Measure Acronym</b>	<b>Control Measure Title</b>
<i>Program</i>	NDR2	Post Construction Stormwater Quality Control Measure for Municipal Construction Projects
<i>Municipal Operations Program</i>	MO1	Employee Education and Training Program
	MO2	Public Infrastructure Operation, Repair and Maintenance
	MO3	Corporation Yard and Fleet Maintenance
	MO4	Parks and Open Space Maintenance
<i>Public Education, Outreach and Participation Program</i>	PEOP1	Residential, Business and Construction Education and Outreach
	PEOP2	Public Participation Program
<i>Public Agency Legal Authority</i>	PALA1	General Plan Action Items
	PALA2	Legal Authorities

Each control measure includes the following:

- **Description:** A brief description of the activities, sources or pollutants to be addressed by the control measure.
- **Existing BMPs and Related Activities:** Current activities being conducted by the city that address reducing pollutants in urban runoff.
- **Measurable Goals:** Activities to be conducted by the city to comply with the storm water regulations. Activities include such things as reviewing or developing documents or procedures, providing training, revising schedules, eliminating practices, etc., and may be conducted or implemented by one or more of the city's departments.
- **Assessment Tasks:** Tasks to be conducted to help assess the effectiveness of the control measure to reduce pollutants in urban runoff. Many assessment tasks require the collection of data and records that may not directly relate to pollutant reduction in urban runoff. These assessment tasks address a qualitative approach to demonstrating pollutant reduction by verifying the good faith effort of the city to reduce or eliminate the threat of sources of pollutants in runoff through program implementation.
- **Responsibility:** Departments or positions responsible for implementing the control measure are identified.

Several city departments will implement various tasks outlined in this planning document. Many of these tasks are complimentary with existing city programs and efforts. The SWMP Administrator position is new for the city. This person will oversee the implementation of control measures and related activities, evaluate their effectiveness, and strive to improve the program over time.

Considered together, the program elements, with control measures and associated BMPs, form a comprehensive programmatic framework that reduces pollutants in stormwater to the maximum extent practicable. Full implementation of the SWMP will be a long-term process. Implementation will be monitored and program effectiveness assessed annually over the permit period. The SWMP will be revised annually as necessary to address areas identified as deficient during the effectiveness evaluation process.



# 1 - INTRODUCTION

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## 1.1 Background

The city of Davis (“city”) is an incorporated municipality in Yolo County located 15 miles west of Sacramento on Interstate 80 and adjacent to the University of California, Davis. It is a developed, university-oriented community surrounded by farmland, greenbelt and natural habitat areas, and preserves. The city’s jurisdiction consists of 9.8 square miles (Figure 1). The jurisdiction delineates the limit of the city’s urbanized area. Approximately 62,200 people reside in the city, including the transient college population. The population growth rate over the ten-year period 1990-2000 was 2.4%.

### 1.1.1 Storm Drain System and Receiving Waters

The city’s storm drain system is divided into 11 basins. Rainfall runoff flows by gravity into the city’s four detention ponds, one detention basin, and one drainage pond. Pump stations lift water from these facilities into main drainage channels: the Covell Drainage Channel, Channel A, Mace Ranch Park Drainage Channel, and the El Macero Drainage Channel. These channels ultimately drain to Willow Slough Bypass or the Yolo Basin Wetlands, Davis Site, east of the city.

The Willow Slough Bypass consists predominately of runoff from agricultural lands to the north of the city.

Yolo Bypass, the main receiving water body, has several designated beneficial uses: irrigation, stock watering, contact and non-contact water recreation, warm freshwater habitat, warm and cold water fisheries migration, warm water spawning, and wildlife habitat. Other local areas that provide habitat value are: marshy wetlands in slough channels; irrigation and drainage ditches; riparian woodlands along the North and South Forks of Putah Creek; the old channel of Willow Slough; parts of Dry Slough; and the stormwater retention ponds.

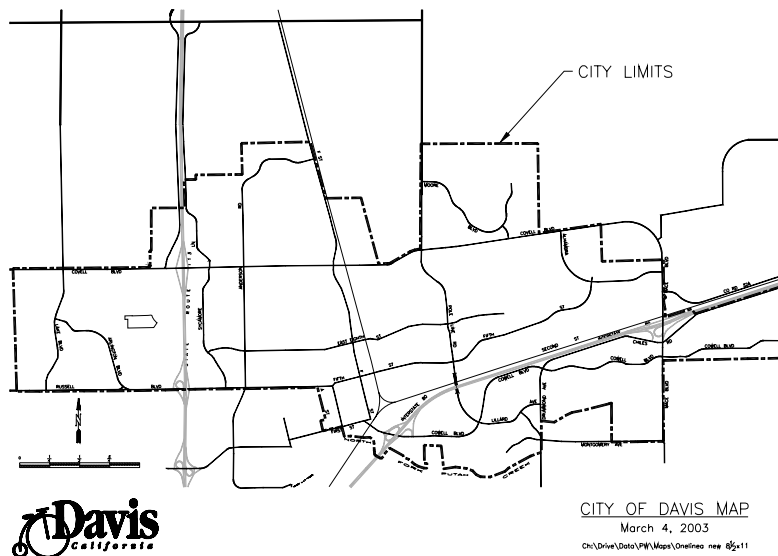


Figure 1. City of Davis main streets and jurisdictional boundary.

# **1 - INTRODUCTION**

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## **1.1.2 Legal Requirements**

The United States Environmental Protection Agency (USEPA) has promulgated Phase II of the federal non-point source stormwater pollution prevention regulations. Phase II is a regulatory program that requires certain relatively smaller owners or operators of municipal storm sewer systems to obtain a stormwater discharge permit issued under the National Pollutant Discharge Elimination System (NPDES). On January 9, 1998, USEPA published its proposed Phase II Stormwater Regulations, and the city of Davis was identified as a municipality that would be subject to a stormwater NPDES permit. As a permitted agency, the city recognized at that time that it would be required to develop a stormwater management program. The USEPA established final Phase II regulations in 1999 (Federal Register Vol. 64, No. 235, Dec. 8, 1999).

California's State Water Resource Control Board issued a draft statewide General Permit for Phase II communities (hereafter the "Small MS4 General Permit") on July 12, 2002. Activities aimed at finalizing this SWMP began subsequent to the draft permit issuance. The city thereafter focused on complying with the deadline for submittal of a Notice of Intent to comply with the Small MS4 General Permit by March 10, 2003. This document has been prepared to address adequately the requirements in the Phase II regulations. It is a "living document" that may be updated annually in response to program assessments.

## **1.1.3 Previous Activities**

The city's General Plan goal is to foster and strengthen the relationship between city residents and their environment and to maintain a cohesive, university-oriented, small town character. The General Plan will guide Davis' growth through 2010. Policy statements in the General Plan that are relevant to managing stormwater are noted in the appropriate program elements' section.

In 1990, the city began planning a constructed wetlands project for flood control and wastewater reclamation purposes. To ensure the environmental integrity of the constructed wetlands, the city developed a Pollution Load Reduction Program. This Program addresses two sources of pollutants for the constructed wetlands: wastewater and urban runoff. To address polluted runoff, the city developed this SWMP. The SWMP addresses a wide variety of activities conducted in the urbanized areas of the city that are sources of pollutants in urban runoff.

## **1.2 Elements and Organization of the Program**

The city's SWMP is a comprehensive environmental program that addresses a wide range of activities found in various city departments. As such, the SWMP builds upon the city's existing programs and activities. Each of the seven program elements contains various control measures, which are the components of each program element. Each control measure consists of recommended BMPs, as applicable. BMPs are the standard acceptable practices (or devices) for controlling, preventing, reducing, or removing pollutants in urban stormwater. Measurable goals for modifying or developing new BMPs are designed to address regulatory requirements or sources of pollutants that are not adequately addressed through existing activities.

# 1 - INTRODUCTION

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This SWMP is organized into five sections:

- **Section 1** introduces the city and its SWMP.
- **Section 2** describes each program element and the corresponding control measures and associated measurable goals and tasks. This section addresses the planning, development, implementation and enforcement for each control measure contained in seven program elements, which are:
  - Commercial and Industrial
  - Illicit Discharge
  - Construction Activities
  - New Development and Redevelopment
  - Municipal Operations
  - Public Education, Outreach and Participation
  - Public Agency Legal Authority.
- **Section 3** describes the city's plan to implement the SWMP and includes a description of the roles and responsibilities of each city department responsible for program implementation. Resources required for development and implementation of the SWMP are also discussed.

Table 1 (see Executive Summary) provides a summary of the control measures contained in each program element. The control measures and associated measurable goals, implementation schedules, and assessment tasks for each program element are described in detail in Sections 2.1 through 2.7. Unless otherwise stated, the fiscal year shaded in the implementation schedule indicates that the measurable goal will be completed by the end of that period.

Considered together, the program elements, with control measures and associated BMPs, form a comprehensive programmatic framework that reduces pollutants in stormwater to the maximum extent practicable. This process addresses the complete cycle of assessing the problem, developing a program to address the problem, implementing the program as designed, and evaluating its effectiveness

## 1.3 Purpose and Goals of Program Elements

### 1.3.1 Commercial and Industrial Program

This program element describes control measures, such as outreach efforts and ordinances or policies, to address activities conducted by businesses in the city. The goal is to reduce or control the discharge of pollutants in runoff from these activities through implementing effective stormwater pollution prevention control techniques.

# **1 - INTRODUCTION**

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## **1.3.2 Illicit Discharges Program**

This program describes the control measures to eliminate or reduce the discharge of non-stormwater associated with illicit connections and illegal dumping to the stormwater sewer system. The goal is to reduce the discharge of pollutants to the stormwater sewer system by eliminating connections of wastewater lines, interior drains, and other non-permitted direct connections, implementing spill and clean-up plans, and prohibit dumping.

## **1.3.3 Construction Activities Program**

This program describes the controls to reduce the discharge of pollutants associated with construction activities. The goal is to control pollutants by requiring construction sites to implement adequate pollution control measures.

## **1.3.4 New Development / Redevelopment Program**

This program describes the controls to reduce the discharge of pollutants associated with runoff from new development and redevelopment projects after construction is complete. The goal is to require the installation of permanent stormwater BMPs. The design of the control measures will be verified through the plan review and approval process. Enforcement of the construction and operation of the control measures will be done through field inspections. The program also includes measures to ensure the long-term maintenance of permanent stormwater BMPs.

## **1.3.5 Municipal Operations Program**

This program describes the control measures to reduce pollutants from municipal activities conducted in public right-of-ways, open spaces, and at publicly operated facilities. The goal is to reduce the discharge of pollutants associated with municipal activities and operations through evaluating and modifying, when necessary, practices or operations that are found to be significant sources of pollutants in stormwater.

## **1.3.6 Public Education, Outreach and Participation Program**

This program describes the current and planned public education, outreach and participation activities that address stormwater pollution. The goal is to educate the general population and businesses about stormwater pollution and recommend pollution prevention measures the public can implement.

## **1.3.7 Public Agency Legal Authorities Program**

This program describes how adequate legal authority will be maintained while implementing the SWMP and the revision of existing or new authorities, when necessary. The goal ensures the city has adequate legal authority to develop, implement and enforce the SWMP.

# **1 - INTRODUCTION**

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## **1.4 Implementation and Assessment of the SWMP**

Full implementation of the SWMP will be a long-term process. The program will be monitored and program effectiveness assessed annually over the implementation period. The SWMP will be revised as necessary to address areas identified as deficient during the effectiveness evaluation process.

At the end of each program element section (Sections 2.0 through 2.7), an implementation schedule identifies the departments responsible for implementing the control measure. A description of the city departments, their roles in the overall program, and funding resources are provided in Section 3.

## **1.5 Compliance with Small MS4 General Permit**

Table 2 summarizes the Small MS4 General Permit for stormwater and how the city's SWMP meets the requirements to develop, implement and enforce the required six minimum control measures. In addition, this SWMP includes one additional program element, developed in the late 1990s as part of the city's Pollution Load Reduction Program. The additional program element (Commercial and Industrial Program) focuses on implementing pollution prevention controls for residential and business sources.

# 1 - Introduction

**Table 2. Demonstration of compliance with the Small MS4 General Permit**

Minimum Control Measures	Where Addressed in SWMP	Discussion	Applicable Control Measures
<p><b>a. Public Education and Outreach</b> Implement a public education program to educate the community about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce stormwater pollution.</p>	<p>Section 2.6 Public Education, Outreach and Participation Program</p>	<p>The city currently implements a comprehensive public outreach program through its Parks and Community Services and Public Works Departments. The current public outreach program focuses on the city’s environmental programs. This program can be revised with minor efforts to address the city’s SWMP.</p>	<p><b>Primary:</b> PEOP1 <b>Supporting:</b> PEOP2</p>
<p><b>b. Public Involvement/Participation</b> Include a public participation program that complies with applicable State and local public notice requirements. The public should be encouraged to participate in developing, implementing and reviewing the SWMP. Include a procedure to receive and respond to comments from the public regarding the SWMP.</p>	<p>Section 2.6 Public Education, Outreach and Participation Program</p>	<p>The city utilizes special commissions, groups and other public outreach methods to ensure public participation and involvement during development of city policy and programs. The city’s Natural Resource Commission (NRC) serves as a primary public participation function. This group is appointed by the city Council to serve as an advisory board and meets in public forums regularly to review and discuss city programs related to the environment. Various programs related to the stormwater program for the city, including public discussions regarding development of the SWMP, have been presented to the NRC.</p>	<p><b>Primary:</b> PEOP2 <b>Supporting:</b> PEOP1, CI1, ID1, CA3</p>
<p><b>c. Illicit Discharge Detection and Elimination</b> Develop a map of the stormwater sewer system and receiving waters. Implement a program to detect and address non-stormwater (including illicit) discharges. Provide outreach to public employees, businesses, and the general public regarding illegal discharges and proper disposal of wastes. Adopt regulatory mechanisms to prohibit illicit discharges to the stormwater sewer system and implement appropriate enforcement procedures.</p>	<p>Section 2.2 Illicit Discharges Program</p>	<p>The city has maps of its stormwater sewer system and outfalls. During 1995/96, the city conducted an extensive field screening monitoring program. The investigation found illicit connections are not a significant concern in the city, and additional screening is not necessary. Currently the city investigates for illicit discharges when there is a complaint, or when a questionable flow is detected during normal maintenance operations of the storm sewer system. The city immediately responds to all spills and implements control measures to protect discharges to the stormwater sewer system. The city will continue this program and enhance it through employee training and improved record keeping.</p>	<p><b>Primary:</b> ID1 <b>Secondary:</b> CI1, CA3, CA4, MO1, MO2, MO3, MO4, PALA2</p>
<p><b>d. Construction Site Stormwater Runoff Control</b> Develop a program to control pollutants in stormwater runoff from construction sites. Include erosion and sediment controls, pollutant source control, and pre-construction site plan and BMP review. Implement procedures for public notification and inspection and enforcement measures.</p>	<p>Section 2.3 Construction Activities Program</p>	<p>The city will revision its land development review process to ensure conditions of approval address requirements for stormwater pollution prevention during construction activities. City inspection staff will be trained to understand regulatory requirements, and how to inspect sites for stormwater issues. The construction program will address private and public construction activities.</p>	<p><b>Primary:</b> CA1, CA2, CA3, and CA4 <b>Secondary:</b> PEOP2, PALA2</p>

# 1 - Introduction

**Table 2. Demonstration of compliance with the Small MS4 General Permit (Cont.)**

Minimum Control Measures	Where Addressed in SWMP	Discussion	Applicable Control Measures
<p><b>e. Post-Construction Stormwater Management in New Development and Redevelopment</b> Develop, implement and enforce a program to address long-term impacts of stormwater runoff from new development and redevelopment projects.</p>	<p>Section 2.4 New Development / Redevelopment Program</p>	<p>The city currently employs many permanent stormwater BMPs on a “regional” basis using wet weather ponds and constructed wetlands. Previous design criteria did not specifically address water quality treatment; however, treatment is provided through settling, filtering, infiltration, absorption, and other processes related to water traversing through vegetated ponds. Through this program, the city will develop a procedure to ensure that staff engaged in review of development plans specifically address stormwater quality issues during the land application approval process to proactively address potential long-term impacts of stormwater runoff from development and will ensure the construction of related control measures.</p>	<p><b>Primary:</b> NDR1 and NDR2  <b>Secondary:</b> CA3, PALA1, PALA2</p>
<p><b>f. Pollution Prevention/Good Housekeeping for Municipal Operations</b> Develop and implement a cost-effective operation and maintenance program to prevent or reduce pollutant runoff from municipal operations. Employee training is required.</p>	<p>Section 2.5 Municipal Operations Program</p>	<p>The city conducts numerous operation, maintenance and repair activities in public right-of-ways, and public facilities, buildings, parks, and open-spaces. Many activities related to maintenance and repair in public right-of-ways currently implement effective stormwater pollution prevention measures. Under this program, other activities will be reviewed and revised, if needed, to better address the concerns for stormwater quality. The program also focuses on employee training and education.</p>	<p><b>Primary:</b> MO1, MO2, MO3, MO4  <b>Supporting:</b> CA4</p>

# 1 - Introduction

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This section of the SWMP describes the control measures to be used by the city. The program elements and associated control measures were developed to address the various sources of pollutants in stormwater from the urbanized areas of the city. The control measures have been grouped by program element as shown in Table 3.

**Table 3. Program Element Index**

<b>Program Elements</b>	<b>Acronym</b>	<b>Section</b>
Commercial and Industrial Program	CI	2.1
Illicit Discharges Program	ID	2.2
Construction Activities Program	CA	2.3
New Development and Redevelopment Program	NDR	2.4
Municipal Operations Program	MO	2.5
Public Education, Outreach and Participation Program	PEOP	2.6
Public Agency Legal Authorities	PALA	2.7

Each program element section begins with a brief discussion of background and regulatory requirements and describes the basic strategy of the control measures. Control measures (see Figure 2 for an example) consist of the title, description, existing activities, measurable goals, assessment tasks, responsibility. Measurable goals are modifications or additions of BMPs that the city will consider for implementation, as appropriate, to develop and carry out the control measure and to meet the objective. Assessment tasks are identified to document the progress of implementation and to measure the effectiveness of implemented BMPs.

The other valuable feature of this section is the implementation schedule and identification of the responsible position for each measurable goal. The annual schedule is based on the city's fiscal cycle, which begins July 1.



# 1 - Introduction

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Figure 2. Illustration of a Control Measure Fact Sheet

Program Element Title	Control Measure Acronym (example CI1)
<p><b>Control Measure Title:</b> This provides the title of the control measure <b>Control Measure Description:</b> This provides a brief description of the activities, sources or pollutants to be addressed by the control measure.</p>	
<p><b>Existing BMPs and Related Activities</b></p>	
<p>This section describes the current activities being conducted by the City associated with this control measure. Changes or enhancement to existing activities are provided as Measurable Goals or tasks in the fact sheet.</p>	
<p><b>MEASURABLE GOALS</b></p>	
<p>This section describes the activities to be conducted by the City to comply with the storm water regulations. Activities include such things as reviewing or developing documents or procedures, providing training, revising schedules, eliminating practices, etc.</p>	
<p><b>ASSESSMENT TASKS</b></p>	
<p>This section describes the tasks to be conducted to verify the City's efforts to implement the control measure. These assessment tasks address a qualitative approach to demonstrating pollutant reduction by verifying the good faith effort of the City to reduce or eliminate the threat of sources of pollutants in runoff through program implementation.</p>	
<p><b>RESPONSIBILITY</b></p>	
<p>City staff positions responsible for implementing the control measure are identified. The SWMP Administrator is understood to be responsible for all assessment tasks.</p>	

## 2.1 - Program Elements - Commercial and Industrial Program

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### 2.1.1 Introduction

Runoff from commercial and industrial areas of the city may contain silt, heavy metals, petroleum hydrocarbons and pesticides associated with consumer and employee vehicles, business activities, and pest control activities. Business activities include, but are not limited to, material, chemical and waste handling, storage and disposal practices, equipment maintenance, washing and storage, and spills and leaks from containers, processes, equipment and vehicles. The control measure and tasks in this section address controlling pollutants associated with these types of commercial and industrial activities.

The Small MS4 General Permit does not *require* a municipality to implement outreach programs to educate businesses regarding stormwater pollution; however, the city recognizes that business activities can contribute significant pollutant loads to stormwater and therefore are identified as a unique subset of pollutant control measures.

### 2.1.2 Commercial and Industrial Control Measures

Control Measure CI1 utilizes the business license application process to identify new businesses that may be a source of stormwater pollutants, and to provide early outreach to all new businesses regarding stormwater pollution. The current business outreach and recognition program, Partners for a Cleaner Davis, will be implemented through this control measure. The city's Partners for a Cleaner Davis program recognizes businesses that demonstrate they are in compliance with all regulatory programs required for their business.

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#### **Control Measure Title: CI1 - Business Outreach and Recognition**

Control Measure Description: Utilize the business license application process to identify new businesses that may be sources of stormwater pollutants. Implement the business outreach program.

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#### **Existing BMPs and Related Activities**

- The Finance Division supplies new businesses with a *Going into Business Agency Contact List* that provides a listing of various agencies that may have regulatory or other legal controls over local business activity. This list is regularly updated.
- The Finance Division distributes a list of the new business licenses issued during the previous month to all city departments while maintaining a database of all active business licenses.
- The Public Works Department's Partners for a Cleaner Davis program is designed to increase the business community's awareness of existing city efforts, to educate them about new programs that may affect them, and to recognize businesses that are complying with environmental requirements. The program serves as a central environmental resource for the business community, has proven to gain cooperation from within the business community as new environmental initiatives are introduced, and to consolidate existing city efforts with respect to environmental programs.

## 2.1 - Program Elements - Commercial and Industrial Program

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- The city has instituted a Transportation System Management Program for businesses within the city limits. The program initially required large employers to develop a Transportation Management Plan, but voluntary efforts have proven equally effective. Currently, a city staff position (Bicycle/Pedestrian Coordinator) is dedicated to managing and assessing the effectiveness of this program.
- Two staff members represent the city on the Board of Directors for the Yolo Transportation Management Association (TMA). The TMA is a non-profit organization with state and local funding that works with large employers to reduce employee related motor vehicle trips. This program was initially developed for the city of Davis but then expanded to cover the entire county and counterpart agencies in the Sacramento area. Most large employers and all municipalities in the county are members.
- The city promotes an annual Bike-to-Work Day (mid-May) with a free biker's breakfast for anyone who bikes to work.

### Measurable Goals

1. Include the SWMP Administrator on the distribution list identifying new business licensees.
2. Identify industries that are required to be covered by the State's General Permit for Industrial Activities and provide outreach to assist them in complying with State requirements.
3. Revise the *Going into Business Agency Contact List* to include the SWMP Administrator, and the city's administrator of the Partners for a Cleaner Davis program.
4. Continue to implement the Partners for a Cleaner Davis program.
5. Continue to implement the Transportation System Management Program.

### Assessment Tasks

Maintain the database of businesses participating in the Partners for a Cleaner Davis program. Document inspections or visits made to the businesses.

Solicit comments from businesses in Partners for a Cleaner Davis program and identify opportunities for improvement.

### Responsibility

The SWMP Administrator is responsible for overseeing this control measure. The Senior Utility Resource Specialist oversees the Partners for a Cleaner Davis program. The Bicycle / Pedestrian Coordinator manages business transportation programs. The Finance Department will revise the *Going into Business Agency Contact List*.

## 2.1 - Program Elements - Commercial and Industrial Program

**Table 4. Commercial and Industrial Program Implementation Schedule and Responsible Department/Position**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>CI1 Business Outreach and Recognition</b>											
1. Include the SWMP Administrator on the distribution list identifying new business licensees.			■			○				●	
2. Identify industries required to be covered by the State's General Permit for Industrial Activities and provide outreach.				■		●				○	
3. Revise the <i>Going into Business Agency Contact List</i> to include the SWMP Administrator, and the city's administrator of the Partners for a Cleaner Davis program.				■		○	○			●	
4. Continue to implement the Partners for a Cleaner Davis program.			■	■	■	○	●				
5. Continue to implement the Transportation System Management Program.			■	■	■	○	●				



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

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activities.

## 2.2 Program Elements - Illicit Discharges Program

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### 2.2.1 Introduction

The city's stormwater sewer system can convey flows other than stormwater. These flows are commonly referred to as non-stormwater flows, and enter the stormwater sewer system from a variety of sources, such as irrigation waters. Illicit discharges are another source of non-stormwater that enters the stormwater sewer system through illicit connections and illegal dumping. An illicit connection is a physical connection to a storm drain that has not been approved by an agency and conveys a prohibited non-stormwater discharge. Illegal dumping is the intentional dumping of prohibited materials into the stormwater sewer system, streets, inlets or basins, and the improper disposal of material on land that is then discharged to the stormwater sewer system when it rains.

Non-stormwater can be a source of pollutants that may adversely impact receiving waters. Small MS4 General Permit requires municipal programs to "effectively prohibit" non-stormwater discharges to the stormwater sewer system.

In accordance with the Small MS4 General Permit, to "effectively prohibit" non-stormwater discharges a municipality must implement a program to detect and eliminate illicit discharges to its stormwater sewer system. The stormwater regulations list non-stormwater flows that a municipality does not need to prohibit provided the flows are not found to be sources of significant pollutants. The flows listed are:

- water line flushing
- rising ground waters
- discharges from potable water sources
- dechlorinated swimming pool discharges
- footing drains
- flows from riparian habitats and wetlands
- landscape irrigation
- foundation drains
- uncontaminated pumped ground waters
- individual residential car washing
- irrigation water
- uncontaminated ground water infiltration to separate storm sewers
- diverted stream flows
- springs
- air conditioning condensation
- water from crawl spaces pumps
- lawn watering

It is important to remember that by identifying these flows, the Small MS4 General Permit only relieves a municipality from having to prohibit the discharge from the stormwater sewer system. It does not relieve the discharger (individual, company, or municipality) of the flows from obtaining the required discharge permits in accordance with Federal, State or local requirements.

Currently the city investigates illicit discharges when there is a complaint, or when a questionable flow is detected during normal maintenance operations of the storm sewer system. The city responds immediately to all reported spills and implements control measures to ensure spills are not directed to the stormwater sewer system. The city believes that its current activities adequately meet the intent of the stormwater regulations. However,

## 2.2 Program Elements - Illicit Discharges Program

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the city will investigate ways to enhance its current program through employee training, improved record keeping, and other means.

Public outreach and education for illicit discharges and ensuring the city maintains adequate legal authority to implement its illicit discharge program, will be conducted through the public education and outreach (PEOP) and public agency legal authorities (PALA) programs, respectively.

### 2.2.2 Illicit Discharge Control Measures

Control Measure ID1 addresses different aspects of an illicit discharge program. The city will review, and revise, as needed, its current maintenance and response activities for illicit discharges. Maintenance and emergency response personnel will be trained to protect the stormwater sewer system during emergency response activities. In addition, improved record keeping and reporting practices will be developed and implemented.

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**Control Measure Title: ID1 - Illicit Discharge Detection, Elimination, and Training**

Control Measure Description: Detect and eliminate illicit connections and illegal discharges to the stormwater sewer system.

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#### EXISTING BMPs AND RELATED ACTIVITIES

- An ordinance prohibiting illicit discharges to the stormwater sewer system is planned under control measure PALA2.
- Annually the Stormwater Sewer Division (Public Works Department) inspects and cleans the city's stormwater sewer system infrastructure. Evidence of illicit connections or illegal discharges is investigated and corrected.
- The sanitary sewer system (all rear-yard pipelines) was inspected with television monitors over the past five years. Older/degraded pipes were slip lined to protect the structural integrity of the pipelines and to reduce inflow and infiltration. Public Works is continuing to assess the condition of the existing sanitary sewer system and is planning for future rehabilitation projects.
- Solid waste in city parks are contained in covered receptacles with no weep holes. Trash from each park is carried to regionally-located dumpsters for collection by regular services.
- The Yolo County Landfill has Toxic and Recycling Collection Days every two months to accept hazardous wastes, pesticides, and herbicides from household and businesses.

## 2.2 Program Elements - Illicit Discharges Program

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- Businesses handling hazardous materials/wastes are required to develop an Emergency Response Plan that includes a spill prevention, control and counter-measure plan. The Fire Department maintains copies of all business emergency response plans.
- The Public Works Department Transportation Division responds to all complaints by staff, residents and business reporting spills, leaks and illegal dumping of non-hazardous materials or illicit connections to the stormwater sewer system. Clean-up activities include measures to prohibit or limit flows to the stormwater sewer system.
- The Fire Department responds to all spills and leaks of hazardous material. Clean up activities include measures to prohibit flow to the stormwater sewer system.

### Measurable Goals

1. Inspect the sanitary sewer system within the core (downtown) area such that the entire system is inspected at least once during the permit term.
2. Continue to implement spill/leak investigation and clean-up response activities.
3. Develop a standardized reporting procedure for spill/leak and clean-up response activities.
4. Maintain records of illicit discharges including:
  - a. Dates of occurrence, response, and resolution
  - b. Location
  - c. Estimated type and quantity of material discharged
  - d. Descriptions of response and enforcement actions.
5. Compile training materials and train appropriate personnel for the adequate implementation of the illicit discharge program during the permit term.

### Assessment Tasks

Maintain a record of illicit discharges investigated. Include in the record a characterization of the type and estimated quantity of the flow eliminated, a brief description of the city's activities to respond, and any enforcement actions taken.

### Responsibility

Public Works Supervisors are responsible for training crews and maintaining the crew's inspection and clean-up records. The Fire Department responds to all spills of hazardous materials. The Code Compliance Coordinator (under the Countywide HazMat Team) conducts site visits to investigate reported violations. After confirmation of the violation, the Code Compliance Coordinator takes necessary steps to gain compliance with city Codes. The SWMP Administrator will compile various records of the individual efforts, as appropriate, and assist with the development of associated staff training.

## 2.2 Program Elements - Illicit Discharges Program

**Table 5. Illicit Discharges Program Implementation Schedule and Responsible Department/Position**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Fire	Finance	Other
<b>ID1 Illicit Discharge Detection, Elimination and Training</b>											
1. Inspect the sanitary sewer system within the core (downtown) area such that the entire system is inspected at least once during the permit term.						●	●				
2. Continue to implement spill/leak investigation and clean-up response activities.						●	●	●	●		
3. Develop a standardized reporting procedure for spill/leak and clean-up response activities.						●	●	●	●		
4. Maintain records of illicit discharges.						●	●	●	○		
5. Train appropriate personnel for the adequate implementation of the illicit discharge program during the permit term.						●	●				



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

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity.



## **2.3 Program Elements - Construction Activities Program**

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### **2.3.1 Introduction**

Stormwater runoff from construction sites can be a significant source of pollutants to receiving waters during all phases of construction activities. Failure to implement adequate erosion and sediment control measures can result in more significant contributions of sediment to receiving waters than what was deposited previously from undisturbed land. Excessive sediment loading can result in severe impacts to water quality. In addition, erosion and sediment can combine with other pollutants associated with construction activities, such as, petroleum products, pesticides, and fertilizers.

The Small MS4 General Permit requires municipal stormwater programs to implement a Construction Site Management Program for construction sites that result in a land disturbance of one acre or more by:

- Implementing an ordinance or other regulatory mechanism to control erosion and sediment from construction sites,
- 
- Establishing penalties or other mechanisms to enforce compliance,
- 
- Addressing discarded building material, concrete washout and sanitary wastes,
- 
- Conducting pre-construction review of site management plans,
- 
- Developing procedures for receipt and addressing of information submitted by the public, and
- 
- Conducting regular inspections during construction.

Construction sites less than an acre can pose a threat of producing an illicit discharge (see Section 2.2) and are subject to the Control Measures of the Construction Site Management Program as necessary.

### **2.3.2 Construction Activities Control Measures**

Control Measure CA1 requires stormwater quality control measures for construction activities to be a condition of approval for land development in the city. In addition, this control measure discusses the role of plan review staff in verifying control measures are included in a project's design during the plan review process.

Control Measure CA2 establishes standards for erosion and sediment control design and practices.

Control Measures CA3 and CA4 address construction site inspections for private land development and contractor requirements for municipal projects, respectively.

## 2.3 Program Elements - Construction Activities Program

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**CONTROL MEASURE TITLE: CA1 - LAND DEVELOPMENT PLAN REVIEW  
PROCESS**

Control Measure Description: Establish standard conditions of approval and engineering design standards and specifications for construction activity stormwater quality measures to be used during the land development process

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### **Existing BMPs and Related Activities**

The Public Works Department's Design Standard book explains the development application process, document submittal requirements for Public Work's review and approval, and the required activities during construction.

- All land development applications are reviewed by the Community Development. Appropriate plans are also circulated to the Public Works Department for engineering review of stormwater BMPs. Conditions of approval are established as necessary to ensure city standards and codes protect the environment.

To comply with CEQA requirements for all land development applications, the Planning and Building Department and Engineering Department establish necessary mitigation measures to ensure significant environmental impacts will not occur as a result of construction activities.

### **Measurable Goals**

1. Establish standard conditions of approval for runoff from all phases of construction activities for construction sites that result in a land disturbance of one acre or more, or less if part of a common plan of development (i.e., individual lots of a subdivision) or is deemed appropriate by the city. Including, but limited to, requiring proof of coverage (i.e. Notice Of Intent) under the State's Construction Activities Storm Water General NPDES Permit, when appropriate.
2. Modify existing records to note the plans that incorporated standard conditions or mitigation measures for construction activity.
3. Develop standards and specifications for construction activity stormwater quality control measures.
4. Train Community Development and Engineering staffs how to implement the MS4 Permitting during the reviewing and approving processes for development and/or construction projects. Provide control measures training to staff responsible for verifying that construction activity controls are incorporated in the development plans and implemented at the site.

## 2.3 Program Elements - Construction Activities Program

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5. Inform the private development and construction firms and contractors about the MS4 Permit Process and the available Control Measures:
  - a. Produce new informational materials or review and revise/amend the public information sheets available at Community Development to include requirements regarding erosion and sediment controls and stormwater pollution prevention including prohibition of non-stormwater discharges to the stormwater sewer system.
  - b. Participate and/or sponsor a workshop prior to the 2005-2006 wet season, to educate available city staff, construction contractors, and developers regarding the city's stormwater quality policies for construction activities and new development.

### Assessment Tasks

Review city development and construction standards and ordinances to determine if modifications are necessary to better implement and enforce appropriate Control Measures.

### Responsibility

The Public Works Department and Community Development will review development applications and provide appropriate feedback and controls to assure that post-construction BMPs are included. The SWMP Administrator is responsible for coordinating between departments, assisting with training and workshops, and revising public information sheets.

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### CONTROL MEASURE TITLE: CA2 - EROSION AND SEDIMENT CONTROL STANDARDS

Control Measure Description: Implement and apply the city's design standards for erosion and sediment control measures.

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### Existing BMPs and Related Activities

- The current Public Works Design Standards specify and outline design standards for any and all site plans.
- The city currently requires a Grading Plan to be submitted with all other improvement plans for sites that are greater than five acres. Staff knowledgeable with the standards reviews all Grading Plans.

## 2.3 Program Elements - Construction Activities Program

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### Measurable Goals

1. Revise the Public Works Design Standards to require construction plans requiring Public Works review and approval to include erosion control practices. The erosion control measures shall comply with the Small MS4 General NPDES Permit's requirements, other requirements deemed appropriate by the city, and shall include the following:
  - a. Appropriate BMPs shall be installed to prevent off-site stormwater transport of silt or other deleterious substances during the wet season.
  - b. Inspection of all BMPs during rain, or at minimum within 24 hours before and after rain, to assure that erosion and sediment controls are properly maintained and functioning as designed. Exception to this requirement is the recognition that minor storm events do not pose a stormwater pollutant runoff potential. However, storm event intensity is often difficult to predict, and therefore, it remains the obligation of the contractor or developer to ensure that proper preventative and maintenance measure are in place at all times in order to stay in compliance city's Small MS4 General Permit.
  - c. All sites covered by an NPDES Permit, or any site instructed by the city, shall have adequate erosion and sediment control materials on site, or readily available as agreed to by the city (e.g. at a central corporation yard near the construction site), to install in the event that significant rainfall is predicted.
2. Require that all Erosion and Sediment Control Plans and Grading Plans for sites disturbing greater than one acre be prepared and signed by a Professional Engineer in Civil Engineering registered in the State of California.
3. Continue to review and comment on Grading Plans.
4. Continue to review and comment on Erosion and Sediment Control Plans.
5. Train staff, and/or provide refresher training, about erosion and sediment control standards and specifications.

### Assessment Tasks

Review the progress of measurable goals and report on overall effectiveness.

### Responsibility

Community Development and Public Works Engineering shall document and/or track plan reviews, site inspections, and enforcement actions. Public Works Engineering or Community Development shall take a lead role in reviewing and commenting on grading plans and erosion and sediment control plans for all construction projects subject to the

## 2.3 Program Elements - Construction Activities Program

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city SWMP as appropriate. The SWMP Administrator shall assist both Community Development and Public Works Engineering as needed.

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**CONTROL MEASURE TITLE: CA3 - CONSTRUCTION SITE INSPECTION**

Control Measure Description: Implement a construction site inspection program.

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### Existing BMPs and Related Activities

- The city holds pre-construction meetings typically attended by the city project engineer, city inspector, developer, contractor, and other parties for significant or selective projects when the improvement plans are approved and construction is about to begin.
- The Public Works Department has an established construction inspection program. Typically, inspectors visit each construction site at least once a day during active construction of public improvements to record the activities conducted at the site and to make sure construction is proceeding according to contract documents. Erosion and sediment control measures outlined on approved Plans are inspected. Generally, problems observed at a site are resolved in the field. If problems persist, enforcement action is taken, up to and including, but not limited to, having the contractor cease construction until the problems are resolved to the satisfaction of the inspector.
- The Building Inspection Division and/or Public Works Department conduct inspections of construction sites during the on-site building construction phase for code compliance and compliance with contract documents.
- The Building Inspection Division may issue enforcement action notifying the builder of violations to city code.
- Public Works issues citations for capital improvement projects and utility work within rights-of-way.
- Public Works inspects the installation of utilities to ensure, as appropriate, that systems are properly installed and functioning.

### Measurable Goals

1. Expand pre-construction meetings for all projects greater than one acre, or other projects selected to by the city, to include:
  - a. A review of erosion and sediment control plans, stormwater pollution prevention measures and all city requirements regarding stormwater quality management for the project.

## 2.3 Program Elements - Construction Activities Program

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- b. Coordination with the Building Division's field inspection staff and the SWMP Administrator to have representatives at the meeting, as required.
  - c. A standard checklist or agenda item to address implementation and maintenance of erosion and sediment control measures and other stormwater pollution prevention control measures.
2. Review and enhance the construction inspection program prior to the 2005-2006 wet season to:
    - a. Inspect construction sites that require erosion and sediment control plans to ensure the plan is implemented.
    - b. Inspect construction sites that pose a significant threat of pollution prior to forecasted significant rain events and following such events during the wet season.
    - c. Coordinate inspection activities with code inspectors and other city field inspection personnel to ensure stormwater program site inspections are conducted during all phases of construction, including but not limited to:
      - i. Inspecting erosion and sediment control measures, waste management measures, proper storage, use and disposal of construction materials, and chemicals, and any other construction related BMPs.
      - ii. Identifying and prohibiting non-stormwater discharges that are not allowed into the stormwater sewer system, e.g. concrete wash waters, contractor equipment rinse waters, etc.
3. Develop a standard inspection form or checklist prior to the 2005-2006 wet season to be used in the field to ensure consistent field review of construction site BMPs.
  4. Train staff responsible for conducting pre-construction meetings prior to the 2005-2006 wet season about the city's stormwater quality issues and policies.
  5. Initially train and subsequently retrain/update construction field inspection staff in stormwater pollution prevention requirements for construction activities.
  6. Continue to receive and respond to information submitted by the public regarding stormwater impacts due to construction projects. Maintain a record (including date, complaint, and action taken) of publicly submitted information regarding impacts of storm water runoff from construction sites.

## 2.3 Program Elements - Construction Activities Program

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### Assessment Tasks

1. Maintain inspection records that include a description of deficiencies found, and the enforcement or other type of actions required to bring the facility into compliance with approved plans. Record the outcome of follow-up activities.
2. Conduct random construction site inspections to verify that field inspections are being adequately addressing stormwater quality issues.

### Responsibility

The Public Works Department and Community Development are both responsible for inspecting construction sites. The SWMP Administrator will provide general oversight and assist with inter-departmental coordination.

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### CONTROL MEASURE TITLE: CA4 - MUNICIPAL CONSTRUCTION PROJECTS – CONTRACTOR REQUIREMENTS

Control Measure Description: Ensure significant municipal construction projects comply with the city's Small MS4 General Permit.

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### Existing BMPs and Related Activities

- For all municipal construction projects, Public Works establishes requirements that contractors must comply with during construction.
- Municipal projects are covered under the State's Construction Activities Storm Water General Permit, when required.

### Measurable Goals

1. Develop and/or improve standard contract language addressing stormwater quality control requirements for municipal construction projects.
2. Continue to inspect municipal construction sites to verify that proper erosion and sediment BMPs and other stormwater BMPs are being implemented and maintained.
3. Train city Capital Improvement inspection staff to ensure the implementation and maintenance of stormwater BMPs at municipal construction sites.

### Assessment Tasks

Maintain inspection records that include a description of deficiencies found, and the enforcement or other type of actions required to bring the facility into compliance with approved plans. Record the outcome of follow-up activities.

## **2.3 Program Elements - Construction Activities Program**

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Conduct random construction site inspections to verify that field inspections are being adequately addressing stormwater quality issues.

### **Responsibility**

The Public Works Engineering Division shall have the lead responsibility for review and revision, as needed, of city standard contract documents for the purpose of achieving contractor compliance with this control measure. The SWMP Administrator will assist with contract language and staff training, as needed.



## 2.3 Program Elements - Construction Activities Program

**Table 6. Construction Activities Program Implementation Schedule and Responsible Department/Position**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>CA1 Land Development Plan Review Process</b>											
1. Establish standard conditions of approval for runoff from construction sites for all phases of construction.						●	●	●			
2. Modify existing records to note the plans that incorporated standard conditions or mitigation measures for construction activity.						●	●	●			
3. Develop standards and specifications for construction activity stormwater quality control measures.						●	●	●	●		
4. Train Community Development and Engineering staff responsible for development application review and inspection of construction activity controls.						●	●	●			
5. Train the local land development and construction community.											
a. Produce new informational materials or review and revise/amend the public information sheets available at the Community Development.						●	●	●			
b. Participate and/or sponsor a workshop prior to the 2005-2006 wet season.						●	●	●			
<b>CA2 Erosion and Sediment Control Standards</b>											
1. Revise the Public Works Design Standards to require a developer to design summer and winter construction erosion control practices.						●	●				
2. Require that all Grading Plans and Erosion and Sediment Control Plans for sites disturbing greater than one acre be prepared and signed by a P.E. in Civil Engineering registered in the State of California.						●	●	●			
3. Continue to review and comment on all Grading Plans.						●	●	●			
4. Continue to review and comment on Erosion and Sediment Control Plans.						●	●	●			
5. Train and/or update staff about erosion and sediment control standards and specifications.						●	●	●			

## 2.3 Program Elements - Construction Activities Program

**Table 2-A. Construction Activities Program Implementation Schedule and Responsible Department/Position (cont.)**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>CA3 Construction Site Inspection</b>											
1. Expand pre-construction meetings for all projects greater than one acre, or other projects selected by the City.			■	■	■	○	●	●			
2. Review and enhance the construction inspection program prior to the 2005-2006 wet season.			■			○	●	●			
3. Develop a standard inspection form or checklist prior to the 2005-2006 wet season.			■			○	●	●			
4. Train staff responsible for conducting pre-construction meetings prior to the 2005-2006 wet season.			■			○	●	●			
5. Initially train and subsequently retrain/update all construction field inspection staff.			■	■	■	○	●	●			
6. Continue to respond to public information on stormwater impacts from construction sites.			■	■	■	○	●	●			
<b>CA4 Municipal Construction Projects – Contractor Requirements</b>											
1. Develop and/or improve on standard contract language for municipal construction projects.			■			○	●	○	○		
2. Continue to inspect municipal construction sites to verify that stormwater BMPs are being implemented.			■	■	■		●	●			
3. Train City Capital Improvement inspection staff to ensure that stormwater BMPs are being implemented at municipal construction projects.			■		■	○	●	●			



Continuing activity, reviewed or revised as needed throughout implementation

One-time activity to develop or implement a measurable goal

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity

## **2.4 Program Elements - New Development / Redevelopment Program**

### **2.4.1 Introduction**

The Small MS4 General Permit requires municipalities to develop, implement, and enforce a program for stormwater runoff to prevent and minimize water quality impacts from new development and redevelopment projects that fall into one of the following categories:

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

The program must include a plan to implement site-appropriate and cost-effective BMPs and ensure long-term operation and maintenance of such BMPs. Additionally, the permit requires the city to adopt specific design standards set forth in Attachment 4 of the Small MS4 General Permit for the above listed categories which address the following topics;

- Peak Stormwater Runoff Discharge Rates
- Conserve Natural Areas
- Minimize Storm Water Pollutants of Concern
- Protect Slopes and Channels
- Provide Storm Drain System Stenciling and Signage
- Properly Design Outdoor Material Storage Areas
- Properly Design Trash Storage Areas
- Provide Proof of Ongoing BMP Maintenance
- Design Standards for Structural or Treatment Control BMPs
- Flow Based Treatment Control BMP

Water quality studies have shown impacts on receiving water caused by stormwater runoff from impervious surfaces. Pollutants associated with residential, commercial and industrial activities in a watershed include sediment, fertilizers, pesticides, other chemicals, paints, waste oil, other vehicle fluids, petroleum hydrocarbons, heavy metals, and coliform from human and animal wastes. Stormwater runoff that comes in contact with these pollutants are transported quickly and efficiently to and through the stormwater sewer system and discharged to receiving waters.

## **2.4 Program Elements - New Development / Redevelopment Program**

In addition, stormwater runoff rates and quantity may significantly increase as a result of impervious surfaces caused by new development.

Impacts to water quality and the physical and biological characteristics of an aquatic habitat caused by new development can be minimized through implementing post-construction stormwater BMPs.

### **2.4.2 New Development/Redevelopment Control Measures**

Control Measure NDR1 addresses private development by establishing appropriate conditions of approval during the development review process. After approval, city staff shall verify that post-construction stormwater BMPs have been included in the engineering, architectural and landscape plans during the plan check and review process prior to approvals and/or permit issuance. In addition, city staff shall verify that the approved post-construction stormwater BMPs are properly constructed in the field by means of site inspections. Upon project completion, the city will periodically perform site visits to verify the effectiveness of the control measure(s).

Control Measure NDR2 addresses runoff from public land that is developed or redeveloped by the city. The city will ensure that post-construction stormwater BMPs are considered for all public agency projects.

---

#### **Control Measure Title: NDR1 - Private Land Development Plan Review Process**

Control Measure Description: 1) Develop standard conditions of approval for private land development projects. 2) Develop a plan check process that enables staff to ensure post-construction measures are included in the design prior to plan approval. 3) Develop an inspection program to ensure post-construction measures are implemented and maintained.

---

#### **Existing BMPs and Related Activities**

- The Public Works and Community Development Departments review all land development applications and establish and/or recommend conditions of approval to ensure that city standards are met, and establish and/or recommend mitigation measures to comply with CEQA requirements.
- The Public Works Revised Design Standards Book (1991) instructs developers to design permanent erosion control BMPs for public improvements.
- The Community Development Department develops and implements conditions of approval on new development in accordance with the applicable city Plans and Codes. The General Plan, applicable Specific Plans, the Municipal Code (Zoning, Subdivision chapters, etc.), and other legal documents are in place to ensure orderly land development while providing for the protection of the environment and natural resources.

## **2.4 Program Elements - New Development / Redevelopment Program**

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- The city may conduct pre-development meetings that include various city departments to discuss requirements and provisions for approval of the land development project. City departments include Community Development, Public Works, and Parks and Community Services.

### **Measurable Goals**

1. Establish standard conditions of approval for permanent stormwater BMPs based on the type of land development project, in order to:
  - a. Preserve areas or features that provide important water quality protection
  - b. Maximize pervious areas to promote and enhance percolation
  - c. Limit disturbance of natural drainage features and vegetation
2. Require long-term maintenance and operation of permanent stormwater BMPs. Establish a process to track permanent stormwater BMP construction, operation, and maintenance.
3. Develop and/or revise checklists or similar tools used by city staff to review land development applications and plans, for compliance with Receiving Water Limitations and Design Standards of the Small MS4 General Permit - Attachment 4.
4. Develop and implement a coordinated plan review, inspection activities, and reporting methods for permanent stormwater BMPs to be used by various city staff.
5. Train planning and engineering staff who are responsible for reviewing plans for inclusion of permanent stormwater BMPs. Educate appropriate staff in the use of established standard conditions, mitigation measures, city requirements, and engineering standards for stormwater quality protection.

### **Assessment Tasks**

Conduct inspections and maintain records of inspections of permanent stormwater BMPs to evaluate performance, operation, and maintenance of these improvements.

### **Responsibility**

The Public Works and Community Development Department are responsible for plan review and site inspections of permanent stormwater BMPs. The SWMP Administrator will assist in developing standard conditions of approval, record keeping, reporting, and inter-department coordination.

---

### **Control Measure Title: NDR2 - Permanent Stormwater BMPs for Municipal Construction Projects**

Control Measure Description: Incorporate permanent stormwater BMPs into municipal projects.

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### **Existing BMPs and Related Activities**

## **2.4 Program Elements - New Development / Redevelopment Program**

- The Public Works Capital Improvements function is responsible for the development of contract documents associated with development and redevelopment of municipal property.

### **Measurable Goals**

1. Utilize permanent stormwater BMPs for municipal projects.
2. Train capital improvement staff in city stormwater management requirements.

### **Assessment Tasks**

Conduct inspections and maintain records of inspections of permanent stormwater BMPs to evaluate performance, operation, and maintenance.

### **Responsibility**

The Public Works Capital Improvements function is responsible for reviewing municipal development plans for opportunities to incorporate permanent stormwater BMPs and for training staff. The SWMP Administrator will provide guidance with project design review and assist with staff training. The Community Development Department will train its own staff responsible for reviewing municipal projects in cooperation with the SWMP Administrator.

## 2.4 New Development / Redevelopment Program

**Table 7. New Development and Redevelopment Program Implementation Schedule and Responsible Department/Position**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>NDR1 Private Land Development Plan Review Process</b>											
1. Establish standard conditions of approval for permanent stormwater BMPs.						●	●	●	●		
2. Require long-term maintenance and operation of permanent stormwater BMPs, when necessary. Establish a process to track that permanent stormwater BMPs are constructed, operated, and maintained.						●	●	●	○		
3. Adopt standards and specifications for permanent (post-construction) stormwater BMPs, in compliance with Attachment 4 of the Small MS4 General Permit.						●	●	●	○		
4. Develop or revise, as necessary, checklists or similar methods used by Engineering and Community Development staff to review land development applications and plans for compliance with City policies.						●	●	●			
5. Continue to review plans for permanent stormwater BMPs.						●	●	●	●		
6. Continue to coordinate plan review and inspection activities among City departments.						●	○	●	●		
7. Train planning and engineering staff responsible for reviewing plans regarding permanent stormwater BMPs.						●	●	●			
<b>NDR2 Permanent Stormwater BMPs for Municipal Construction Projects</b>											
1. Utilize permanent stormwater BMPs for municipal projects.						●	●	○			
2. Train capital improvement staff.						●	●	●			



Continuing activity, reviewed or revised as needed throughout implementation

One-time activity to develop or implement a measurable goal

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity.

## **2.5 Program Elements - Municipal Operations Program**

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### **2.5.1 Introduction**

The Small MS4 General Permit requires municipalities to reduce the discharge of pollutants in runoff from municipal operations. There are many municipal facilities and activities that could be sources of pollutants in stormwater runoff including:

- maintenance and repair of vehicles, equipment and facilities
- facility, equipment, and landscaping maintenance and repair practices
- chemical and material use, application and storage practices
- waste management practices

Pollutants most commonly associated with these facilities and activities include petroleum hydrocarbons, pesticides, fertilizers, toxic chemicals, trash and debris, sediment and oxygen-demanding substances.

### **2.5.2 Municipal Operation Control Measures**

Control Measure MO1 addresses employee training. Employees responsible for and engaged in activities that could potentially contribute pollutants to stormwater will receive SWMP training. The type and degree of training will vary depending on the department and position of the employees and their responsibility for implementing elements of the SWMP.

Control Measure MO2 addresses municipal operations related to the operation and maintenance of roads, streets, curb and gutter, stormwater sewer system, water lines and all other activities related to the operation and maintenance of the public infrastructure.

Control Measure MO3 addresses municipal operations related to the operation of the corporation yard including activities relating to routine fleet maintenance.

Control Measure MO4 addresses operation and maintenance of public parks and areas of open space.

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#### **Control Measure Title: MO1 - Employee Education and Training**

Control Measure Description: Increase city employee awareness of the SWMP and to ensure employees responsible for implementing any part of the SWMP are adequately trained.

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#### **Existing BMPs and Related Activities**

- The Public Works Department conducts department-wide monthly safety meetings. Attendance is mandatory, and records are kept on the items discussed and the names of the employees that attended. The meetings last for about one hour. The first half of the meeting is related to safety, and the second half of the meeting is dedicated to other training and information sharing.
- The Public Works Department currently distributes Employee Handbooks that contain all the policies and procedures that most employees need to know while employed with the department.



## **2.5 Program Elements - Municipal Operations Program**

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- Many of the staff within the Public Works Department train employees through weekly Divisional tailgate meetings and on-the-job training. Records of the training are maintained.

### **Measurable Goals**

1. Review the Public Works Employee Handbook and identify where it may be revised to include reference to the City's responsibility to implement the SWMP, and describe the City departments and/or employee positions responsible for implementing the SWMP.
2. Develop and implement an environmental training program that includes stormwater issues for city personnel that conduct activities directly or indirectly related to the SWMP. The various departments and divisions to be trained include:
  - i. Public Works Department:
    - a) Administrative Division
    - b) Transportation Division
    - c) Water Division
    - d) Wastewater Division
    - e) Solid Waste Division
    - f) Support Services Division
  - ii. Parks and Community Services Department
  - iii. Community Development Department

### **Assessment Tasks**

Evaluate the effectiveness of this control measure through an evaluation of the information gathered in annual reports.

### **Responsibility**

The SWMP Administrator is responsible for providing educational material for training programs and for working with division heads in updating employee manuals. Public Works managers will update employee handbooks and Department Heads will incorporate related stormwater quality management topics into regular training events.

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**Control Measure Title:** MO2 - Public Infrastructure Operation, Repair and Maintenance

Control Measure Description: Implement procedures, practices and schedules to ensure municipal operation activities minimize stormwater pollutants.

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### **Existing BMPs and Related Activities**

#### Street Sweeping

- Residential streets are swept once per week

## **2.5 Program Elements - Municipal Operations Program**

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- Downtown District streets are swept twice per week.

### **Graffiti Removal**

- Graffiti removal procedures include using less toxic products and no runoff removal and clean-up methods.
- The city has a graffiti control hotline and a volunteer program to include the public in its anti-graffiti efforts.

### **Signs, Striping and Painting Activities**

- The Transportation Division uses water-based, fast drying paint products that do not contain heavy metals. The paint is applied in a manner to minimize over spray and spillage.

### **Road, Street, Curb, Gutter and Sidewalk Repair and Maintenance**

- The Transportation Division is responsible for the maintenance and repair of all public streets, sidewalks, and associated infrastructures. They typically schedule maintenance and repair work during the dry season except during emergency situations.
- Household garbage and recyclable materials are collected separately but concurrently. Green waste is picked up loose from the street using specially designed equipment. A street sweeper follows this vehicle to remove remnant material from the collection activities.

### **Stormwater Sewer System Maintenance**

- The city is sectioned into quadrants. Inspections conducted by the Storm Sewer Division are recorded and maintained by quadrant. Maintenance records show catch basins characterized as dirty and cleaned.
- The Storm Sewer Division cleans catch basins throughout the year as needed. This includes an inspection and cleaning just prior to the wet season.
- Field crews replace damaged or missing “Rainwater Only” curb tiles (see PEOP1) during the storm drain cleaning and inspection program.
- Siphon-type drains in the downtown area are flushed and vacuumed quarterly. Collected water is discharged into the sanitary sewer system.
- The Storm Sewer Division inspects and maintains each of its five retention ponds annually prior to the wet season. This is part of the routine maintenance program beginning September and completed by the end of October. The ponds are inspected and maintained for damage, erosion, and trash build-up. Ponds are equipped with catchment screens to gather debris. The ponds are not equipped with pre-settling basins. Accumulated sediment at pond inlet structures is spread throughout the pond and not removed. Excess vegetation and accumulated trash is removed. Damage or erosion is repaired.
- From November through April, the Stormwater Sewer Division inspects the ponds at a minimum of two times per week. During rain events, ponds are inspected during normal week day work hours and once following each event. Damage or erosion is repaired as soon

## **2.5 Program Elements - Municipal Operations Program**

as practically possible. During non-normal work hours, stand-by staff responds to alarms or other reports of problems.

- During the dry season months, May through October, the ponds are inspected at least once per week.
- The city has installed two trash racks at the outlet of West Pond, the largest of the five ponds.
- During August and September of each year the city cleans and inspects every pump station in the city to remove silt and trash. During the wet season months, November through April, the pump stations are inspected a minimum of two times per week. During rain events, they are inspected during normal week day work hours and once following each event. Damage or erosion is repaired as soon as practically possible. During non-normal work hours, stand-by staff respond to alarms or other reports of problems.
- During the dry season months, May through October, pump stations are inspected at least once per week.
- Preventative maintenance of pump stations occurs quarterly and is in addition to the annual inspections.

### **Storm Channels and Ditches**

- The city operates and maintains major drainage channels and ditches that traverse the city. Each year from May to November the city inspects, repairs, and maintains the channels and ditches. Approximately 60% of the vegetation (mostly tule weed) is mechanically excavated and the rest is chemically treated along the bottom of each ditch. Chemicals used include Direx or Roundup (when no water is present) and Rodeo (when water is present). These waterways are:
  - Covell Channel
  - El Macero Channel
  - Second Street ditch
  - Chiles Road ditch
  - Channel A
  - F Street Channel
  - Mace Ranch Channels
  - Core Area Outfall Ditch
  - Putah Creek Channel.
- Channels and ditches are inspected during and immediately following each storm event during normal working hours. Inlet and outlet structures are cleared of debris. Inspectors report repair items to their supervisor and the work is scheduled. A work order system is used to track the completion of repair work.

## **2.5 Program Elements - Municipal Operations Program**

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### BMP Activity Sheets

Because of the significant efforts over the past several years to develop and implement the stormwater management program, the Public Works Department already utilizes BMP Activity Sheets for several work activities. Field crews use the following Activity Sheets:

- Storm drain inlet and other concrete installation, repair, and replacement projects
- Public infrastructure maintenance and repair schedule and contractor BMPs
- Road and street repair and maintenance BMPs
- Routine catch basin/inlet inspection and cleaning BMPs
- Routine storm drainage pond inspection, maintenance, and cleaning BMPs
- Storm drain pump station inspection and maintenance BMPs
- Storm channel and ditch maintenance BMPs
- Storm drain stenciling program and other public outreach BMPs

### **Measurable Goals**

1. Develop standard practices (with BMP Activity Sheets, if necessary) for additional activities that emphasize:
  - a. Graffiti removal activities.
    - i. Remove graffiti using the least-toxic products. Implement dry cleanup methods for removing residual materials.
    - ii. Protect storm drain inlets during graffiti cleanup activities.
  - b. Signs, striping and painting activities:
    - i. Use dry-method techniques to clean and remove paint, paint chips, and other waste material. Dispose of waste material appropriately. Avoid washing or rinsing waste material down the storm drain.
    - ii. Protect storm drain inlets when work is being conducted at or near an inlet.
    - iii. Handle and load paint products or other materials away from storm drain inlets.
    - iv. Develop/edit and implement spill control and clean-up procedures to prevent spilled paint or other chemicals from reaching the stormwater sewer system.
  - c. Water line maintenance activities:
    - i. Implement measures to reduce the quantity of domestic water to the stormwater sewer system.
    - ii. Ensure all discharges comply with all applicable laws, regulations and permits.
2. Evaluate inlet inspection and maintenance records. Develop a list of catch basins that have been cleaned, by quadrants of the city. Determine if certain quadrants of the city require more frequent cleaning. Use this data to help prioritize routine maintenance and to focus the public education and outreach program.

## **2.5 Program Elements - Municipal Operations Program**

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### **Assessment Tasks**

Implement a supervisory oversight program which documents that employees are implementing BMPs. Maintain a record of follow-up activities conducted.

### **Responsibility**

The Public Works managers are responsible for their field crews' activities. The SWMP Administrator will assist with developing or editing BMP Activity Sheets and with evaluating city records for prioritizing public outreach efforts.

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### **Control Measure Title: MO3– Green Waste Management**

Control Measure Description: Procedures, practices, and schedules for the evaluation and management of green waste management to ensure minimal release to the receiving waters.

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### **Existing BMPs and Related Activities**

Currently, green waste generated from yard and landscape maintenance activities is staged in the city streets then removed mechanically by a private contractor and normally followed by street sweeping the following day. The debris typically is set away from the gutter to allow curbside flows to bypass the debris during inclement weather.

The City is currently examining alternatives for handling green waste including the use of containers for collection and removal in specific areas of the city and city-wide, and requiring professional landscapers and area specific property owners to eliminate the disposal of green waste in the streets. In considering these alternatives, the City is conducting a citizen and property owner survey as well as noting guidance provided by the City's Bicycle Advisory Commission and Natural Resource Commission. The analysis will consider a number of factors including level of service, cost of service, public acceptance, aesthetics, water quality impacts, and bicycle safety. City staff will provide a recommendation to the City Council for their consideration by the winter of 2006.

Additional practices to promote that green waste is not discharged to the receiving waters include street sweeping, parking enforcement, storm drain inspection and cleaning, stormwater detention basins and channel operations, stormwater pump station cleaning, local waterways and detention basin clean-up events, vegetated channels, storm drain inlet markers, green waste composting, and public education. Focused public education programs regarding landscape management including integrated pest management and water conservation, are described in other portions of this SWMP.

### **Measurable Goals**

1. Complete the City's evaluation of alternatives of green waste collection and removal. Pending City Council direction, begin to implement recommended alternative by spring of 2007.

## **2.5 Program Elements - Municipal Operations Program**

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2. Review and, if necessary, modify the City's Management of Garbage, Other Wastes, Recyclables, and Fees Ordinance to support implementation of the recommended green waste removal alternative by July 2007.
3. Develop an outreach program focusing on how proper handling of green waste can promote water quality by the end of October 2006. First distribution of anticipated outreach materials or advertisements will take place by November 2006.
4. Continue to promote backyard composting program through workshops, educational articles, or advertisements. By June 2007, evaluate the number of inquires, public participates in workshops, or composting containers distributed and reevaluate the composting program. In response to the evaluation, revise composting program by July 2007.

### **Assessment Tasks**

1. Conduct a green waste management survey and report on subsequent implementation actions.
2. Develop possible revisions to City ordinance.
3. Summarize annual outreach and public education efforts.
4. Document the number of citizen complaints regarding green waste management practices.
5. Tabulate total number of storm drain inlets inspected and cleaned annually.
6. Document the volume of material removed from various stormwater facilities.
7. Record the number of composting classes and participants.

### **Responsibility**

Various staff within the Public Works Department are responsible for completing the above Assessment Tasks. The SWMP Administrator will assist as needed with all tasks and coordinating and compiling all the data and information.

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**Control Measure Title:**                    **MO4 - Corporation Yard and Fleet Management**  
**Control Measure Description:** Manage the city's corporation yards to minimize pollutant discharges to the stormwater sewer system.

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### **Existing BMPs and Related Activities**

- The city owns and operates two corporation yards, at 1717 5<sup>th</sup> Street and at 1818 5<sup>th</sup> Street. The city Fuel Facility located at 1717 5<sup>th</sup> Street corporation yard is completely covered and includes leak prevention and detection equipment. This facility meets all current regulations covering operations of underground storage tanks. The island is graded to prevent stormwater from draining onto or through the fueling island area. Fuel spill reporting/cleanup procedures are posted and absorbents are stored nearby.
- Painting at 1717 5<sup>th</sup> Street is done only during the dry season. Water-tight paint containers are stored on pallets.

## **2.5 Program Elements - Municipal Operations Program**

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- A pile of Hydropatch asphalt patching material, in a three-sided concrete wall containment area, is covered during rainfall.
- Recyclable scrap metal is stored on-site in a large dumpster. A recycling contractor empties the container approximately twice per month.
- Crew supervisors are certified in Hazmat storage and response. Any on-site spills are contained on-site by staff and disposed of appropriately.
- The Parks and Community Services Department operates the General Services Division and the Parks and Open Space Division from 1818 5<sup>th</sup> Street. These divisions provide maintenance city facilities, vehicles and equipment, parks and open space. Fleet maintenance activities such as oil changes, preventative maintenance, brake repairs and general vehicle maintenance activities are conducted indoors. The city does not complete major repairs such as component rebuilding at this facility. The Fleet Services shop does not store new or used vehicle or equipment parts on a regular basis. The vehicle wash pad is covered and sloped to drain into a debris separator and from there into the sanitary sewer system. The remainder of the yard conventionally drains into the stormwater sewer system.
- Waste oil and waste coolant are stored in double-wall containers. The waste oil tank is located outside the maintenance building in an uncovered area against the south shop wall and is protected by bollards. The waste coolant tank is located inside the Fleet Services shop and is contained by a concrete berm. Waste oil is collected from vehicles in a drain cart and the drain carts contents are pumped into the waste oil tank through a sealed system of suction hose, pump, and transfer piping directly to the waste oil tank. Waste coolant is collected in a drain container and the contents manually emptied directly into the waste coolant tank.
- Used batteries are stored on a special plastic spill containment pallet, indoors. They are hauled away by a commercial battery recycler.
- Bulk oil and coolant are stored inside the Fleet Services shop building and are contained by a lined, concrete berm. Product is delivered into the tanks by commercial vendors by means of a delivery hose. Products are removed from the tanks and distributed to work stations throughout the shop through a system of overhead pumps and piping system.
- Drips pans are placed under vehicles that are leaking in the parking area. If excessive, such vehicles are moved indoors.
- Fire trucks from the Fire Department are washed cosmetically at the Fire Station, but washing of the undercarriage is done at the corporation yard. Washing practices will be reviewed during the term of this permit.
- Spills and leaks inside and outside the shop are cleaned using dry methods. Absorbent material used to clean the spill or leak is swept up and disposed or recycled appropriately.

### **Measurable Goals**

1. Continue to implement site BMPs for employees that operate, maintain and use the city's Corporation Yards at 1717 and 1818 5<sup>th</sup> Street.
2. Inspect 1717 and 1818 5<sup>th</sup> Street annually for opportunities to reduce pollutant discharges into the stormwater sewer system and dispose of all waste material.

## **2.5 Program Elements - Municipal Operations Program**

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### **Assessment Tasks**

Conduct annual inspections of corps yards to determine compliance with established BMPs and identify areas/BMPs that can be improved.

Implement a supervisory oversight program to verify and document that the BMPs for the corporation yard are being implemented. Document all follow-up actions required.

### **Responsibility**

The Parks and Community Development Department's General Services Manager is responsible for the corporation yard maintenance and BMPs. The SWMP Administrator oversees implementation of BMPs and suggest improvements, as needed and/or annually.

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### **Control Measure Title: MO5 - Parks and Open Space Maintenance**

Control Measure Description: Implement procedures, practices and schedules to ensure activities related to the operation, maintenance and repair of public parks and open space minimize stormwater pollutants.

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### **Existing BMPs and Related Activities**

- Both the Parks and Community Services and the Public Works Departments are implementing Integrated Pest Management Programs (IPMs) to reduce the use of pesticides. The IPMs include employee training on pesticide application and alternatives to pesticide use. Feedback from field staff assists in tracking pesticide use and use reduction efforts.
- The city no longer uses any Category 1 herbicides and has significantly reduced the use of Category II herbicides. In addition, few insecticides are used. Herbicides and pesticides are applied to targeted areas only when needed.
- Crews use rakes, brooms, and leaf blowers to clean up twigs, sawdust and wood chips left after vegetation trimming and maintenance in public parks and open spaces.
- The city altered its pruning operations to reduce the amount of green waste. Vegetation is allowed to grow more naturally thus reducing the amount of pruning conducted and the chance for vegetative waste to enter the stormwater sewer system.
- The city's open space vegetation management activities include restoring and re-vegetating areas, planting native grasses, and removing noxious plants and weeds. Much of the open space owned and maintained by the city is along Putah Creek or the city's ponds. Well-established and maintained native vegetation in areas adjacent to and around water bodies provides a filter that stormwater will flow through as it discharges to the creeks and ponds.
- The city owns and operates four public swimming pool complexes: Civic Center, Manor, Arroyo, and Community. Filters are backwashed approximately weekly or monthly; pools are drained (emptied) annually. Filter backwash at Manor, Arroyo, and Community drain into the sanitary sewer system. Civic Center's filter backwash drains into the stormwater sewer system because of plumbing constraints. Manor's pool water is drained into the



## **2.5 Program Elements - Municipal Operations Program**

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sanitary sewer system after chlorine levels are below 1 mg/L. Civic Center, Arroyo, and Community pool waters are chemically treated to oxidize any residual chlorine to below 0.1 mg/L before discharging to the stormwater sewer system. Decks at all four complexes are hosed down into storm drains. BMPs will be identified for these activities during the term of this permit.

### **Measurable Goals**

1. Continue to implement the IPM program and policy. Investigate opportunities to expand the program and further reduce pesticide and herbicide use. Review and revise the program as necessary to keep the practices up-to-date and incorporate emerging technology for IPM practices.
2. Coordinate with the Public Education, Outreach, and Participation Program to continue implementing the Residential Pesticide Outreach Program.
3. Maximize removal of vegetative waste from pruning activities and protect storm drain inlets when practical. Mulch lawn clippings in public spaces.
4. When possible, use non-vehicular equipment to conduct vegetation maintenance activities and collection of vegetation waste (e.g., rakes, brooms, battery powered leaf blowers).
5. During open space maintenance and planting activities, use plants and planting arrangements that maximize water quality benefits from the vegetation, when possible.
6. Investigate plumbing facilities and activities at municipal swimming pools. Determine appropriate BMPs to be utilized.

### **Assessment Tasks**

Maintain records of the amount, date, and location of herbicides, insecticides and pesticides applied by city staff and contractors.

Assess measures to reduce pesticide use.

Record efforts made to determine the types of plants and planting arrangements in open spaces that maximize water quality benefits.

### **Responsibility**

The Parks and Community Development Department is responsible for implementing all activities in this control measure. The SWMP Administrator will assist with all activities, as needed.

## 2.5 Program Elements - Municipal Operations Program

**Table 8. Municipal Operation Program Implementation Schedule and Responsible Department/Position**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>MO1 Employee Education and Training</b>											
1. Review the Public Works employee handbook and identify where it may be revised to include reference to the city's responsibility to implement the SWMP, and describe the city departments and/or employee positions responsible for implementing the SWMP.						●	●				
2. Develop and implement a citywide environmental training program that includes stormwater quality issues.						●	◐	◐	◐	◐	
<b>MO2 Public Infrastructure Operation, Repair and Maintenance</b>											
1. Develop standard practices (with BMP Activity Sheets, if necessary) for additional activities. Include subtasks a-c.						◐	●				
2. Evaluate inlet inspection and maintenance records.						◐	●				
<b>MO3– Green Waste Management</b>											
1. Conduct an evaluation of alternative green waste collection and removal alternatives						◐	●				
2. Review and determine if the Management of Garbage, Other Wastes, Recyclables, and Fees Ordinance needs changing.						◐	●				
3. Develop an outreach program on proper green waste handling.						◐	●				
4. Promote backyard composting and evaluate the need for changes to the program.						◐	●				





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

- Individual or department to take lead in the development or implementation of an activity.
- ◐ Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity.

## 2.5 Program Elements - Municipal Operations Program

**Table 8. Municipal Operation Program Implementation Schedule and Responsible Department/Position (cont.)**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>MO4 Corporation Yard and Fleet Maintenance</b>											
1. Continue to implement site BMPs for employees that operate, maintain and use the city's Corporation Yards at 1717 and 1818 5 <sup>th</sup> Street.						●	●		○		
2. Inspect 1717 and 1818 5 <sup>th</sup> Street annually for opportunities to reduce pollutant discharges into the stormwater sewer system and dispose of all waste material.						○			●		
<b>MO5 Parks and Open Space Maintenance</b>											
1. Continue to implement the IPM program and policy.						○	●		●		
2. Coordinate with the Public Education, Outreach and Participation Program to continue implementing the Residential Pesticide Outreach Program.						○			●		
3. Maximize removal of vegetative waste from pruning and mowing activities and protect storm drain inlets when practical. Collect and dispose/compost lawn clippings from public spaces.						○			●		
4. When possible, use manual or battery/electrically powered equipment to conduct vegetation maintenance activities and collection of vegetation waste (e.g., rakes, brooms, battery powered leaf blowers).						○			●		
5. During open space maintenance and planting activities, use plants and planting arrangements that maximize water quality benefits from the vegetation, when possible.						○			●		
6. Investigate plumbing facilities and activities at municipal swimming pool and identify appropriate BMPs						○	●		●		

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

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity.

## 2.6 Program Elements - Public Education, Outreach and Participation Program

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### 2.6.1 Introduction

The Public Education, Outreach and Participation Program is an essential element of the SWMP. This program element focuses on educating the public and businesses about the impact of stormwater discharges on a water body and what can be done to reduce stormwater pollutants. Through participation, the public can provide valuable input and assistance in program development and implementation. Increased public knowledge and participation result in increased public acceptance and support of the program, and help ensure a successful and effective program to reduce stormwater pollutants.

Elements of the Public Education, Outreach and Participation Program include:

- The distribution of educational material developed to inform individuals and households about activities that cause stormwater pollution and the steps that can be taken to prevent it.
- Participating and attending public functions.
- School programs
- Workshops and other educational programs for the business community.

Educational material may encourage citizens to participate or volunteer in various municipal programs such as inlet stenciling and retention pond clean-up. In addition to general public education, educational materials for business activities are developed to specifically address business practices that cause stormwater pollution and to provide pollution prevention measures that businesses can implement to prevent such pollution.

### 2.6.2 Public Education, Outreach and Participation Control Measures

Control Measure PEOP1 addresses public education and outreach. Many of the materials to be used for public education are already developed and used by the city. These materials will be revised/amended to include reference and discussions about the SWMP.

Control Measure PEOP2 addresses public participation.

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**Control Measure Title:** **PEOP1 - Residential Education and Outreach**

**Control Measure Description:** Educate residents regarding steps and measures that can be implemented to prevent stormwater pollution.

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## 2.6 Program Elements - Public Education, Outreach and Participation Program

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### Existing BMPs and Related Activities

- The Finance Division distributes utility billings to property owners (not necessarily all residents) every other month. The billing statements include a 5"x5" box in the left-hand corner that is used for various city messages. Any city department may utilize the space as a public outreach tool.
- Public Information Sheets are available for the public who wants to build or install permanent structures in the city at the Community Development Department counter. These sheets summarize the following city Code requirements:

Pool and Spa Regulations	Request for Investigation/Complaint Form
Estimate Building Fees	Checklist for Residential Zoning Compliance
Required Permits	Residential Permit Application Checklist
New Residential Construction	Commercial Permit Application Checklist

- The Public Works Department participates in various environmental educational programs and produces associated informational materials:
  - Developed the *Consumer Guide to Cleaner Rides in Davis*, with useful information for every family, whether their mode of travel is gasoline, electric, or human powered. The booklet is full of suggestions to reduce car use, make conventional cars drive cleaner, and save money and gas. Additionally, the city bicycle program works with the UC Davis bicycle program putting on several education/advocacy events throughout the year. These events are all aimed at trying to stimulate a modal shift away from single occupant motor vehicle trips to more trips by bicycle.
  - Developed and distributed flyers regarding household hazardous waste collection events.
  - Sponsors slides for Davis theaters regarding recycling and pollution prevention.
  - Developed and revised a brochure regarding the city's wetlands
- City employees can obtain free bike locks if using their own bike to commute to work; the city also has a bike fleet available for work-time use.
- Public Works employees participate in special public events to promote environmental programs. At the events they distribute various environmental public education environmental brochures and other flyers. Events attended by the Department include:
  - Special events held at UCD.
  - California Duck Days Festival.
  - Davis Neighborhood Days.

## 2.6 Program Elements - Public Education, Outreach and Participation Program

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- In the recent past, the Stormwater Sewer Division employed a part-time employee to coordinate the public education program, which included stormwater quality issues. Some of the activities conducted by the employee were:
  - Developed the Water Watch Brochure.
  - Published articles in the local newspaper regarding water quality.
  - Made public presentations to schools and other interested parties.
  - Developed a storm drain stenciling package and brochure
  - Developed a circular curb tile to replace the use of paint and stencil. These tiles were provided to volunteer groups for storm drains throughout the city. By January 2002, every storm drain within the city had been marked.
- The Stormwater Sewer Division currently employs a Wildlife Resource Specialist who makes public presentations regarding the city's wetlands and stormwater retention ponds. In addition to the wetland brochure, a slide show was developed to describe the wetlands function, habitat value, and future efforts. Handouts are given to students on measures that they can take to prevent stormwater pollution. The Specialist also coordinates the Integrated Pest Management (IPM) Program.
- The Solid Waste Division develops and distributes public education and outreach material for the Source Reduction and Recycling and Household Hazardous Waste Programs:
  - *Davis Garbage Guide* – a primary public education tool used by the city that contains information regarding recycling and waste reduction.
  - Flyers announcing the Yolo County Household Hazardous Waste Collection Events.
  - Two videos regarding the environmental hazards of waste oil and the techniques for disposing of waste oil at the DWR Recycling Center.
  - Articles in the local paper and flyers announcing the large appliance and bulky waste drop-off events at the city's waste yard.
  - Brochures on how to reduce waste.
  - Brochures on how to compost green waste.
- Due to public desire to know where and what pesticides are being applied in and along city parks, greenbelts, and miscellaneous landscaped areas that people are most likely to enter, the city has established a "hotline" to provide this information (530-757-5621).



## 2.6 Program Elements - Public Education, Outreach and Participation Program

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- The Public Works Department's Residential Pesticide Outreach Program educates the public about the IPM (see control measure MO4) program, environmental concerns regarding pesticide use, and alternative non-chemical pest control techniques. A primary method of outreach for this program is the Healthy Gardens Program's dedicated web page (<http://www.city.davis.ca.us/pw/ppp/pop.cfm>) under the city's web site.
- The UC Davis Cooperative Extension has a Backyard Master Gardener Program that uses volunteers to answer gardening questions over the telephone. The hotline (530-666-8737) also gives information on alternative pest control techniques to replace pesticide usage.
- The Parks and Open Space Division has placed signs at the four retention ponds in Davis stating "We are all connected to our waterways." An example at the North Davis Pond is:



- Through the Parks and Community Services Division, the city publishes a wide variety of educational materials on improving the environment. The following publications are available to every resident in Davis:
  - *Ecologic Davis* is produced annually and contains information on recycling and energy conservation and provides the opportunity for including information related to stormwater pollution.
  - *Focus* is a semi-annual newsletter for residents that discuss important issues within Davis.
  - Special topic brochures are also produced for the public. Current publications include information on the Transportation Management Ordinance, the city's IPM Program, and air pollution prevention.
- The city maintains a web site for information on local recycling programs and conditions (<http://www.ci.davis.ca.us/pw/recycle/>).
- The city has a cable channel and the ability to use TV and radio for public education announcements.

## 2.6 Program Elements - Public Education, Outreach and Participation Program

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- The city sponsors an Environmental Recognition Award, started in 1994, for individuals, businesses and non-profit organizations.
- The city has a graffiti control hotline (530-757-5600) and a volunteer program to include the public in its anti-graffiti efforts.
- The city installed a van wrap on its sewer collections van displaying a pollution message and contact information.



### Measurable Goals

1. Continue to make presentations on the wetlands to local school groups. Provide to the students a fact sheet on city activities that address stormwater runoff.
2. Develop a web site for the wetlands with stormwater issues. Add a link to download SWMP documents.
3. Investigate using the city's cable television channel to promote the SWMP through a public service announcement about stormwater issues and water quality to be aired prior to the wet season.
4. Evaluate issuing an annual Utility Report to the public in combination with the city newsletter *Focus*. If determined feasible, issue Utility Report annually.
5. Continue to implement the Residential Pesticide Outreach Program.
6. Continue to participate in public events held in the city to promote the SWMP.
7. Develop a stormwater quality display that includes brochures, pamphlets and other outreach material regarding the SWMP. The display could include diagrams, pictures, computer program, or model that illustrates the concerns and potential environmental impacts that could be caused by urban runoff.



## 2.6 Program Elements - Public Education, Outreach and Participation Program

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8. Maintain the graffiti hotline. Consider expanding the use of the hotline to allow residents and businesses to report illegal dumping, illicit connections or other activities that they believe may have adverse impact on the environment.

### Assessment Tasks

Continue using assessment tools developed for the Healthy Garden and Wetlands outreach programs.

Record the number of calls and reports received through the graffiti hotline.

### Responsibility

The Wildlife Resource Specialist will continue to participate in school presentations and tours of the wetlands. The SWMP Administrator is responsible for overseeing or leading all PEOP1 activities.

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### Control Measure Title: PEOP2 - Public Participation

Control Measure Description: Promote public participation in the development, implementation and review of the SWMP.

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### Existing BMPs and Related Activities

- The city complies with all state and local public notice requirements for the adoption of public plans or policies to be implemented by the city.
- The Natural Resources Commission (NRC) holds public meetings to review, comment on and make recommendations to the city Council regarding various projects that require environmental review.
- The Partners for a Cleaner Davis program (see CI1) was developed in cooperation with the business community. A number of businesses participated in the development and will participate in the implementation and future revisions to the program. The NRC is regularly updated about the program at public meetings and has voiced its support of the program.
- The Healthy Gardens program (see PEOP1) was developed through a citizen and business workgroup and presented to the NRC for their support during a public meeting.
- Several volunteer organizations are active in the Davis community:
  - Sierra Club, Yolano Group – organizes field trips and environmental events.

## 2.6 Program Elements - Public Education, Outreach and Participation Program

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- Explorit! Science Center – develops hands-on science programs and exhibits for children. In 2002 the on-site exhibition “Creature Features - Exploring Wetlands Wildlife” was coupled with “Wetlands Safari” which took school groups into the Davis wetlands.
- Yolo Basin Foundation – focuses on wetlands and wildlife, publishes newsletter, sponsors environmental field trips, and Duck Days event.
- TREE Davis – supports an urban reforestation and tree planting program.
- Putah Creek Council – publishes newsletter and puts on monthly talks and events related to Putah Creek.
- Norwood 4H Club – participates in various community volunteer activities.
- Emerson and Holmes Junior High Schools, Science Departments and Leadership Program – conducts water quality testing for class credit; volunteer storm drain marking for leadership credits.
- Riparian Improvement Organization (RIO) – conducts habitat restoration projects, storm drain stenciling, and annual litter cleanups at various storm drainage ponds.



Trash from North Star Pond collected by RIO volunteers, October 2002.

### Measurable Goals

1. Present a summary of the program assessment and proposed program changes to the NRC annually.
2. Develop interactive relationships with several volunteer organizations active in the city.

### Assessment Tasks

Maintain a record of the number of public workshops, committees or other public forums held to address SWMP-related issues. Include pertinent information, e.g. date held, number in attendance, special interest groups attending, etc.

## **2.6 Program Elements - Public Education, Outreach and Participation Program**

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### **Responsibility**

The SWMP Administrator is responsible for conducting public presentations on the SWMP. Public Works Department will continue to support the Healthy Gardens program and Partners for a Cleaner Davis program or similar programs as these evolve, including workshops and other means of programmatic evaluation and improvement.

## 2.6 Program Elements - Public Education, Outreach and Participation Program

**Table 9. Public Education, Outreach and Participation Program Implementation Schedule and Responsible Department/Position**

Control Measures and Measurable Goals	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>PEOP1 Public Education and Outreach</b>											
1. Continue to make presentations on the wetlands to local school groups.						●	●				
2. Develop a web site for the wetlands with stormwater issues. Add a link to download SWMP documents.						●	●				●
3. Investigate using the city's cable television channel to promote the SWMP						●	●				
4. Evaluate issuing an annual Utility Report to the public in combination with the city newsletter <i>Focus</i> . If determined feasible, issue Utility Report annually.						●	○	○	○		
5. Continue to implement the Residential Pesticide Outreach Program.						●	●		●		
6. Continue to participate in public events in the city to promote the SWMP.						●	●		○		
7. Develop a stormwater display for use at public events.						●	●		○		
8. Maintain the graffiti hotline.						●	●				
9. Consider expanding the use of the hotline.						●	●				
<b>PEOP2 Public Participation</b>											
1. Present a summary of the program assessment and proposed program changes to the NRC.						●	●	○	○		○
2. Develop interactive relationships with several of the volunteer organizations active in the city						●	●	○	○		○



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

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity.

## **2.7 Program Elements - Public Agency Legal Authorities Program**

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### **2.7.1 Introduction**

The Small MS4 General Permit does not require a separate legal authority review; however, requiring adequate legal authority is folded into three of the six minimum control measure: illicit discharge program, construction activities program, and post-construction program.

### **2.7.2 Legal Authority Control Measures**

Control Measure PALA1 involves reviewing the May 2001 city of Davis General Plan for action items that relate to stormwater quality issues and developing a plan to implement the items.

Control Measure PALA2 evaluates current legal authorities to determine if they are adequate to develop, implement and enforce the program, or if revisions or new authorities are necessary. This control measure includes the development and adoption of a Stormwater Sewer Ordinance. This ordinance would include provisions specifically related to the implementation and enforcement of the SWMP.

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#### **Control Measure Title: PALA1 - General Plan Action Items**

Control Measure Description: Implement action items contained in 2001 General Plan that are applicable to the SWMP.

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### **Existing BMPs and Related Activities**

The city's General Plan has policy statements and action items related to stormwater quality. City staff is required to implement the Plan's action items. An implementation schedule is not developed for these action items – the city has the period of the General Plan (2001-2020) to implement them. Prioritization of the action items is addressed in the city's annual budget.

### **Measurable Goals**

Review the action items contained in the 2001 General Plan to identify and prioritize the items applicable to the SWMP. Implement high priority items through the SWMP prior to the schedule in the General Plan if appropriate.

### **Assessment Tasks**

Maintain a record of the action items being addressed, when and how the action was taken.

### **Responsibility**

The SWMP Administrator is responsible for reviewing the General Plan and incorporating action items into updates to the SWMP, as necessary.

## 2.7 Program Elements - Public Agency Legal Authorities Program

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### **Control Measure Title: PALA2 - Legal Authority Review**

Control Measure Description: Assess existing legal authorities as needed during SWMP implementation to ensure continued adequate authority to enforce the SWMP and develop new or revise authorities as necessary.

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### **Existing BMPs and Related Activities**

- The city currently utilizes the following legal authorities to help ensure that requirements in the SWMP are met:
  - Zoning Ordinance
  - Subdivision Ordinance
  - Municipal Code Chapter 8 – Buildings including Grading, Drainage, and Flood Control
  - Municipal Code Chapter 23 – Nuisance Abatement
  - Municipal Code Chapter 27 – Parks and Open Spaces
  - Municipal Code Chapter 33 – Sewers and Sewage Disposal
  - Municipal Code Chapter 25 – Streets and Sidewalks
  - Municipal Code Chapter 39 - Water
  - Uniform Building Code
  - Engineering Standards Specifications and Design Standards
  - Improvement Agreement
  - Development Agreement
  - Clean Water Act
  - CEQA process and development of Conditions of Approval and CEQA Mitigation Measures
  
- Yolo County District Attorney's Office, Environmental Prosecutions Unit, prosecutes environmental crimes and brings environmental civil suits to enforce environmental laws and regulations. Officers investigate reports from the public or from public agencies (Department of Fish and Game, Yolo County Health Department) that environmental regulations are being broken.
  
- Construction projects disturbing greater than one acre of land (or part of a larger development plan that will disturb greater than one acre) are required to obtain coverage under a statewide General Storm Water Permit for Construction Activities.

### **MEASURABLE GOALS**

1. Evaluate the need for a Stormwater Sewer Ordinance that will incorporate issues addressing stormwater quality as well as other drainage issues in the city. If needed, develop and adopt a Stormwater Sewer Ordinance.

## **2.7 Program Elements - Public Agency Legal Authorities Program**

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2. Revise existing city Code and other legal authorities as needed to ensure continued implementation and enforcement of the SWMP according to requirements in the Small MS4 General Permit for illicit discharges, illegal dumping, land development review, construction and post-construction stormwater BMPs. Include requirements for long-term maintenance and operation of permanent stormwater BMPs.
3. Review and revise, as necessary, implementing code compliance enforcement techniques, such as issuance of citations or notices of noncompliance, for inspectors to implement. Include enforcement authority for violations of long-term maintenance agreements.
4. Train staff in new ordinances or other legal authorities when needed.

### **Assessment Tasks**

Evaluate the effectiveness of this control measure by assessing the status of the completion of the measurable goals.

### **Responsibility**

The SWMP Administrator will guide the evaluation and development of legal authority for enforcing the Small MS4 General Permit. City attorneys and staff responsible for plan review, site inspections and code enforcement will provide input on the ordinance and enforcement techniques.

## 2.7 Program Elements - Public Agency Legal Authorities Program

**Table 10. Public Agency Legal Authorities Program Implementation Schedule and Responsible Department/Position**

	Implementation Schedule					Responsible Department/Position					
	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	SWMP Administrator	Public Works	Community Development	Parks	Finance	Other
<b>Control Measures and Measurable Goals</b>											
<b>PALA1 General Plan Action Items</b>											
1. Review the action items contained in the proposed General Plan and identify and prioritize the items applicable to the Stormwater Management Program.						●	○	○	○	○	○
<b>PALA2 Legal Authority Review</b>											
1. Evaluate need for Stormwater Sewer Ordinance.						○	●				
2. Revise existing city Code and other legal authorities as needed.						○	○	○	○	○	○
4. Review and revise, as necessary, implementing code compliance enforcement techniques.						○	●	●			
5. Train staff in new ordinances or other legal authorities when needed.						○	●	●	●		○



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

- Individual or department to take lead in the development or implementation of an activity.
- Individual or department to provide strong support in the development or implementation of an activity.
- Individual or department to review and provide comments and guidance during the development or implementation of an activity.



## 3 Program Implementation

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### 3.1 Program Management and Roles and Responsibilities

Management and oversight of the SWMP development and implementation is essential to the success of the program and to meet the intent of the Small MS4 General Permit. The development and implementation of the SWMP requires the participation and coordination of many of the departments, divisions and employees in the city. Careful oversight and management of the SWMP will ensure:

- The roles and responsibilities for the development and implementation of the program are assigned to the appropriate city departments, divisions or employees.
- Proper coordination and cooperation between departments, divisions or employees responsible for program development and implementation.
- The program is developed and implemented in accordance with the SWMP's schedule.
- The Program is monitored and the effectiveness of the program is assessed and reported.
- Compliance with the Small MS4 General Permit.
- Staff is accountable to the governing council and to the community.

Descriptions of the roles and responsibilities for each department directly or indirectly involved in the SWMP are provided below. In this document, the control measures in Section 2 provide tables summarizing the implementation schedule and the responsible department(s) for each measurable goal.

#### 3.1.1 Stormwater Management Program Administrator

A SWMP Administrator is designated to provide oversight. The SWMP Administrator is responsible for collection of the assessment material and evaluation of control measure effectiveness. The Administrator determines, with assistance from various city departments, any additional assessment tasks or materials needed to adequately evaluate the effectiveness of a control measure. The Administrator is also responsible for communicating with the regulatory agencies.

The Administrator serves as the champion of the city's SWMP working to coordinate compliance activities of the various responsible parties. The Administrator will set meetings, conduct program evaluations as needed, and prepare reports and submittals for the governing or permitting agency.

#### 3.1.2 Public Works Department

There are multiple divisions in the Public Works Department that carry out engineering and field operation functions. Each has responsibility for developing and implementing various elements of the associated control measures.

### 3 Program Implementation

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The Engineering Division is responsible for control measures related to:

- Land development application review and establishing conditions of approval,
- Land development final plan review and approval,
- Construction site meetings and inspection,
- Coordinating with the Community Development Department's inspection services section,
- Responding to unauthorized surface water discharges from construction sites,
- Enforcing established conditions of approvals and city code and engineering design standards,
- Public outreach to the development community,
- Reviewing and developing appropriate legal authorities associated with site development, and
- Ensuring city construction projects are in compliance with NPDES Permit requirements.

Field operations involve all activities related to the operation, maintenance and upkeep of public facilities and infrastructure. Many of these activities involve the use of water, chemicals, materials and waste products that could end up in the stormwater sewer system or in stormwater runoff if not properly managed through developing and implementing the measurable goals related to:

- Street, road, curb, gutter, and sidewalk maintenance and repair;
- Stormwater sewer system operation, maintenance and repair,
- Domestic water supply system operation, maintenance and repair,
- Sanitary sewer operation, maintenance and repair,
- Facility and public parking area operation, maintenance and repair,
- Public outreach to the commercial and retail community,
- Illicit connection and illegal discharge identification and elimination,
- Spill response and clean-up activities, and

## 3 Program Implementation

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- Corporation Yard operation and maintenance.

### 3.1.3 Community Development Department

The Community Development Department is involved in the land development, planning and regulatory inspection activities of the program. The Planning Division's land use and planning activities play a key role in the city's policy for future land development and use of permanent stormwater BMPs principally associated with waste handling facilities and spill prevention control measures. The Community Development Department will be involved in the development and implementation of measurable goals relating to:

- Land development application review and approval, establishing conditions of approval and CEQA mitigation measures,
- Developing, implementing, enforcing and revising land use ordinances, the General Plan, and city codes, ordinances and other authorities, and
- Construction site inspections.

### 3.1.4 Parks and Community Services Department

The Administrative Services, Public and city Facility Maintenance, Parks and Open Space, and Community Relations and Promotions divisions in the Parks and Community Services Department provide a number of services in the city. The department's Community Relations and Promotions division has developed a public education program that focuses on public outreach and promotion of the city's environmental programs. A number of brochures, newsletters and other outreach materials have been developed and with minor changes can also address stormwater quality. This division also operates the city's cable TV station. The city will consider using this medium for business & public education measures.

The Public and city Facility Maintenance division is responsible for the maintenance and upkeep for public and city facilities, parks and open spaces. They also perform routine maintain and minor repair of city equipment and vehicle fleet.

The Parks and Community Services Department will be involved in the development and implementation of measurable goals relating to:

- Operation, maintenance of public parks and open spaces,
- Fleet operation and maintenance,
- Public buildings and pool operation and maintenance,
- Vegetation management control,
- Operation and management of the city's cable TV station, and

## 3 Program Implementation

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- Implementing, maintaining and developing public education and outreach associated with city environmental policies.

### 3.1.5 Administrative Services Department

The Finance Division of the Administrative Services Department is responsible for issuing city business licenses and utility billings. These services may provide outreach opportunities for the SWMP. Coordination between the Finance Division, the SWMP Administrator and other city departments is important for program development and implementation.

### 3.1.6 Fire Department

The Fire Department responds to spills and releases of hazardous materials, reviews business emergency response plans, and inspects facilities/businesses in the city. The city will explore the opportunity of incorporating SWMP compliance inspections into the Fire Department inspection process. Inspection reports, business plans or other documents maintained by the Fire Department may provide useful information for the Commercial and Industrial and Public Education program elements. Coordination between the Fire Department and the SWMP Administrator is important to ensure exchange of information occurs.

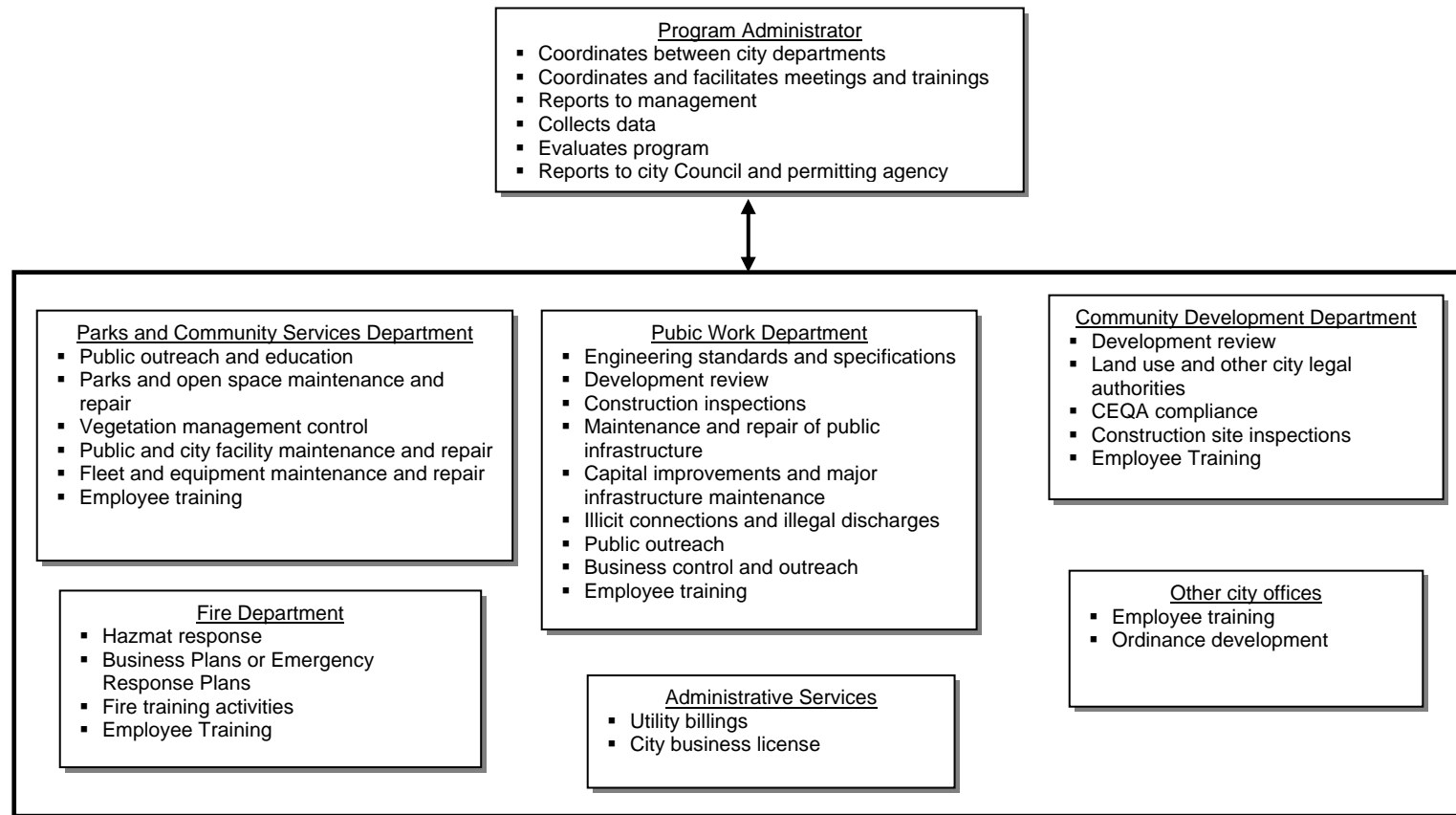
The Fire Department also conducts fire-training activities and other non-emergency activities that result in non-stormwater discharges. The Department is responsible for managing these flows to minimize the discharge to the stormwater sewer system during non-emergency activities.

Figure 3 illustrates the city departments and key activities related to the SWMP. Figure 4 illustrates the departments involved by program element.

### 3 Program Implementation

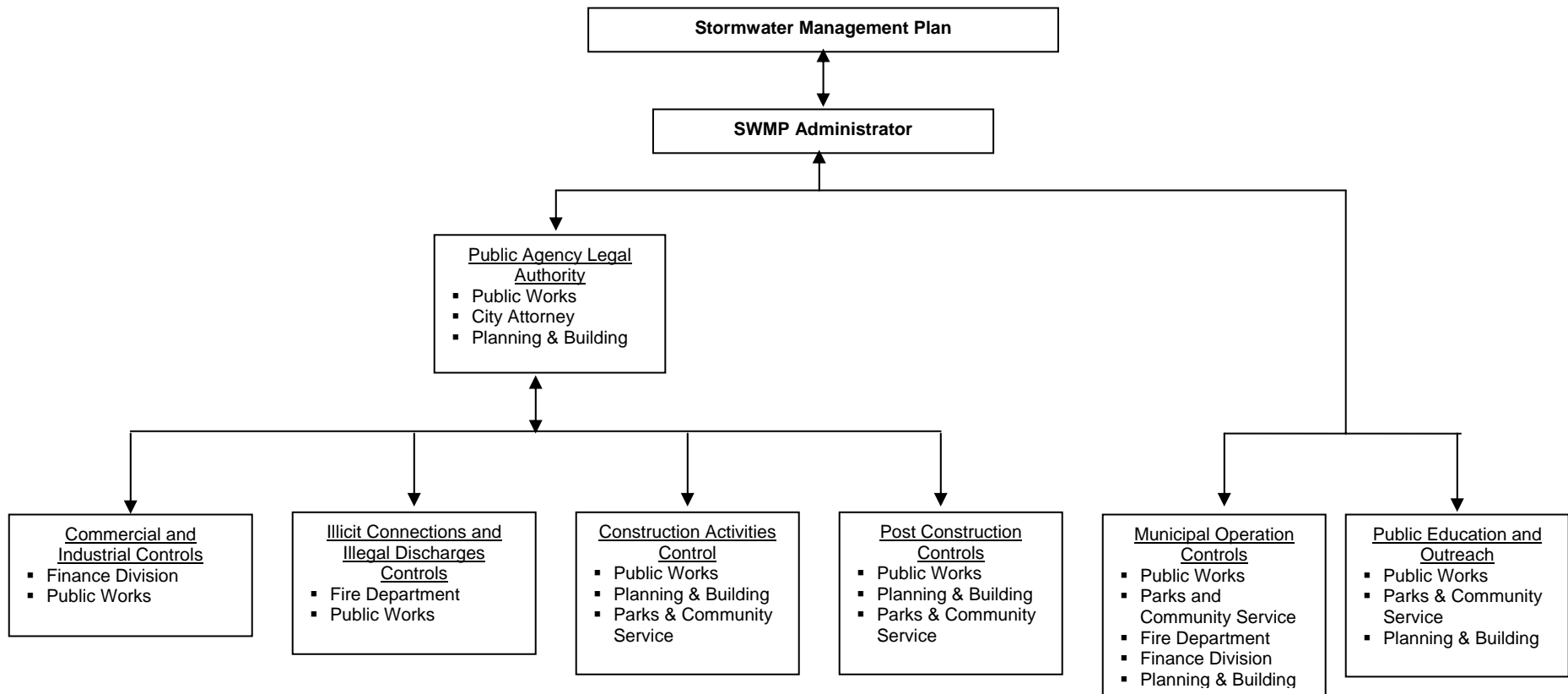
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Figure 3. Stormwater Management Activities by Responsible Department



### 3 Program Implementation

Figure 4. Program Management Illustration Responsible Departments by Program Element



## **3 Program Implementation**

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### **3.2 Program Staffing Resources and Funding**

SWMP control measures will be incorporated into existing work activities or built from existing resources as much as reasonably possible. The degree to which the program may impact resources varies depending on the control measure and current activities of each department. Some control measures may require nothing more than a change in how a form is completed or how a site is inspected, or may require additional time for an employee to review plans or conduct site inspections.

Incorporating control measures and associated BMPs into existing resources and activities is the most cost-effective approach the city could pursue. Tasks will be included in the SWMP to develop and implement a process to incorporate SWMP activities into the city's daily functions. The process will be evaluated to determine if additional resources are necessary to adequately implement the SWMP.

### **3.3 Funding**

Funding issues have been reviewed during the preparation of this document. The general fund, stormwater sewerage impact fees, related capital improvement permit fees, and funds associated with a special assessment district and utility, permit, and assessment district fees fund current activities related to storm water management.

### **3.4 Collaboration with Other Local Agencies**

The city interacts and overlaps with several other local agencies in activities related to stormwater management. The following agencies and pertinent responsibilities have been identified:

- Agricultural Commissioner (Yolo County) – Enforce pesticide regulations, inspect permittees, conduct workshops and mails informational letters to permittees.
- University of California Cooperative Extension Farm Advisor (Yolo County) – research alternatives to pesticides and Integrated Pest Management techniques, provides information learned through newsletters and workshops.
- Yolo County Department of Public Health – enforce environmental health laws in areas of food regulation, small drinking water systems, septic systems, bacteria and pest control advice, environmental documents (NEPA, CEQA) review, and solid and toxic waste.
- Yolo County District Attorney's Office – prosecute environmental crimes.
- Yolo County Landfill – recycling programs, curbside collection of yard wastes, toxic waste collection days.

### 3 Program Implementation

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- Yolo County Communications - Emergency Service Agency – maintains hazardous materials inventory and provides informational packets.
- Yolo-Solano Air Quality Management District – determines emission limits and regulatory requirements for criteria air pollutants.

In addition to the city's individual activities, staff participates in a countywide stormwater manager's group to discuss collaborative opportunities such as developing a countywide outreach message. The group also shares information on common issues such as funding sources, implementation tools, program approval and implementation status, and standards.