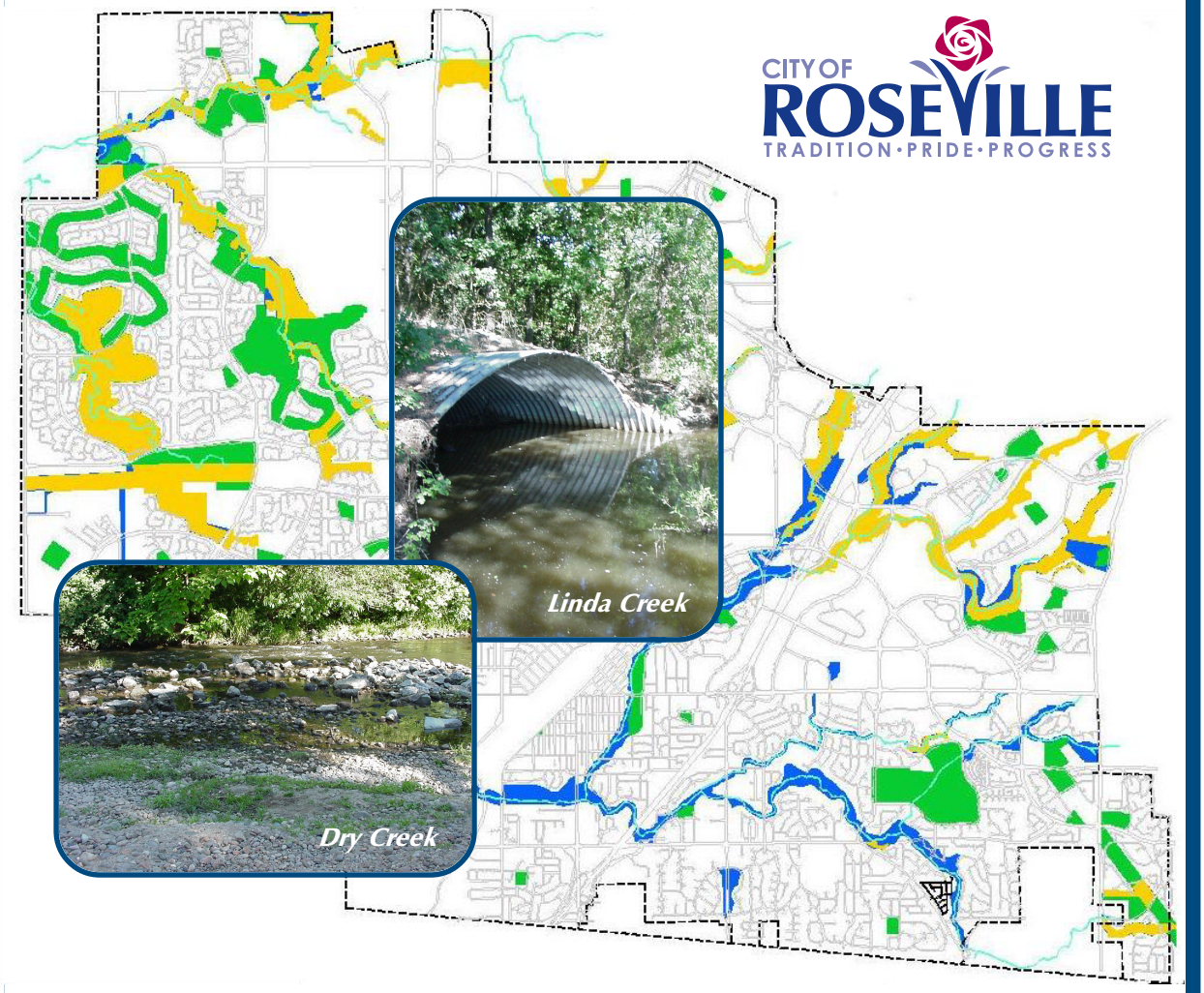
Stormwater Management Program



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Section 1: Introduction

This document represents the City of Roseville's Stormwater Management Program (SWMP). The SWMP outlines a comprehensive set of priorities, activities, and strategies that constitute the City's Minimum Control Measures (MCMs) and Best Management Practices (BMPs), which are believed to reduce pollutants in stormwater to the Maximum Extent Practicable (MEP). The SWMP was completed under consideration of guidance from a Citizen's Advisory Committee (CAC), as well as input and direction of City staff.

1.1 City of Roseville Background

The City of Roseville (City) is contained within Placer County whose total population is approximately 264,900 and is adjacent to Sacramento County in California. The regional urbanized area is shown on Figure 1. Roseville's population was 85,533 as of 1 January 2002. This represents an approximate reduction of 1,000 from the previous year estimate by the State Department of Finance. However, the City population has increased by an average of 3,275 persons per year since 1992 for a growth rate of approximately 5.8%. It is currently projected that Roseville will have a population of approximately 110,000 by 2010 reflecting build-out of all currently entitled residential property. Land uses vary and include residential, commercial, and industrial uses. The City of Roseville's urbanized area, as defined by the 2000 census, is shown on Figure 2. Although the urbanized area does not cover the entire City limits, the City intends to implement this program within the entire City limits.

1.2 Purpose of the Program

Under the State implementation of the Federal Environmental Protection Agency (EPA) promulgated National Pollutant Discharge Elimination System – Regulations for Revisions of the Water Pollution Control Program Addressing Stormwater Discharges Final Rule (EPA Final Rule), the City must apply for coverage under the Stormwater Discharges from Small Municipal Storm Sewer Systems General Permit (General Permit) by 10 March 2003.

1.3 Regulatory History

The Federal regulations that require the City to undertake this program come out of the Clean Water Act (CWA). In 1972, CWA amendments prohibited discharges of pollutants from point sources and later, 1987 amendments defined stormwater as point sources. As a result, EPA promulgated regulations in two phases: Phase I in 1990 and Phase II in 1999. For municipalities, Phase I covered Municipal Separate Storm Sewer Systems (MS4s) operated by municipalities exceeding a population of 100,000. The Phase II regulations generally apply to small MS4s below 100,000 population or those not covered by Phase I, such as the City of Roseville.

The State of California has elected to implement these regulations through the issuance of a statewide general permit (Stormwater Discharges from Small Municipal Storm Sewer Systems General Permit).

1.4 Regulatory Requirements

The requirements of the CWA, the terms, conditions, and provisions in the General Permit, and the RWQCB enforcement policy implementation are the primary drivers of the regulatory requirements. Regulatory requirements are also related to the standards that will be applied in determining compliance. In the case of Phase II municipalities, the "maximum extent practicable" standard will govern the program approach.

Under the current regulatory framework, the City must apply for coverage under a General Permit, although this is subject to State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board, Central Valley Region (RWQCB), implementation. The City must apply for coverage under the General Permit by 10 March 2003 through a Notice of Intent (NOI). With its NOI, the City must develop and submit a SWMP describing the City's program.

The permit requires the City to address six Minimum Control Measures and describe the Best Management Practices to be implemented that address the MCMs in the SWMP. The permit also requires the SWMP to establish measurable goals to be achieved and a schedule of implementation. The City has five years to fully implement the SWMP.

Adoption of the Stormwater Management Program by the City Council is exempt from CEQA under the Porter Cologne Water Quality Control Act.

The RWQCB has expressed that expectation will be high for the City of Roseville due to its population, growth rate and resources.

1.5 Program Benefits

Clean water is a desirable and beneficial resource of the community. Clean water is necessary to maintain recreational activities, habitat preservation, and community aesthetics. Stormwater quality is suspected to be a contributing source of unnecessary pollutant loading into receiving waters, such as the City's creeks. If not addressed, stormwater pollutants may negatively impact the community and its resources.

Through effective implementation of this SWMP, the City believes pollutant loading will be reduced to the MEP and our creeks will be cleaner. Clean water will enhance the quality of life by improving aesthetics and reducing potential risks associated with water quality.

Section 2: Program Overview

A critical component to development of the SWMP was an effective and comprehensive public involvement and education process. City staff recognizes that many individuals, organizations and agencies need to work closely with the City to help ensure that the final implementation is one that is supported by the community and mitigates concerns and impacts.

As part of the SWMP development, the City maintained communications with key decision-makers, stakeholders and impacted audiences who sought to participate through a Citizens' Advisory Committee. Various community members, such as residents, community leaders, business owners and business associations, educational institutions, and environmental groups were included on the CAC and attended a series of CAC meetings. The CAC was educated about stormwater pollution and provided input into prevention practices that are effective. The City believes that the CAC process will help highlight the benefits of this program.

2.1 Program Strategy

In consideration of CAC guidance, the SWMP was developed with specific criteria. The criteria are listed below in order of CAC priority:

- Economic impact;
- Reasonableness and incremental approach;
- Partnering, consistency, and adopting proven approaches of nearby jurisdictions;
- Impact to the environment;
- Ease of compliance;
- Flexibility;
- Measurability; and
- Capacity to communicate.

The BMPs that describe implementation of the MCMs were developed and selected with these criteria in mind. In addition, the BMPs were selected to reflect compliance with the General Permit requirements and to reflect the MEP standard for the City.

Within the MCMs, the SWMP adopts early implementation of BMPs in which elements and resources are already in place and of BMPs that target a high priority MCM, such as the Construction Site Runoff MCM. BMPs that require a more long-term strategy are further developed in early years, but allowed more time to implement. A five-year implementation schedule was developed for each BMP. The years of the SWMP are based on a fiscal year calendar beginning on July 1, 2003 and ending on June 30, 2004. The five-year implementation schedule found in Section 4 is color coded to indicate the proposed timing of BMP

implementation. White squares represent years in which BMP has not begun. Black squares denote the year in which a BMP will be initiated while the gray squares signify on-going BMP implementation.

The CAC transmitted the Draft Roseville SWMP to the City Council, with the following recommendations.

Recommendation 1

"The Stormwater Management Citizen's Advisory Committee recommends the Council adopt the Draft Roseville SWMP and submit the Program to the Regional Water Quality Control Board in compliance with the Small MS4 General Permit."

Recommendation 2

"The Stormwater Management Citizen's Advisory Committee recommends that continued public participation and input be provided in implementation of the program and in establishment of new or expanded fees. The public input may be in the form of workshops, Citizen's Advisory Committees, and other venues."

2.2 Program Scope

The program scope is characterized by the MCMs contained in the General Permit. Those MCMs include:

- Public outreach;
- Public involvement;
- Illicit discharge detection and elimination;
- Construction site runoff;
- New development and redevelopment; and
- Municipal operations.

2.2.1 Minimum Control Measures

2.2.1.1 Public Outreach

The City believes that an effective Public Outreach MCM is based on the proposition that an informed and knowledgeable community is more likely to support the SWMP and increase the overall level of compliance with the SWMP provisions. The City will implement the Public Outreach MCM with focus the following general areas.

- Forming partnerships;
- Educational materials and strategies; and

- Reaching diverse audiences.

One of the principles guiding the approach is to use existing resources, programs, and materials available from Phase I Municipalities and other entities. With this in mind, the approach is to encourage the formation of partnerships focusing on those programs near and similar to the City. Building on these partnerships, the City will leverage opportunities to use already available and proven educational materials and strategies. Some typical types of outreach to be used by the City include a stormwater hotline, website, utility inserts, storm drain stenciling, participation in community events, and targeted business/industrial/construction workshops and/or materials.

Diverse audiences, such as residents, children, industries, businesses, construction professionals, multi-cultural audiences, community groups, and municipal personnel will be targeted. The target audiences will be prioritized by relevancy to potential stormwater quality improvement.

2.2.1.2 Public Involvement

The Public Involvement Program MCM is important because it fosters public acceptance and ownership. Types of activities that establish an effective Public Involvement MCM for the City of Roseville include:

- Public meetings and presentations;
- Stakeholder (industry, environmental, watershed, etc) groups;
- An interactive website; and
- Storm drain labeling.

The SWMP allows a great deal of flexibility in satisfying this MCM, and this MCM is closely related to the Public Outreach MCM. Similar to the approach in the Public Outreach MCM, the SWMP leverages opportunities to use already available materials, venues and strategies and develops new materials, venues and strategies as appropriate and consistent with program goals.

2.2.1.3 Illicit Discharge Detection and Elimination

The Illicit Discharge Detection and Elimination (IDDE) MCM for the City of Roseville includes measures to control illicit discharges, prevent improper disposal of wastes, and contain and clean up spills that threaten stormwater quality. Typical sources of illicit discharges that the program is designed to control include:

- Sanitary wastewater;
- Commercial car wash discharges;
- Improper oil or toxic disposal;
- Radiator flushing;

- Unauthorized Industrial discharges; and
- Chemical spills.

Elements included in the MCM to control these discharges include:

- A storm system map;
- A prohibition on non-stormwater discharges;
- A plan to detect non-stormwater discharges;
- A plan to address non-stormwater discharges; and
- Education on illegal discharges and improper disposal.

The MCM differentiates between authorized and unauthorized discharges.

The plan to detect and address non-stormwater discharges is developed in consideration of the staff and resources available. In general, however, it includes elements to identify problems, locate sources, take corrective action, and provide documentation.

The education elements needed under this program are closely related to the Public Outreach MCM.

2.2.1.4 Construction Site Runoff

The City will implement and enforce a program to reduce pollutants in stormwater runoff from construction sites greater than one acre. This MCM will have a high priority given the level of construction activities occurring within the City. The MCM includes elements that provide for:

- A regulatory mechanism;
- Review of site/construction plans;
- Site inspection;
- Enforcement;
- Sanctions to ensure compliance; and
- Public information, follow-up, and response.

In consideration of these elements, the City will review and revise existing ordinances and create a new ordinance consistent with the SWMP. The City will also coordinate construction community education and outreach with the Public Outreach Program MCM, adjust the City's plan review process to ensure that stormwater runoff issues are addressed, and develop a streamlined inspection, enforcement and documentation strategy.

2.2.1.5 New Development and Redevelopment

The City includes as part of the overall program, a New Development and Redevelopment MCM for post-construction controls. The MCM will include Post-Construction BMPs that will address both the quality and the quantity issues associated with new development. This MCM will be further developed in coordination with the City's existing improvement and construction standards during the permit term. In addition, it is recognized that the City has existing development agreements already in place. The MCM will differentiate between these existing agreements and the changes in the approach going forward. In general, the MCM elements will provide for:

- A regulatory mechanism;
- Structural and non-structural control strategies; and
- Long-term operation and maintenance of controls.

Non-structural BMPs will include consideration of planning procedures and will include site-based local controls options. Development of structural BMPs will include consideration of storage strategies, infiltration practices, soil conditions, and vegetative features.

2.2.1.6 Municipal Operations

The City already has many elements of a good Municipal Operations MCM in place. The MCM will provide measures to further reduce pollutants in stormwater runoff from the City's municipal operations. The MCM includes:

- An operation and maintenance program designed to reduce pollutants in stormwater runoff;
- A municipal operations source-control program; and
- Provisions for employee training on pollution prevention and good housekeeping.

The program further develops these elements, coordinating with City staff from various departments, and includes appropriate controls to address the specific needs and characteristics of the City's municipal operations.

As part of this effort, the City is preparing Standard Operational Procedures (SOPs) for guidance of City staff. The SOPs will provide BMPs that can be implemented within the City municipal operations context to reduce pollutants in stormwater. The SOPs will be updated as BMPs change or improve.

2.2.2 Reporting Requirements

The General Permit requires that the City submit annual reports to the RWQCB by September 15th of each year beginning September 15, 2004. The report will summarize the activities performed throughout the reporting period (July 1 through June 30) and must include:

a. The status of compliance with the permit conditions;

b. An assessment of the appropriateness and effectiveness of the identified BMPs;

c. Status of the identified measurable goals;

d. Results of information collected and analyzed, including monitoring data, if any during the reporting period;

e. A summary of the stormwater activities the City plans to undertake during the next reporting cycle;

f. Any proposed change(s) to the SWMP along with a justification of why the change(s) are necessary; and

g. A change in the person or persons implementing and coordinating the SWMP.

The City must keep records required by the General Permit for at least five years of the duration of the General Permit if it is continued. Additionally, the City must submit any and all records to the RWQCB upon request and must make these records, including the permit and the SWMP, available to the public during regular business hours.

2.2.3 Responsible Persons

The General Permit requires the SWMP identify the persons responsible for implementing or coordinating each of the Minimum Control Measures. Table 2 provides a listing of primary and secondary staff, where appropriate, who have been assigned to oversee each of the Minimum Control Measures.

Kelye McKinney, Environmental Engineering Manager, has been assigned the primary responsibility of overseeing the implementation of the City's SWMP. Secondary staff is assigned to each MCM as listed in Table 2 at the end of this report.

3.1 Public Outreach

3.1.1 Description

The Public Outreach Program is intended to provide information to the public on the impacts of stormwater discharges on water bodies and the steps the public can take to reduce pollutants in stormwater runoff. The general public outreach program will be developed in two phases: first, utilizing existing outreach programs and mediums, and then expanding the outreach based on development of a long-range strategy. Finally, a specific outreach effort is utilized to reach construction and development industry professionals to assist them in complying with the Construction Site Runoff and New Development and Redevelopment programs.

3.1.2 Best Management Practices

PO-1 Early Implementation

An Early Implementation program builds on the existing outreach activities of the City of Roseville by adding stormwater messages to those efforts. Stormwater messages will be added to the Water Conservation, Household Hazardous Waste, Used Oil Drop-off, Compost Bin, Dog Park, Creek Week, Fire Department Inspection and Neighborhood Services Programs, utilizing their existing mediums for disseminating information. Early Implementation also utilizes two grant-funded activities to address stormwater: the construction of two signs at Mahany Park, a highly used regional park, and preparation of a creek side landowner's guide. The City's web page will provide stormwater information. Storm drain stencils caution the public not to discharge pollutants to the drainage system.

PO-2 Strategic Program

Recognizing that additional efforts could be duplicative of Sacramento outreach, be targeted to the wrong audience, and/or utilize an ineffective medium and thus be an inefficient use of City funds, the City will develop a long-range, strategic outreach program based on a community survey. The City will seek partnerships with adjacent communities and utilize already developed materials wherever possible. The Strategic Program will also address the need for targeted outreach, e.g., to business owners.

PO-3 Construction, New Development, and Redevelopment Outreach

Construction, New Development and Redevelopment Outreach is intended to provide information to contractors, project designers, developers and other interested parties during development of these programs, as well as provide technical assistance when program changes are adopted. The BMP includes workshops for each program during program development and annual training workshops to assist design and construction professionals in complying with the requirements of the program.

3.1.3 Public Outreach Fact Sheets

PUBLIC OUTREACH (PO)

Description: The Public Outreach element is intended to conduct outreach activities about the impacts of stormwater discharges on water bodies and the steps that the public can take to reduce pollutants in stormwater runoff. It includes early implementation activities, a long-term strategic outreach program and outreach to those affected by the Construction Site Runoff, Post-Construction Runoff and Illicit Discharge Detection and Elimination Programs.

PO BEST MANAGEMENT PRACTICES

1. **Early Implementation Program**
   Add stormwater information to existing outreach programs and utilize their existing mediums for disseminating information.
2. **Strategic Outreach Program**
   Develop targeted new efforts for outreach based on community survey and potential partnerships.
3. **Construction, New Development and Redevelopment Outreach**
   Conduct outreach to construction professionals and other interested parties during development of Construction Site Runoff and New Development/ Redevelopment programs.
   Provide training to City staff and construction professionals on adopted program.

BMP		Implementing Departments	
		Lead	Cooperating
1. Early Implementation Program		EU	PW - Engineering and Streets; P&R; CDD; Fire; PI; ECS; IT
2. Strategic Program		EU	
3. Construction Outreach		EU/PW	PI; IT; Fire; ECS Planning; CDD

Five-Year Implementation Schedule

Public Outreach (PO)	2003/4	2004/5	2005/6	2006/7	2007/8
PO-1 Early Implementation Plan	■				
PO-2 Strategic Program		■			
PO-3 Construction Outreach	■				
Full Implementation					■

PO-1
Early Implementation Program

Detailed Description:
Include stormwater information in appropriate existing outreach programs:

a. Include articles on stormwater impacts and new Phase II program in Roseville Reflections and Environmental Utilities newsletter;
b. Add stormwater specific information to Water Conservation, Household Hazardous Waste, Used Oil Drop-Off, Compost Bin, Dog Park, Creek Week, Fire Department Inspection and Neighborhood Services Programs and utilize their existing mediums for disseminating information;
c. Utilize available educational signs at Mahany Park for stormwater information;
d. Develop and implement creek side landowner education through Roseville Creeks' Management Plan;
e. Expand City Stormwater web page; and
f. Implement storm drain labeling through Construction Standards for new development and citizen volunteers for existing development.

Measurable Goals

Milestones

1. New stormwater content.
2. Two signs constructed.
3. Landowner education materials complete.

Ongoing

1. Three materials amended or created each year.
2. Two articles in EU newsletter and/or Roseville Reflections/yr.
3. Two mailings/yr.
4. Three community events/yr.
5. 100% new storm drains stamped.
6. 200 storm drains labeled/yr.

Goal:
Distribute information efficiently and cost-effectively using existing programs.

Implementing Departments:
Environmental Utilities will provide stormwater information to City departments that implement the outreach programs described at left:

EU – Water Conservation
EU – Solid Waste
Parks and Recreation
Community Development
Fire Department
Economic and Community Services
Information Technology
Public Works – Streets
Public Works – Engineering
Public Information

Dependencies/Coordination:
No other BMPs must be developed in order for PO-1 to be implemented. This BMP will be modified once PO–2 is completed (Strategic Outreach Program).

Implementation:

1. Develop new stormwater outreach materials and existing materials.
2. Disseminate through existing programs.
3. Include stormwater content on website.
4. Develop and construct two educational signs at Mahany Park.
5. Develop and implement creek side landowner education.
6. Stamp new storms drains and stencil or label existing storm drains.

PO-2
Strategic Outreach Program

Detailed Description:
Develop a focused, strategic program to educate the community on the impacts of stormwater and the steps people can take to reduce pollutants in stormwater. The program includes:

a. Working to develop partnerships with neighboring communities;
b. Evaluating through a survey the level of knowledge about stormwater in the community and how the community obtains knowledge about such issues;
c. Identifying needs for general stormwater information;
d. Identifying target audiences (e.g., industry, businesses and minority communities) and specific messages and appropriate mediums to reach those audiences; and
e. Updating the SWMP Public Outreach program to reflect the activities identified under c. and d.

Measurable Goals

Milestones

1. Scoping meeting with adjacent jurisdictions.
2. Community Survey.
3. Adopted Strategic Program.
4. Updated SWMP PO program.

Ongoing

1. Follow-up meetings with adjacent jurisdictions; number set based on scooping.
2. Outreach activities to be specified in strategy; measurable goals to be included in SWMP update.

Goal:
Develop a cost-effective outreach program that capitalizes on existing knowledge in the community and that utilizes "piggybacking" and partnering to the greatest degree possible.

Implementing Departments:
Environmental Utilities will initiate program development and will implement the adopted activities. Cooperating departments:

Public Information
Information Technology
Fire Department
Economic and Community Services

Dependencies/Coordination:
No other BMPs must be developed in order for PO-2 to be implemented. PO-1 will be modified once this program is completed.

Implementation:

1. Investigate potential partnering with Sacramento and adjacent jurisdictions.
2. Conduct community survey to assess level of knowledge and effectiveness of mediums.
3. Adopt a strategy that identifies key messages, target audiences and mediums.
4. Utilize already developed materials to implement adopted strategy wherever possible.
5. Update SWMP PO program.
6. Implement Strategic Outreach through EU.

PO-3
Construction, New Development and Redevelopment Outreach

Detailed Description:

a. Conduct six half-day workshops during CSR and ND program development (three per program) and post draft documents and workshop information on the website; and
b. Conduct annual training workshops for construction industry professionals on the adopted/revised ordinances and updated Construction Standards and Improvement Standards.

Goal:

Incorporate contractors, project designers, developers and other interested parties in CSR and ND program development to develop BMPs consistent with community goals, and provide technical assistance to these parties to assist in complying with requirements of adopted program.

Measurable Goals

Milestones

1. Conduct three workshops on CSR program development.
2. Conduct three workshops on ND program development.

Ongoing

1. Conduct annual CSR training workshop once program development is complete.
2. Conduct annual ND training workshop once program development is complete.

Implementing Departments:

Environmental Utilities will ensure outreach to construction professionals during program development and cooperate with Public Works - Engineering Division on training.
Public Works – Engineering Division will take the lead for training construction professionals.
Cooperating departments:

Planning
Community Development

Dependencies/Coordination:

The outreach component of this BMP will be implemented during CSR-6 and ND-5. Once CSR-6 and ND-5 are complete, the training component of PO–3 will be implemented.

Implementation:

1. Develop list of interested parties for CSR and ND programs.
2. Post notices of workshops on website and mail/e-mail notice to interested parties list.
3. Conduct three half-day CSR and three half-day ND workshops during program development.
4. Post draft documents and workshop materials on website and solicit comments.
5. Conduct annual half-day training workshop each for CSR and ND program.

3.2 Public Involvement

3.2.1 Description

The Public Involvement Program is intended to engage the community of Roseville in stormwater management. The City will use a variety of approaches to include the community in the development and implementation of its program, including a Stormwater website, participation in watershed management, updates to public bodies and a storm drain labeling program.

3.2.2 Best Management Practices

PI-1 Website

The City will use a website not only to provide information to the public, but also to solicit input from the community on its stormwater program. Draft documents will be posted and comments accepted on the website. It will also include an e-mail link for submitting comments on any aspect of the program, including public reporting of suspected discharges in violation of the City's regulatory stormwater programs.

PI-2 Watershed Management

There are several ongoing watershed management efforts occurring within the City's boundaries, including, the Dry Creek Coordinated Resource Management Plan, the Pleasant Grove Creek Coordinated Resource Management Plan. Both of these plans are being developed by Placer County. Coordination for watershed plan development occurs through the Dry Creek Watershed Counsel (DCWC). The City is a member of the DCWC, which meets monthly and provides a public forum for discussion of stakeholder issues and values. The City will also prepare a Citywide Creek and Riparian Management and Restoration Plan, which will focus on more urban watershed management issues unique to the City. The City will actively participate in meetings of these groups, and will use these forums to promote stormwater quality protection by co-sponsoring efforts such as Creek Week cleanups, citizen monitoring and Adopt-a-Stream efforts.

PI-3 Public Body Updates

The City will provide periodic updates during Public Utilities Commission, Planning Commission and City Council meetings, including opportunities for public comment to inform the public of the activities being conducted under the Roseville SWMP and to allow public input on those activities.

PI-4 Storm Drain Labeling

The City will label or stencil storm drains in areas of existing development using community groups, thus providing an opportunity for Roseville citizens to assist in public outreach on illicit discharges.

3.2.3 Public Participation Fact Sheets

PUBLIC INVOLVEMENT (PI)

Description: The Public Involvement Program utilizes a variety of approaches for including the community in the development and implementation of its program, including a Stormwater website, participation in watershed management, updates to public bodies and a storm drain labeling program.

PI BEST MANAGEMENT PRACTICES

1. **Website**
   Establish and/or update Roseville Stormwater website to solicit public involvement in program development, public reporting and technical assistance.

2. **Watershed Management**
   Participate in the Dry Creek Watershed Council and efforts to establish Pleasant Grove Creek Coordinated Resource Management Program.

3. **Public Body Updates**
   Provide periodic updates to Public Utilities Commission and City Council on stormwater program development and implementation.

4. **Storm Drain Labeling**
   Coordinate citizen groups in labeling storm drain inlets in areas of existing development.

BMP		Implementing Departments	
		Lead	Cooperating
1. Website		EU	IT, PW
2. Watershed Management		CDD	EU, PW
3. Public Body Updates		EU	PW, Planning
4. Storm Drain Labeling		PW	EU

FIVE-YEAR IMPLEMENTATION SCHEDULE

Public Involvement (PI)	2003/4	2004/5	2005/6	2006/7	2007/8
PI-1 Website	■				
PI-2 Watershed Management		■			
PI-3 Public Body Updates	■				
PI-4 Storm Drain Labeling		■			
Full Implementation					■

PI–1
Website

Detailed Description:
Establish a Stormwater web page on the City of Roseville site to:

a. Post information on program development and ongoing implementation;
b. Provide for submittal of e-mails concerning any aspect of the program, including reporting suspected violations of the City's regulatory stormwater programs; and
c. Provide technical assistance for compliance with the City's stormwater program.

Measurable Goals

Milestones	Ongoing
1. Website in place. 2. Technical assistance documents posted.	1. Website updated four times/year.

Goal:
Provide information to the public and opportunities to comment on program development and implementation.

Implementing Departments:
Environmental Utilities would produce the information needed for the website, post updates and screen and respond to comments either directly or by referring to other appropriate City departments. Information Technology would assist with website development and maintenance. Public Works would provide information related to ND and CSR programs and would respond to reports of construction site violations. Fire Department staff would respond to reports of illicit discharges.

Dependencies/Coordination:
PI–1 can be established immediately for program information and public reporting. Technical assistance materials will be posted as they are developed (e.g., CSR- 6, DR-5, IDDE-5).

Implementation:

1. Add Stormwater page to City website to describe new program.
2. Establish link for submitting comments to City.
3. Establish link for reporting construction site violations and illicit discharges.
4. Post documents and other relevant information as they are developed.

PI–2
Watershed Management

Detailed Description:

a. Attend meetings of Dry Creek Watershed Council (DCWC);
b. Support efforts to establish a Coordinated Resource Management Plan for the Pleasant Grove Creek watershed (PG CRMP);
c. Develop a Citywide Creek and Riparian Management and Restoration Plan; and
d. Support creek clean up, citizen monitoring and Adopt-a-Stream program.

Measurable Goals

Milestones	Ongoing
N/A	1. Two DCWC meetings per year. 2. Two PG CRMP meetings per year once established.

Goal:

To assist existing watershed organizations in implementing activities that will improve water quality in Roseville creeks and to support establishment of a Coordinated Resource Management Plan process for Pleasant Grove Creek.

Implementing Departments:

Community Development will take the lead for attending the Conservancy meetings and participating in the CRMPs. EU will provide additional support.

Dependencies/Coordination:

No other BMP is necessary for implementation of PI–2.

Implementation:

1. Attend watershed group meetings for the Dry Creek and Pleasant Grove Creek watersheds.
2. Provide meeting space for organizations if requested.
3. Co-sponsor Creek Week stream cleanups.
4. Co-sponsor citizen monitoring efforts.
5. Co-sponsor Adopt-a-Stream program.

PI–3
Public Body Updates

Detailed Description:
Provide periodic updates during Public Utilities Commission and City Council meetings including opportunities for public comment.

Goal:
To inform the public of the activities being conducted under the Roseville SWMP and to allow public input on those activities.

Implementing Departments:
Environmental Utilities will be lead for reporting to the public bodies. Public Works will provide information on ND and CSR programs.

Measurable Goals

Milestones	Ongoing
N/A	1. Four updates/year.

Dependencies/Coordination:
The periodic updates are not contingent on the implementation of any other BMP, but the content of the reports will address the status of the BMPs in the SWMP.

Implementation:
1. Agendize report.
2. Conduct hearings as necessary.
3. Include time for public comment.

PI–4
Storm Drain Labeling

Detailed Description:
Label or stencil storm drains in areas of existing development using community groups.

Goal:
Provide an opportunity for Roseville citizens and civic groups to assist in public outreach on illicit discharges.

Implementing Departments:
Public Works - Streets Division will coordinate the program. EU will support effort through Public Outreach materials.

Dependencies/Coordination:
No other BMPs are related to PI–4.

Measurable Goals

Milestones	Ongoing
1. Label vs. stencil evaluation complete.	1. 200 storm drains stenciled or labeled/year.

Implementation:
1. Evaluate labels as compared to stencils for cost, potential for vandalism and longevity.
2. Identify areas to be stenciled or labeled.
3. Recruit community groups through Public Outreach efforts.
4. Provide materials to community groups.
5. Track storm drains completed.

3.3 Illicit Discharge Detection and Elimination

3.3.1 Description

The purpose of the Illicit Discharge Detection and Elimination (IDDE) MCM is to identify and eliminate illicit, or unapproved, discharges and connections to the Small Municipal Separate Storm Sewer Systems (MS4) that are not composed entirely of stormwater, except for discharges allowed under a National Pollutant Discharge Elimination System (NPDES) permit, authorized non-stormwater discharges. The City has evaluated the following categories of non stormwater discharges and has made the determination that they are not significant contributors to stormwater pollution in local waterways:

1.) water line flushing

2.) landscape irrigation;

3.) diverted stream flows

4.) rising ground waters

5.) uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)) to separate storm sewers;

6.) uncontaminated pumped ground water;

7.) discharges from potable water sources;

8.) foundation drains;

9.) air conditioning condensation;

10.) irrigation waters;

11.) springs;

12.) water from crawl space pumps;

13.) footing drains;

14.) lawn watering;

15.) individual residential car washing;

16.) flows from riparian habitats and wetlands; and

17.) dechlorinated swimming pool discharges

18.) or fire fighter flows.

An example of an illicit discharge is a leak from a failing septic system or the improper disposal of sewage from a recreational practice. Another example of an illicit disposal is an intentional or accidental spill of a non-stormwater waste, such as used oil, within the public right-of-way. These types of spills can potentially enter the storm drain system through inlets, catch basins, or manholes, either directly or indirectly, during a runoff event.

An illicit connection is defined as a man-made conveyance that is connected directly to the storm drain system without a permit and through which non-stormwater flows are discharged. Illicit connections may be intentional or unknown.

3.3.2 Best Management Practices

IDDE-1 Illicit/Non-Stormwater Discharge Detection

This BMP addresses detection and enforcement activities targeted towards commercial and industrial facilities, businesses, residential, construction sites, and municipal facilities. The goal is to detect illicit/non-stormwater discharges through a range of activities by City personnel and the public. This will include increasing public awareness of how to identify illicit and non-stormwater discharges.

There are several methods with which to monitor illicit connections and non-stormwater discharges. They include, industrial inspections, spill response programs, citizen reporting, a site plan or building plan review, specific training directed to discharge monitoring, dry weather monitoring, and septic programs.

Industrial Inspection: Use existing inspection programs and introduce one inspection entity to coordinate inspections so as not to be redundant with the number of inspections.

Spill Response: Coordinate the City's response programs with a stormwater program that monitors location, frequency, and number of spills.

Citizen Reporting: Expand City website and/or hotline to enable citizens to report observed illicit discharges and connections, as well as any non-stormwater discharges and odors.

Site Plan/Building Plan Review: Review plans to detect any potential illicit connections.

Train City Personnel to Observe and Report: Provide training for field personnel to observe illicit discharges/connections when performing normal duties in field.

Assess Dry Weather Flows: Perform dry weather season visual or chemical monitoring.

Currently, there are industrial discharge inspections performed by the EU-Waste Department. In addition, there are existing inspections performed by the Fire Department. A first tier of inspections will be provided by adding stormwater elements to the scopes of these existing inspections. A second tier of inspections will be provided by EU using more highly trained stormwater staff for high priority and problematic sites.

Record keeping and documentation to track discharges will be coordinated by EU. Modes for connection detection include field screening procedures for evidence of illicit discharges to

storm drains (e.g., inspection checklists, physical survey procedures, dry weather flow monitoring and sampling in response to complaints).

Preventing spills to the storm drain system is an ongoing process. Currently, there are several in-house response programs within each City department. The Fire Department responds to reported spills in streets and also regulates storage and disposal of hazardous waste. Monthly coordination meetings with the Fire Department, Environmental Utilities, Public Works, and Parks and Recreation Departments to coordinate and share information about recent incidents would assist with monitoring BMP performance. EU will provide a coordinator who will be responsible for coordination of reported spills and monitoring programs to track discharges and spills.

EU will also coordinate training for City personnel to detect illicit connections and discharges during routine inspections of streets, construction sites, building inspections, and other maintenance or inspection activities. Also, developing citizen awareness programs will assist educating citizens to be better able to report illicit discharges and connections.

IDDE-2 Address/Eliminate Illicit Connections and Non-Stormwater Discharges

Once an illicit connection or a non-stormwater discharge has been reported, steps need to be taken to properly evaluate the discharge or connection and to help prevent future incidents. The goal of this BMP is to address, or eliminate, illicit connections and non-stormwater discharges that are detected by:

1. Instituting policies and procedures for a consistent monitoring program to detect and eliminate illicit and non-stormwater discharges and connections;

2. Providing a means for technical guidance for staff on methods to identify illicit connections and discharges, and providing proper enforcement of infractions; and

3. Reducing incidents of illicit discharges by the general public by continuing spill response and cleanup activities.

Essentially there are two general activities to address and/or eliminate illicit connections and non-stormwater discharges detected in IDDE-1. The first is conducting interviews in conjunction with site inspections and testing of suspected sources. Second are the enforcement procedures to regulate the illicit connections and non-stormwater discharges. Provide City staff guidance, with respect to making qualified decisions related to discharges and connections when performing inspections. Define different levels of enforcement actions, from least severe to most severe, a warning letter, Notice of Violation (NOV), Cease and Desist (C&D), administrative fines, and even possible referral to DA when danger to environment is eminent.

Environmental Utilities will develop and coordinate responses to illicit connections and non-stormwater discharges. Once the policies and procedures are developed for the monitoring program, Public Works and the Fire Department will assist with the BMP.

IDDE-3 Storm Sewer System Map

The purpose of the storm sewer system map is to provide accurate location information to City personnel implementing aspects of the IDDE program. This includes identifying the location of outfalls in the City and to identify the names and locations of waters of the U.S. that receive discharges from those outfalls.

The City of Roseville has already compiled a storm sewer map with the names and locations of outfalls and the receiving waters. Over the course of the permit term, the City will continue to update this map and refine its accuracy. This activity will include, but is not limited to the incorporation of existing storm sewer maps into one map, and the continuation of the identification of the names and locations of new and previously unknown outfalls and their receiving waters. Mapping outfalls that receive, or discharge to, waters of the U.S. is an ongoing activity.

IDDE-4 Stormwater Ordinance

Roseville Municipal Code Section 14.12.025, Storm Drains, states that it is unlawful to discharge any illicit waste, discharge, or garbage into any storm drain. The Police Department already implements enforcement of this ordinance and coordinates with the Fire Department to respond to unauthorized discharges, spills, and connections. The existing ordinance will be used to create a new separate Stormwater Ordinance that effectively prohibits, through ordinance, non-stormwater discharges into the MS4 and implements appropriate enforcement procedures and actions.

Areas that need to be addressed in the new Stormwater Ordinance include, but are not limited to, a prohibition of discharges to storm drains other than stormwater or authorized non-stormwater, or a cross-reference to an existing discharge prohibition ordinance; prohibition against unauthorized connections to the storm drain system, with a requirement to eliminate or secure approval for any non-stormwater connection; right-of-access for inspections and monitoring of facilities suspected of illicit discharges and/or connections; cross-reference to the industrial and construction stormwater discharge regulation ordinances; requirements and procedures for notification of spill and emergency response; enforcement procedures (e.g., NOV, public nuisance, public hearing); and remedies (e.g., recovering the cost of abatement, and monetary penalties).

Environmental Utilities will develop the new ordinance. The Fire Department responds to calls and is assisted by the Public Works - Streets Division. Both the Police Department and City Attorney's office will help assist with the ordinance language.

IDDE-5 Utilize Existing Programs

Inform public employees, businesses, and general public of hazards associated with illicit discharges and improper disposal of waste.

Wherever possible, existing programs will be expanded to cover the new scope of services impacted by the new Phase II program. EU will provide stormwater information to City departments that implement the outreach activities. Outreach activities are discussed in detail in the Public Outreach MCM.

IDDE-6 Long-Term Outreach

The objective for the long-term outreach program is to develop cost-effective outreach activities that capitalizes on existing knowledge in the community and that utilizes “Piggybacking” and partnering to the greatest degree possible. This BMP addresses activities that develop a variety of educational products (e.g., displays, pamphlets), media outreach campaigns, and business outreach. Educational products are designed to address targeting messages to specific constituencies. This MCM also addresses potential pollution that can arise from activities around the home. Home and automobile maintenance chemicals and other polluting materials used around the home can pollute stormwater if used carelessly or if dumped into storm drains. Hazardous waste collection programs will help prevent discharge of maintenance chemicals to the storm drain system. Long-term outreach is discussed in detail in the Public Outreach MCM.

3.3.3 Illicit Discharge Detection and Elimination Fact Sheets

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

Description: The purpose of the IDDE MCM is to identify and eliminate illicit, or unapproved, discharges and connections to the Small Municipal Separate Storm Sewer Systems (MS4) that are not composed entirely of stormwater, except for discharges allowed under a National Pollutant Discharge Elimination System (NPDES) permit, authorized non-stormwater discharges or fire fighter flows.

IDDE BEST MANAGEMENT PRACTICES

1. Illicit/non-stormwater discharge detection.
2. Address and/or eliminate illicit connections and non-stormwater discharges.
3. Outfall and receiving water mapping.
4. Stormwater Ordinance.
5. Early implementation program utilizing existing programs.
6. Strategic program for long-term outreach.

BMP	Implementing Departments	
	Lead	Cooperating
1. Discharge detection	FD	EU-WWT, EU-Solid, PW-Insp
2. Address/eliminate illicit connections and non-stormwater discharges	EU	PW-Insp, PW-St, FD
3. Storm sewer system map	EU	PW-St, CDD, P&R
4. Stormwater Ordinance	EU	FD, PW-St, CA
5. Utilizing existing programs	EU	PW-Eng, P&R, CDD, PI, ECS, IT, PW-St, FD
6. Long-term outreach	EU/PW	Planning, IT, FD, ECS

Five-Year Implementation Schedule

Illicit Discharge Detection and Elimination (IDDE)	2003/4	2004/5	2005/6	2006/7	2007/8
IDDE-1 Discharge Detection	■				
IDDE-2 Illicit Connections/Non-Stormwater Discharges		■			
IDDE-3 Stormwater Sewer System Map					
IDDE-4 Stormwater Ordinance	■	■			
IDDE-5 Utilizing Existing Programs	■				
IDDE-6 Long-Term Outreach		■			
Full Implementation					■

IDDE–1
Illicit/Non-Stormwater Discharge Detection

Detailed Description:

Use several different activities to better monitor discharges.

a. Industrial Inspection: Use existing inspection programs and introduce one inspection entity to coordinate all inspections so as not to be redundant with the number of inspections;
b. Spill Response: Coordinate the City's response programs with stormwater program that monitors location, frequency, and number of spills;
c. Citizen Reporting: Expand City website and/or hotline to enable citizens to report observed illicit discharges and connections, as well as any non-stormwater discharges and odors;
d. Site Plan/Building Plan Review: Review all plans to detect any potential illicit connections;
e. Provide annual training to Streets, Water, Wastewater, Parks, Fire, Police, Utility Meter Readers and other personnel to observe and report illicit discharges/connections when performing normal duties in the field;
f. Assess Dry Weather Flows: Two full time equivalent staff from EU and/or Public Works will perform visual or chemical monitoring one day per month during the dry weather season (May-Oct); and

Goal:

To detect illicit/non-stormwater discharges by introducing activities to City personnel and the public. Also to increase public awareness.

Implementing Departments:

Environmental Utilities is currently implementing some management measures and partially implements others. Fire Department will expand existing inspection programs to include stormwater elements. EU will supplement the inspection program on a prioritized basis.

EU - Solid Waste
EU - Waste Water
PW – Inspection
Fire Department
Utility Meter Readers
Parks
Police

Dependencies/Coordination:

PO-1 and IDDE-5 will be developed together. IDDE-1, IDDE-2, IDDE-5 and PO-1 will be developed together.

Measurable Goals

Milestones

1. Develop education program
2. Annual inspector training and coordination
3. Coordinate spill response programs
4. Annual City personnel training

Ongoing

1. A minimum of 250 industrial, residential and business inspections per year
2. Monitor dry weather flow events one day per month
3. Respond to 100% of high priority citizen reports

Implementation:

1. Fire Department to expand existing inspection program to include stormwater elements.
2. Inspectors to coordinate and monitor inspection programs and supplemental inspections on a prioritized basis.
3. Develop City personnel training programs to detect illicit connections and discharges.
4. Develop citizen awareness programs.
5. Develop and implement IDDE inspection and referral procedures.
6. Develop tracking system for inspections.
7. Develop internal policies and procedures for addressing citizen e-mail and hotline reports.

IDDE–2
Address/Eliminate Illicit Connections and Non-Stormwater Discharges

Detailed Description:
Two general activities to address and/or eliminate illicit connections and non-stormwater discharges detected in IDDE–1.

a. Investigation Process: Conduct interviews, perform site inspections and testing of suspected sources; and
b. Enforcement Procedures: Provide City staff guidance, with respect to making qualified decisions, related to discharges and connections when performing inspections. Develop and implement different levels of enforcement actions: warning letter, NOV, C&D, administrative fines, and possible referral to DA.

Goal:
To address, or eliminate, illicit connections and non-stormwater discharges that are detected by:

1. Instituting policies and procedures for a consistent monitoring program to detect and eliminate illicit and non-stormwater discharges and connections.
2. Providing a means for technical guidance for staff on methods to identify illicit connections and discharges, and providing proper enforcement of infractions.
3. Reducing incidents of illicit discharges by the general public by improving spill response and cleanup activities.

Implementing Departments:
EU will develop and coordinate responses to illicit connections and non-stormwater discharges. Other agencies that will help assist are:

Public Works – Inspection
Public Works – Streets
Fire Department

Measurable Goals

Milestones

1. Create new policy and investigation and enforcement procedures to address illicit discharges/ connections
2. Conduct annual training for enforcement staff.

Ongoing

1. Track and report Investigations conducted
2. Track and report enforcement actions taken in compliance with new stormwater ordinance (refer to IDDE-4).

Implementation:

1. Develop policy to address illicit/non-stormwater discharges and connections.
2. Develop monitoring guidelines for inspection staff.
3. Develop existing spill response and remedial activities.
4. Develop tracking system for investigation and violations.

IDDE–3
Storm Sewer System Map

Detailed Description:
Update the City's existing storm sewer system map, showing the location of outfalls and the names and locations of waters of the U.S. that receive discharges from those outfalls.

Goal:
1. To refine by confirming and verifying the accuracy of the location of outfalls in the City and to identify names and locations of waters of the U.S. that receive discharges from those outfalls.

Implementing Departments:
EU will perform stormwater system mapping. Assistance provided by Public Works - Streets Division, Parks and CDD.

Dependencies/Coordination:
No other BMPs must be developed in order for IDDE-3 to be implemented.

Measurable Goals

Milestones
1. Incorporate existing maps into one map.
2. Refine and verify the names and locations of outfalls in City.
3. Annually submit copy of up-dated outfall map.

Ongoing
1. Refine and verify outfalls map.

Implementation:
1. Coordinate mapping program with mapping efforts undertaken by Dry Creek Conservancy.
2. Verify mapping accuracy through Streets and Parks personnel.

IDDE–4
Stormwater Ordinance

Detailed Description:
Develop new Stormwater Ordinance that is comprehensive, which includes the following:

a. Prohibition of discharges to storm drains other than stormwater or authorized non-stormwater, or a cross-reference to an existing discharge prohibition ordinance;
b. Prohibition against unauthorized connections to the storm drain system, with a requirement to eliminate or secure approval for any non-stormwater connection;
c. Right of access for inspections and monitoring of facilities suspected of illicit discharges and/or connections;
d. Cross-reference to the industrial and construction stormwater discharge regulation ordinances;
e. Requirements and procedures for notification of spill and emergency response;
f. Enforcement procedures (e.g., NOV, public nuisance, public hearing);
g. Remedies (e.g., recovering the cost of abatement, monetary penalties, and suspension of storm drain service).

Measurable Goals

Milestones	Ongoing
1. Develop ordinance.	1. Public awareness of City ordinance. 2. Enforcement actions.

Goal:
To effectively prohibit, through ordinance, non-stormwater discharges into the MS4 and implement appropriate enforcement procedures and actions.

Implementing Departments:
EU will develop the ordinance. Fire Department responds to calls and is assisted by Public Works - Streets Division and EU. Police Department and City Attorney will help assist with the language.

Dependencies/Coordination:
No other BMPs must be developed in order for IDDE-4 to be implemented.

Implementation:
1. Develop stormwater language.
2. Use existing Municipal Code Section 14.12.025 as template.
3. Expand new ordinance to be all encompassing.
4. Develop enforcement procedures.

IDDE–5
Utilize Existing Programs

Detailed Description:
Include stormwater information in appropriate existing outreach programs.

a. Include articles on stormwater impacts and new Phase II program in Roseville Reflections and Environmental Utilities newsletter;
b. Add stormwater specific information to Water Conservation, Household Hazardous Waste, Used Oil Drop-Off, Compost Bin, Dog Park, Creek Week, Fire Department inspection and Neighborhood Services programs and utilize their existing mediums for disseminating information;
c. Utilize available educational signs at Mahany Park for stormwater information;
d. Develop and implement creek side landowner education through the Citywide Creek and Riparian Management and Restoration Plan;
e. Expand City stormwater web page; and
f. Implement storm drain stenciling through Construction Standards for new development and citizen volunteers for existing development.

Measurable Goals

Milestones

1. New stormwater language.
2. Two signs constructed.
3. Landowner educational materials.

Ongoing

1. Three materials amended/yr.
2. Two articles in EU newsletter/ Roseville Reflections/yr.
3. Two mailings/yr.
4. 100% new storm drains stamped.
5. 200 storm drains labeled/yr.

Goal:
To inform public employees, businesses, and general public of hazards associated with illicit discharges.

Implementing Departments:
EU will provide stormwater information to City departments that implement the outreach programs that describe at left:

EU - Water Conservation
EU - Solid Waste
Parks and Recreation
Community Development
Fire Department
Economic and Community Services
Information Technology
Public Works – Streets Division
Public Works – Engineering Division
Public Information

Dependencies/Coordination:
PO-1 and IDDE-5 will be developed together.

Implementation:

1. Develop stormwater language and amend materials.
2. Disseminate through existing programs.
3. Include stormwater language on website.
4. Develop and construct two educational signs at Mahany Park.
5. Develop and implement creek side landowner education.
6. Stamp new storm drains and stencil or label existing storm drains.

IDDE–6
Long-Term Outreach

Detailed Description:
Develop a focused, strategic program to educate the community on the impacts of stormwater and the steps people can take to reduce pollutants in stormwater. The program includes:

a. Working to develop partnerships with neighboring communities;
b. Evaluating through a survey the level of knowledge about stormwater in the community and how the community obtains knowledge about such issues;
c. Identifying needs for general stormwater information;
d. Identifying target audiences (e.g., industry, businesses and minority communities) and specific messages and appropriate mediums to reach those audiences; and
e. Updating the SWMP Public Outreach program to reflect the activities identified under c and d.

Goal:
To develop a cost-effective outreach program that capitalizes on existing knowledge in the community and that utilizes "Piggybacking" and partnering to the greatest degree possible.

Implementing Departments:
EU will initiate program development and will implement the adopted activities through its Water Conservation Education staff.
Cooperating agencies:
Public Information
Information Technology
Fire Department
Economic and Community Services

Dependencies/Coordination:
IDDE-6 will be coordinated with IDDE-5 and also along with PO-1 and PO-2.

Measurable Goals

Milestones

1. Scoping meeting with adjacent MS4s.
2. Community Survey
3. Adopted Strategic Program.
4. Updated SWMP PO Program.
5. Expanded Water Conservation Education Program.

Ongoing

1. Follow-up meetings with adjacent jurisdictions; number set based on scooping.
2. Outreach activities to be specified in strategy.

Implementation:

1. Investigate potential partnering with Sacramento and adjacent jurisdictions.
2. Conduct community survey to assess level of knowledge and effectiveness of mediums.
3. Adopt a strategy that identifies key messages, target audiences and mediums.
4. Utilize already-developed materials to implement adopted strategy wherever possible.

3.4 Construction Site Runoff

3.4.1 Description

The Construction Site Runoff program is intended to reduce pollutants in stormwater runoff from construction activities that disturb one acre or more. The program also covers disturbances less than one acre if it is part of a larger common plan of development. The program includes an ordinance; implementation of erosion, sediment and materials/waste BMPs through City Improvement and Construction Standards; design review guidance for City staff; a telephone line and web page for public reporting; an inspection/enforcement program; and an outreach and training program.

3.4.2 Best Management Practices

CSR-1 Revised Ordinances

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

CSR-2 City Standards

The City will utilize its Improvement and Construction Standards to require construction site runoff control measures and to guide in the design, installation and maintenance requirements for those measures. The City will review existing technical guidance for construction site BMPs, analyze its current suite of BMPs and adopt changes to the standards. The standards also specify submittal requirements to ensure adequate information is provided for plan review staff, and these requirements will be evaluated as well. The standards will provide technical guidance to project applicants and contractors to ensure compliance with the program, as well as a regulatory basis on which to condition approval of projects.

CSR-3 Design Review Guidance for City Staff

Once the new Stormwater Ordinance is adopted and the City Improvement and Construction Standards have been updated, the City will prepare design review guidance for its plan review staff, to assist them in implementing the new requirements. The City will provide the guidance on its website to assist project applicants and will conduct training for its staff on use of the guidance.

CSR-4 Enhanced Reporting System

The City will provide one telephone number that citizens can use to report suspected violations of the City's Construction Site Runoff program, as well as an e-mail link on its website for public

reporting. Referral, tracking and follow-up procedures will be adopted to ensure that reports are investigated and resolved.

CSR-5 Inspection and Enforcement Program

The City inspects construction sites through its Public Works – Engineering and Building Divisions for compliance with City requirements for construction site runoff. Erosion is covered under the City's grading code and all discharges of non-stormwater are prohibited from the City's storm drain system. When a violation at a construction site is found, the City utilizes a tiered system of enforcement actions, including staff guidance, notice letters, suspension of progress inspections, referral to Code Enforcement and referral to the City Attorney. The City will evaluate this program for its implementation of stormwater controls and develop revisions to policies and procedures. City inspection and enforcement staff will be trained on the new policies and procedures, as well as the new requirements of the City Stormwater Ordinance and Standards. The City will also utilize a tracking system for violations.

CSR-6 Outreach and Training Program

This BMP is intended to ensure that the public is involved during the development of the Construction Site Runoff program, and that construction industry professionals are informed about City requirements for construction site management. The City will conduct three half-day workshops during development of revisions to the City Standards and annual training workshops on the adopted standards and new Stormwater Ordinance requirements. The program also includes training for City staff on the new design review guidance developed under CSR-3.

3.4.3 Construction Site Runoff Fact Sheets

CONSTRUCTION SITE RUNOFF (CSR)

Description: The Construction Site Runoff program utilizes a new Stormwater Ordinance; revisions to City Standards; guidance, outreach and training to implement those revised standards; improvements to the complaints reporting system and a modified inspection/enforcement program.

CSR BEST MANAGEMENT PRACTICES

1. **Revised Ordinances**
   Adopt new Stormwater Ordinance and amend existing Grading Ordinance to reference the new ordinance.
2. **City Standards**
   Amend Improvement and Construction Standards to reflect ordinance and expand erosion, sediment control and waste/materials management BMPs.
3. **Design Review Guidance for City Staff**
   Develop guidance for City staff to implement revised ordinance and standards
   (e.g., submittal requirements checklist, plan review checklist) and conduct training.
4. **Enhanced Reporting System**
   Establish telephone line in Environmental Utilities with referrals to appropriate department. Establish web-based reporting.
5. **Inspection and Enforcement Program**
   Modify inspection and enforcement program to address stormwater, conduct training for City staff to implement program and utilize tiered system of enforcement actions.
6. **Outreach and Training Program**
   Conduct outreach during development of Construction Site Runoff program. Provide training to City staff and construction professionals.

BMP	Implementing Departments	
	Lead	Cooperating
1. Revised Ordinances	EU	PW, Planning, City Attorney
2. City Standards	PW	EU, Planning
3. Design Review Guidance	PW	EU, Planning
4. Enhanced Reporting System	EU	PW
5. Inspection/Enforcement Program	PW	EU, Code Enforcement
6. Outreach/Training Program	PW	EU, Planning

Five-Year Implementation Schedule

Construction Site Runoff (CSR)	2003/4	2004/5	2005/6	2006/7	2007/8
CSR-1 Revised Ordinances	■	■			
CSR-2 City Standards		■			
CSR-3 Design Review Guidance		■			
CSR-4 Enhanced Reporting System			■		
CSR-5 Inspection/Enforcement program	■				
CSR-6 Outreach/Training Program	■				
Full Implementation					■

CSR-1
Revised Ordinances

Detailed Description:
Develop and adopt a new Stormwater Ordinance that:

a. Sets performance standard(s) for construction site runoff;
b. Covers grading, land clearing or other disturbance greater than or equal to one acre;
c. Requires BMPs for erosion, sediment control, construction materials and wastes;
d. Requires financial guarantees for compliance and site stabilization;
e. Refers to technical guidance (e.g., Construction Standards); and
f. References enforcement mechanisms.

Measurable Goals

Milestones	Ongoing
1. Ordinance adopted.	N/A

Goal:
Set regulatory requirements for management of construction sites to reduce runoff of sediments, construction site wastes or other materials.

Implementing Departments:
Environmental Utilities would take the lead for developing the Stormwater Ordinance and updating Grading Ordinance. Public Works and Planning would participate regarding the Construction Site Runoff provisions and would implement the new ordinance through development review. The City Attorney would assist with legal issues.

Dependencies/Coordination:
The new Stormwater Ordinance will address construction site runoff control, post-construction runoff control and illicit discharges and provides the regulatory basis for inspection and enforcement (CSR–6).

Implementation:

1. Develop ordinance language for construction site runoff.
2. Provide public notice.
3. Conduct public workshop(s).
4. Conduct public hearing(s).
5. Adopt ordinance.
6. Assess implementation at five-year intervals.

CSR-2
City Standards

Detailed Description:
Utilize City Improvement, Construction and other applicable Standards (e.g., Parks Standards) to require construction site runoff control measures

a. Update existing construction site runoff control measures in City Standards;
   1. Submittal requirements;
   2. Erosion and sediment control BMPs; including detail sheets as appropriate;
   3. Materials and waste control BMPs including detail sheets as appropriate; and
b. Implement through City development review.

Goal:
To provide technical and regulatory guidance to City staff and project applicants on City requirements for construction site runoff control.

Implementing Departments:
Public Works would lead the effort to revise the City's Improvement and Construction Standards. Environmental Utilities, Planning and Community Development would cooperate in the effort.

Dependencies/Coordination:
Revisions to the City's Standards would be coordinated with development of the new Stormwater Ordinance, and would be followed by Design Review Guidance (CSR-3) and the Inspection/Enforcement Program (CSR-5). The City would conduct outreach to construction professionals during development of the revisions (PO-3) and would provide training to construction professionals and City staff once the revisions are adopted (PO-3).

Measurable Goals

Milestones
1. Construction Standards revised.
2. Improvement Standards revised.
3. Materials posted.

Ongoing
1. Provide updates of revisions to construction standards as appropriate.

Implementation:
1. Review Standards and other technical documents (e.g., CA BMP Handbook - 2003 version, Sacramento technical reference).
2. Adopt new specific erosion, sediment control and materials/waste BMPs in City Standards.
3. Include detail sheets for structural BMPs (e.g., slope diversion dikes, fiber rolls) that address siting, design, and maintenance.
4. Conduct public workshops and update City Council.
5. Post revised documents on website.

CSR-3
Design Review Guidance for City Staff

Detailed Description:
Develop guidance for City staff to implement revised ordinance and standards.

a. Submittal requirements checklist;
b. Plan review checklist;
    1. Planning (e.g., BMPs such as stream setbacks);
    2. Public Works (e.g., BMPs such as slope protection); and
c. Provide training to staff on use of guidance documents.

Goal:
To assist City Planning and Public Works staffs in implementing construction site runoff control during development review.

Implementing Departments:
Public Works will lead development of the checklists with Planning cooperating for those issues addressed during their plan review. Environmental Utilities and Community Development would cooperate in the effort.

Dependencies/Coordination:
Design Review Guidance would follow revisions to City Standards (CSR-2). Training for City staff (CSR-7) would follow completion of the guidance materials.

Measurable Goals

Milestones
1. Design Review Guidance Materials complete.
2. Materials posted.

Ongoing
1. Conduct annual staff design review training sessions.
2. Revised standards applied to 100% of new projects after adoption.

Implementation:
1. Review existing City procedural documents.
2. Review other communities' and model design review documents.
3. Develop City Design Review Guidance.
4. Post adopted guidance on website.
5. Provide training to City staff.

CSR-4
Enhanced Reporting System

Detailed Description:
Enhance the City's existing violations reporting system by:

a. Establishing a telephone line, answered by Environmental Utilities or Community Development staff, where citizens can report suspected violations at construction sites;
b. Establish an e-mail link on the City's Stormwater web page to report suspected violations at construction sites;
c. Provide procedures for referral to Public Works for violation investigation;
d. Track reports and follow-up actions; and
e. Advertise the telephone line and web-based reporting in the Early Implementation (PO-1) and Strategic Outreach Programs (PO-2) for Public Outreach.

Goal:
To provide ways that the public can report suspected violations of the City's regulatory stormwater programs, including the construction site runoff control program.

Implementing Departments:
Environmental Utilities or Community Development will establish one telephone line for reporting all suspected discharges. Public Works will cooperate to investigate suspected construction site violations.

Dependencies/Coordination:
The telephone line, e-mail link and referral procedures are not dependent on any other BMP for implementation. A procedure for tracking reports and follow-up actions will be developed as part of Inspection/Enforcement Program improvements (CSR-5).

Measurable Goals

Milestones

1. New telephone line established.
2. Web page modified.
3. Telephone number added in Early Implementation Program.

Ongoing

1. 100% violation reports followed up.
2. Annual report to include violation reports and follow-ups.

Implementation:

1. Establish telephone line in Environmental Utilities or Community Development with referrals to appropriate department.
2. Establish web-based reporting on Roseville Stormwater web page.
3. Advertise as part of Public Outreach.

CSR-5
Inspection and Enforcement Program

Detailed Description:
Implement a stormwater inspection and enforcement program for construction sites that includes:

a. Inspection policy setting frequencies for inspections based on set criteria;
b. Inspection procedures including contractor self-inspection and government inspector checklist;
c. A tiered system of enforcement actions;
d. Tracking system for violations, including those reported by public, and
e. Training for inspection and enforcement staff to address stormwater and implement new procedures.

Measurable Goals

Milestones

1. Inspection policy developed.
2. Inspection procedures developed.
3. Tracking system established

Ongoing

1. 90% of medium and low priority sites with one acre or greater disturbance inspected monthly
2. 90% of high priority sites with one acre or greater of disturbance inspected weekly.
3. Annual inspector and enforcement official training sessions in the permit term
4. Track and report annually construction stormwater runoff inspections and enforcement activities.

Goal:
To ensure that construction sites are operated in conformance with the City's ordinances, Improvement Standards and Construction Standards.

Implementing Departments:
Public Works will develop and implement the inspection policy and procedures and the tracking systems. Environmental Utilities will cooperate to ensure violation tracking is reported to Regional Board.

Dependencies/Coordination:
The inspection policy and procedures will follow adoption of the Stormwater Ordinance and the tracking system will follow establishment of the policy and procedures.

Implementation:

1. Set criteria for inspections, e.g., size of disturbance, proximity to receiving waters.
2. Develop policy for construction site inspections.
3. Develop inspection checklists.
4. Implement a construction stormwater runoff inspection program and utilize a tiered system of violations to enforce new stormwater ordinance (see CSR-1).
5. Establish tracking system for violations.
6. Provide training for inspectors and enforcement officials.

CSR-6
Outreach and Training Program

Detailed Description:
Training program that includes:

a. Three half-day workshops during CSR program development and post draft documents and workshop information on the website;
b. Annual training workshops for construction industry professionals and City staff on the adopted/revised ordinances and updated Construction Standards and Improvement Standards; and
c. Training to City staff on new Design Review Guidance.
d. Provide technical assistance materials to the regulated community on the City's website.

Measurable Goals

Milestones	Ongoing
1. Three half-day program development workshops.	1. One ordinance and standards training workshop/year. 2. Two design review training workshops in permit term.

Goal:
To ensure that construction sites are operated in conformance with the City's ordinances, Improvement Standards and Construction Standards.

Implementing Departments:
Public Works will develop and conduct the workshops with cooperation from Planning and Environmental Utilities.

Dependencies/Coordination:
The program development workshops will take place during ordinance (CSR-1) and standards (CSR-2) revision. Annual training workshops will follow these BMPs. The design review training workshops will follow development of the design review guidance (CSR-3).

Implementation:

1. Develop list of interested parties for CSR program.
2. Investigate joint workshops with adjacent jurisdictions.
3. Post notices of workshops on website and mail/e-mail notice to interested parties list.
4. Conduct three half-day workshops during program development.
5. Post draft documents and workshop materials on website and solicit comments.
6. Conduct annual half-day training workshop for CSR.
7. Conduct training for City staff on Design Review guidance.

3.5 New Development and Redevelopment

3.5.1 Description

The goal of the City's New Development and Redevelopment MCM is to minimize the effects of new development or redevelopment for any project disturbing more than one acre of land. The Development and Redevelopment MCM includes:

- Development of Structural Controls;
- Development of Non-Structural Controls;
- Development of Ordinances or Regulatory Mechanisms; and
- Development of Long Term Operation and Maintenance (O&M) Practices.

Structural controls are facilities constructed for the storage or treatment of stormwater runoff. Non-structural controls are policies and procedures that manage land use in order to lessen the impacts of urban development and redevelopment activities on stormwater quality. It is intended that for this MCM, both structural and non-structural controls will be combined with regulatory ordinances and O&M practices, and incorporated into the City's Improvement and Construction Standards. To comply with the provisions of the State's General Permit for Storm Water Discharges from MS4s, the City will incorporate the design standards of Attachment 4 or its functional equivalent into the City's new Improvement and Construction Standards. Once the City's design standards and planning ordinances are amended to include the design requirements of the General Permit, new projects will be required to incorporate the new stormwater structural and/or non-structural controls in order to proceed through the development review process.

3.5.2 Best Management Practices

ND-1 Development Review Process

Currently, the City's Community Development Department must review all new development and redevelopment projects. During plan review, proposed projects are checked for conformance to the City's General Plan, applicable zoning codes and ordinances, and Improvement and Construction Standards. These documents are implemented through existing policies and procedures, such as standard conditions, facility master plans and development agreements. In order to improve the review process for stormwater quality, the City will assess its policies and procedures for development review based on a new Stormwater Ordinance (see ND-3 below) and amended Improvement and Construction Standards (see ND-2 below). Design review guidance and training for design review staff will also be utilized to ensure appropriate application of the adopted structural and non-structural controls.

ND-2 Technical Criteria

The City will incorporate the technical criteria of Attachment 4 or its functional equivalent into the planning and development approval process. The technical criteria will include volume and flow

control design parameters. In addition, the City will continue to develop and implement structural and/or non-structural control strategies through their improvement and construction standards. Structural controls are manmade facilities constructed for the storage, detention, infiltration, or treatment of stormwater runoff. Structural controls may include:

- Detention Ponds

  Detention facilities include wet ponds and extended-detention ponds. These facilities allow particulate matter and associated pollutants suspended in stormwater runoff to settle and allow for some storage and equalization of stormwater flows.

- Vegetative Areas

  Vegetative areas convey stormwater runoff through wetlands, grassy areas, or landscaping to remove pollutants, through both settling and biological uptake. Wetlands are among the most effective stormwater practices in terms of pollutant removal and they, along with grassy areas and landscaping, offer aesthetic value to the surrounding area.

- Runoff Pretreatment

  Modifying existing storm drain structures or constructing new facilities specifically designed for stormwater treatment accomplishes runoff pretreatment. Examples of structures used for runoff pretreatment include specially designed catch basins or catch basin inserts, in-line storage structures, swirl separators, and oil/grease pillows. These elements chemically or physically treat runoff as it enters the storm drain collection system. A significant drawback to these structures is that they are often labor intensive and expensive to maintain.

Non-structural controls strategies are policies and procedures, such as site planning and design that lessen the impacts of development on water quality. Non-structural controls for post-construction runoff control may include:

- Alternative Construction

  Alternative construction methods incorporate development and construction that reduces impervious areas, increases pervious areas, and allows for natural runoff patterns on applicable projects.

  Site Design

  Site design most often includes measures implemented by local Planning and Building Department to create buffer zones, open space areas, urban forestry, and infrastructure planning. Site design can include buffers to protect waterways from disturbance or encroachment and maintain neighboring ecosystems and habitats. Particulate matter and toxins suspended in runoff can often be adsorbed or treated within buffer zones or biological feature before the stormwater reaches adjacent waterways.

- Zoning

  Zoning can be used to set requirements for site design and can implement land use planning that protects as open space areas important for water quality maintenance.

Control strategies that are compliant with community goals, and are likely to maximize stormwater treatment efficiency will be reviewed for incorporation into the improvement and construction standards on an ongoing basis. Controls will be reevaluated and revised or excluded from the improvement and construction standards as feedback is received after their construction.

ND-3 Post-Construction Ordinance

The City will adopt a new Stormwater Ordinance. This ordinance will include provisions to address post-construction runoff from new development and redevelopment and requirements for long-term maintenance of structural controls. The ordinance will allow the City to require post-construction controls on new development and will provide the authority to inspect privately owned controls approved by the City and require maintenance of those controls.

Stormwater controls will be initially evaluated during project approval practices. Each project will be reviewed for incorporation of stormwater controls during plan checks by the Planning and Engineering Departments. Then construction of the approved controls will be observed and inspected by the Engineering and Building Inspection Divisions. Prior to final approval, the owner of the stormwater control structure will be required to submit an Operations and Maintenance (O&M) manual and a proposed maintenance schedule. The O&M manual and proposed schedule will serve as a basis for long-term maintenance and will be checked for compliance with regulatory ordinances after final approval has been granted.

ND-4 Regulatory Requirements for Privately Owned Controls

Often stormwater facilities are neglected or improperly maintained after construction. This, in turn, leads to a dramatic decrease in treatment efficiency, as well as accumulated trash and solids, localized flooding, and the possible destruction or failure of stormwater facilities. Therefore, it is necessary to establish regulatory requirements for privately owned controls including project approval conditions, O&M guidance for controls owners, and a tracking and enforcement program.

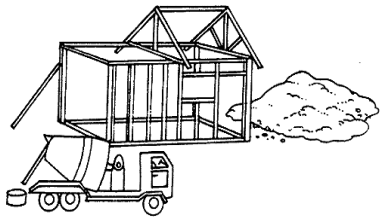
The City may utilize conditions of approval, bonding, long-term maintenance agreements or other legal agreements developed under ND-3 to require maintenance of structural controls. Other mechanisms for ensuring maintenance of structural controls include assumption of ownership and a regulatory inspection program. Once the City has determined the types of structural controls to be required and the maintenance program to be used (See ND-2 and ND-3 above), a database will track approved controls and a self-certification program will require reporting of periodic maintenance by control owners. The City will conduct follow-up inspections for those not certifying maintenance and for a subset of certified owners to confirm maintenance.

ND-5 Outreach and Technical Assistance

In order for post-construction runoff control to be successful, the MCM must engage those people that will be responsible for compliance. Landowners, project designers, project developers and contractors all need information about the importance of the program; its requirements; control siting, design, and maintenance; and sanctions for non-compliance. Outreach to these constituents is currently provided by posting ordinances and Construction Standards on the City website, and one-on-one assistance by City planners and Public Works engineers. As the program develops, other outreach mediums, including website postings and workshops, will be included to inform construction professionals of the development of the program and of new program requirements, once adopted.

3.5.3 New Development and Redevelopment

NEW DEVELOPMENT AND REDEVELOPMENT (ND)



Description: Development of Structural and Non-structural control standards and maintenance and inspection schedules for new development and redevelopment. Structural controls are composed of manmade facilities constructed for the storage or treatment of stormwater runoff. Non-structural controls are policies and procedures developed to modify human activities in order to lessen the impacts of urban development and redevelopment activities. Coordination and education of review staff, developers, and owners are key to successful implementation of controls.

ND Best Management Practices

1. **Development Review Process**
   Utilize Technical Criteria (ND-2) and Ordinance (ND-3) to implement stormwater management in new development and redevelopment through modifications to policies and procedures and provision of design review guidance.

2. **Technical Criteria**
   Establish technical criteria for structural and non-structural controls including siting, design and maintenance considerations and incorporate into Improvement and Construction Standards.

3. **Post-Construction Ordinances**
   Develop new Stormwater Ordinance that addresses requirements for post-construction controls and provisions for long-term maintenance.

4. **Regulatory Requirements for Privately-Owned Controls**
   Regulatory requirements for privately-owned controls including project approval conditions, O&M guidance for control owners, and tracking and enforcement program.

5. **Outreach and Technical Assistance**
   Incorporate project designers and developers in program development, and conduct training on adopted ordinances and technical guidance.

BMP		Implementing Departments	
		Lead	Cooperating
1. Development review process		PW	Pln; EU
2. Technical criteria		PW	Pln; EU
3. Post-construction ordinances		PW	Pln; EU; City Attorney
4. Regulatory requirements for privately-owned controls		PW	Pln; EU; Fire
5. Outreach and technical assistance		PW	Pln; EU

Five-Year Implementation Schedule

New Development and Redevelopment (ND)	2003/4	2004/5	2005/6	2006/7	2007/8
ND-1 Develop Review Process					
ND-2 Technical Criteria					
ND-3 Post-Construction Ordinances					
ND-4 Regulatory Requirements for Private Controls					
ND-5 Outreach and Technical Assistance					
Full Implementation					

ND–1
Development Review Process

Detailed Description:
Institute changes to development review process to address stormwater:

a. Assess development review procedures with Public Works Engineering, Community Development and Planning for post-construction runoff control. Develop amendments to policies and procedures (e.g., standard conditions, stormwater master planning through specific plans and development agreements);
b. Integrate technical criteria developed under ND-2 into regulatory process;
c. Provide design review guidance and training to City staff for flood control facilities, detention designs, infiltration facilities and other structural/non-structural controls in conjunction with revision of Improvement and Construction Standards, and adoption of new Stormwater Ordinance (ND-3) and technical guidance (ND-2); and
d. Encourage and develop system for continual feedback from department staff to further develop stormwater runoff measure and increase program effectiveness.

Measurable Goals

Milestones	Ongoing
1. Amended policies and procedures.	1. Annual staff trainings.
2. Design review guidance.	

Goal:
Minimize water quality impacts due to stormwater runoff from new development or redevelopment.

Implementing Departments:
Public Works will review and develop City Construction and Improvement Standards, and ordinances for inclusion of stormwater controls and regulatory ordinances.
Development will be coordinated with:
Planning
Environmental Utilities

Dependencies/Coordination:
ND-1 is dependent on the new Stormwater Ordinance (ND-3) and technical criteria (ND-2) and should be initiated when these BMPs are at an early draft stage. This BMP will be modified and updated as the SWMP is implemented and the City begins to receive feedback regarding the effectiveness of various post-construction controls.

Implementation:
1. Review existing policies and procedures as compared to new ordinance and standards.
2. Amend policies and procedures.
3. Develop design review guidance.
4. Provide training.

ND–2
Technical Criteria

Detailed Description:
Develop and implement structural and/or non-structural control strategies:

a. Review existing technical guidance programs, such as the CA BMP Handbook for Post-Construction Control, the Sacramento Guidance Manual for Onsite Stormwater Quality Control Measures, and the EPA's National Menu of Best Management Practices for Stormwater Phase II for controls to be included into the stormwater plan, and City Standards;
b. Develop technical criteria for structural and non-structural controls specific to City of Roseville, including siting, design and maintenance considerations; and
c. Amend City Improvement and Construction Standards.

Measurable Goals

Milestones	Ongoing
1. Amended Improvement and Construction Standards.	1. Annual staff training sessions to coordinate with CSR-3.

Goal:
Identify structural and non-structural controls suitable to local climate and terrain, and compatible with community goals and development.

Implementing Departments:
Public Works will take the lead to investigate potential control strategies for inclusion into the City's Construction and Improvement Standards. They will address structural controls, including maintenance of publicly owned systems. The Planning Department will be responsible for non-structural controls such as riparian setbacks.

Dependencies/Coordination:
The review of existing programs and development of draft criteria will be conducted concurrently with the development of the new Stormwater Ordinance (ND-3). The revised standards will be implemented through the development review process (ND-1).

Implementation:

1. Review existing technical guidance programs for post-construction controls, including onsite treatment controls, regional treatment facilities, structural source controls and non-structural controls.
2. Define criteria for appropriate structural and/or non-structural control strategies.
3. Evaluate existing Standards, implementation of General Plan requirement for promotion of infiltration in new development and other existing controls in relation to criteria.
4. Prepare draft amendments to Improvement and Construction Standards.
5. Conduct public workshop.
6. Adopt amended Standards.

ND–3
Post-Construction Ordinance

Detailed Description:
Develop Stormwater Ordinance that includes requirements for post-construction controls that includes:

a. Authority to require post-construction controls for new development and redevelopment;
b. Reference to a technical standard such as Improvement and Construction Standards to guide design and installation;
c. Requirements for perpetual maintenance of structural controls;
d. The right of program staff to enter private property and inspect controls;
e. The authority to require maintenance and/or repairs to structural controls, and
f. Enforcement remedies for non-compliant control maintenance.

Measurable Goals

Milestones	Ongoing
1. Ordinance adopted.	N/A

Goal:
Establish regulatory measures and means to enforce acceptable design, installation, and maintenance of approved control strategies.

Implementing Departments:
Environmental Utilities will take the lead for developing post-construction requirements for the Stormwater Ordinance, with Planning and Public Works cooperating. The City Attorney would assist with legal issues.

Dependencies/Coordination:
No other BMPs must be developed in order for implementation of BMP ND-3. This BMP will be coordinated with BMP ND-1 and ND-2.

Implementation:
1. Review existing ordinances.
2. Produce draft ordinance.
3. Provide review period for public comment and conduct workshop.
4. Adopt ordinance.

ND–4
Regulatory Requirements for Privately-Owned Controls

Detailed Description:

Utilize development review process, database tracking and enforcement to ensure privately owned controls are maintained.

a. Include maintenance requirements in project approval of privately owned structural of controls (e.g., condition of approval, maintenance agreement). Use such actions to address perpetual funding for O&M, and\or project-specific O&M requirements. Address maintenance of City-owned facilities through Municipal Operations element of SWMP;
b. Provide maintenance guidance for owners of approved structural controls through specifications in Improvement and Construction Standards. Include typical operations and cleaning schedules;
c. Include structural controls in database (e.g., GIS) to facilitate tracking and ownership, and to enforce proper operations and maintenance;
d. Utilize self-certification program for structural control maintenance with annual reporting required and spot inspections; and
e. Include structural control inspections in Fire Department inspections of businesses.

Measurable Goals

Milestones

1. Standard condition language.
2. Amended Improvement and Construction Standards including maintenance specifications.
3. Complete structural control tracking database.
4. Develop self-certification documents.

Ongoing

1. Inspect all controls with no annual certification form returned.
2. Inspect five certified controls/year.
3. Enforce post construction standards of new ordinance (ND-3).

Goal:

Maximize efficiency of approved privately owned structural controls by requiring appropriate maintenance.

Implementing Departments:

Public Works will require maintenance provisions for each project as a condition for final approval; will be the lead for standards revisions and conduct inspections. Planning and Environmental Utilities will cooperate in developing the required maintenance provisions and standards revisions. EU will track controls. Fire Department will also supplement inspections.

Dependencies/Coordination:

BMP ND-4 should be implemented at the completion of BMPs ND-1 through ND-3.

Implementation:

1. Develop standard conditions for projects with structural controls.
2. Include structural control maintenance guidance in Improvement and Construction Standards.
3. Develop tracking database and update when structural controls are approved.
4. Develop and implement post construction inspection and enforcement policies and procedures.
5. Provide inspection and database training for inspectors.
6. Develop self-certification forms and mail to structural control owners annually.
7. Conduct follow-up inspections for sites without self-certification submittals and spot inspections to verify self-certified maintenance.

ND–5
Outreach and Technical Assistance

Detailed Description:
Conduct outreach and provide technical assistance to project designers and developers.

a. Incorporate project designers and developers and other interested parties in program development, including workshops and outreach on web page, to develop controls consistent with community goals; and
b. Conduct annual training for project designers and developers on adopted ordinance and revised standards.

Measurable Goals

Milestones	Ongoing
1. Three half-day program development workshops.	1. One ordinance and standards training workshop/year.

Goal:
To ensure that new development and redevelopment is constructed in conformance with the City's ordinances, Improvement Standards and Construction Standards.

Implementing Departments:
Public Works will develop and conduct the workshops, with cooperation from Planning and Environmental Utilities.

Dependencies/Coordination:
The program development workshops will take place during ordinance (ND-3) and standards (ND-2) revision. Annual training workshops will follow these BMPs.

Implementation:
1. Develop list of interested parties for ND program.
2. Post notices of workshops on website and mail/e-mail notice to interested parties list.
3. Conduct three half-day workshops during program development.
4. Post draft documents and workshop materials on website and solicit comments.
5. Conduct annual half-day training workshop for ND.

3.6 Municipal Operations

3.6.1 Description

The State's general NPDES permit for MS4s requires that, at a minimum, a municipal operations control measure must establish the means of achieving the ultimate goal of preventing or reducing pollutant runoff from municipal operations and training procedures on those means. To this end, the goal of the Municipal Operations section of Roseville's SWMP is to incorporate stormwater best management practices (BMPs) into the City's operation and maintenance (O&M) procedures that prevent or reduce stormwater runoff pollution to the maximum extent practicable. The City's Municipal Operations Program includes the following four BMPs:

- MO-1: Inventory and Assess the Potential for Stormwater Pollution in O&M Activities at City-Owned Facilities and in City Field Operations;
- MO-2: Review and Assess the O&M Practices Identified in MO-1 as Potential Stormwater Pollution Sources for the Selection and Incorporation of BMPs to the Maximum Extent Practicable;
- MO-3: Review Construction and Development Procedures of City-Owned Facilities for Inclusion of Stormwater BMPs as Necessary, and
- MO-4: Develop and Expand City O&M Training Programs to Include Stormwater Pollution Prevention.

The City maintains several industrial facilities, including the Dry Creek Wastewater Treatment Plant and the City Corporation Yard. Stormwater BMPs are currently employed at these facilities. Via the specifics of this Minimum Control Measure, the City plans to expand the use of stormwater BMPs to other City maintained sites. In addition, the City will include BMPs in routine field operations. By properly implementing BMPs in City O&M activities, pollution from stormwater runoff containing chemicals that are normally used in maintenance activities such as lubricants, fertilizers, salts, and pesticides can be minimized or eliminated.

Through its various departments, the City also provides the labor and materials for the upkeep of streets, parks, drainage and utility systems within its boundaries. By establishing appropriate BMPs for each of these field activities, the discharge of potential pollutants may be minimized from work conducted on public domain.

To insure the appropriate implementation of stormwater BMPs in O&M activities, the City will provide training and refresher classes to inform personnel of stormwater pollution issues and allow positive feedback to supervisors and policymakers as to how everyday operations may be modified to minimize impacts to water quality.

3.6.2 Best Management Practices

MO-1 Inventory and Assess the Potential for Stormwater Pollution in Operations and Maintenance (O&M) Activities at City-Owned Facilities and in City Field Operations

As a first step in the implementation of this Best Management Practice, the City will develop an inventory of municipal facilities and field operations that may contribute to stormwater pollution. To provide structure for this MCM, the City will create a database of City operated facilities. This database will include fundamental statistics on each City facility pertinent to the management of stormwater quality such as size and proximity to a receiving water body.

Under this Municipal Operations MCM, the City will also review the O&M activities at each cataloged facility. O&M practices at each identified facility will be assessed for pollutant discharge potential. O&M procedures that involve activities that typically contribute to stormwater pollution when left unchecked such as vehicle fueling and repair, power washing operations, hazardous materials storage, and concrete cutting will receive particularly close scrutiny. Once the City's O&M procedures are evaluated for stormwater pollution potential, problematic processes will be compared to a list of possible BMPs. Staff will select the BMP most effective in mitigating stormwater pollution from the identified process.

MO-2 Review and Assess the O&M Practices Identified in MO-1 as Potential Stormwater Pollution Sources for the Selection and Incorporation of BMPs to the Maximum Extent Practicable

Several departments throughout the City have begun to develop stormwater BMPs for O&M activities, but to date most have not been formalized. MO-2 will focus on finalizing and documenting the inclusion of stormwater BMPs into the appropriate O&M procedures based on findings from MO-1.

BMPs selected for O&M programs may include stormwater pollution prevention alternatives such as source controls, treatment controls and materials management procedures. Source control BMPs may be incorporated into many of the City's O&M activities including, but not limited to, procedures for automobile maintenance, vehicle washing, waste disposal, landscaping and lawn care, pest control, and storm drain cleaning. Materials management BMPs include hazardous materials storage procedures, spill response and prevention, and good housekeeping procedures to track paints, oils, and other materials that may impact water quality. Treatment controls rank lower in preference on the pollution prevention hierarchy than source controls. Therefore, stormwater treatment controls will be implemented at City facilities as a last resort when good source reduction alternatives are not available.

Currently, the City is required under its industrial permits to implement stormwater BMPs for O&M activities at both the City's Corporation Yard and the Dry Creek Wastewater Treatment Plant. Each site has an approved Stormwater Pollution Prevention Plan (SWPPP) delineating those BMPs. The City plans to maintain those current practices enhancing them where necessary. These Swaps require that visual inspections of stormwater BMPs be performed on a periodic basis and after significant rain events, and maintenance be conducted on a routine

basis. Annual reports are submitted to the Regional Water Quality Control Board in accordance with the requirements of each facility's industrial permit.

In addition to current stormwater pollution prevention practices at its industrial facilities, the City will, where necessary, select, implement and maintain BMPs at its facilities and in field practices.

To mitigate stormwater pollution to the maximum extent practicable, additional BMPs will be selected based on the anticipated level of their efficiency in reducing or eliminating stormwater runoff pollution from an O&M procedure. Selected BMPs will be implemented in each department to minimize the impacts to stormwater quality from a variety of activities such as vehicle maintenance, dumping and disposal controls, landscaping and pest controls, parking lot and street cleaning, and storm drain system-cleaning activities.

MO-3 Review Construction and Development Procedures for City-Owned Facilities for Inclusion of Stormwater BMPs as Necessary

Projects financed or completed by City departments and personnel often do not undergo the same review process as projects developed by private parties. It is therefore important to monitor City construction and redevelopment for conformance to City Standards, and ensure that stormwater controls are included and not overlooked during City project development.

In order to maintain the management of stormwater runoff and verify the implementation of BMP controls at each of these sites, the City will include stormwater quality provisions in City contract documents and require that all contractors hired by the City comply with established BMP controls. The City will also provide a formalized structure for stormwater BMP inspection at municipal construction and redevelopment projects.

MO-4 Develop and Expand City O&M Training Programs to Include Stormwater Pollution Prevention

Employee training programs will be developed to inform staff and maintenance personnel of issues related to stormwater management. Topics for training programs may include spill prevention, source controls, treatment controls, materials management, and the concepts of BMP implementation and preventative maintenance. A successful training program will increase employee awareness of activities that may impact water quality.

Training programs are currently offered to personnel in the City's Fire, Public Works, and Environmental Utilities Departments. The programs are implemented in a variety of formats from formal training classes held by the City or other cooperating public agencies (e.g., Placer County Flood Control District) to informal tailgate safety meetings held at inspection and construction sites.

Training programs will be structured to promote employee feedback in order to identify strong points and weaknesses of the program, and to indicate where additional training may be needed. These training programs will also be used to identify additional opportunities to include stormwater BMPs in the City's O&M activities.

3.6.3 Municipal Operations Fact Sheets

MUNICIPAL OPERATIONS (MO)

Description: The Municipal Operations Program reviews and develops City maintenance and operations activities to better protect water quality. The program reviews policies and procedures for City maintenance and construction activities, implements BMPs and emphasizes the training of department staff to be proactive in identifying stormwater related issues.

MO Best Management Practices

1. **Inventory and Assess the Potential for Stormwater Pollution in O&M Activities at City-Owned Facilities and in City Field Operations**
   Survey and catalog City facilities and field operations with the potential to contribute to stormwater pollution. Evaluate O&M activities for pollutant discharge at identified facilities and in field activities.
2. **Review and Assess the O&M Practices Identified in MO-1 as Potential Stormwater Pollution Sources for the Selection and Incorporation of BMPs to the Maximum Extent Practicable**
   Select and employ stormwater pollution prevention BMPs in O&M procedures such as automobile maintenance, waste disposal, housekeeping, and other maintenance procedures to minimize impacts to water quality.
3. **Review Construction and Development Procedures for City-Owned Facilities for the Inclusion of Stormwater BMPs as Necessary**
   Review projects that are financed or constructed by City personnel to ensure incorporation of stormwater BMPs in the design and construction phases.
4. **Develop and Expand City O&M Training Programs to Include Stormwater Pollution Prevention**
   Develop employee-training programs to inform staff and maintenance personnel of issues related to stormwater management, including spill prevention, materials management, preventative maintenance, source control and treatment control measures.

BMP	Implementing Departments	
	Lead	Cooperating
1. Review and develop operations and maintenance (O&M) programs	EU; PW; P&R; AS; CS; RE	EU; PW; P&R; AS
2. Select and incorporate Stormwater BMPs into the O&M Practices Identified in MO-1	EU; PW; P&R; AS; CS; RE	EU; PW; P&R; AS
3. Review construction and development procedures for City-owned facilities.	EU; PW; P&R; AS; CS; RE	EU; PW; P&R; AS
4. Develop and expand O&M stormwater training program	EU; PW; P&R; AS; CS; RE	EU; PW; P&R; AS

Five-Year Implementation Schedule

Municipal Operations (MO)	2003/4	2004/5	2005/6	2006/7	2007/8
MO-1 Inventory and Assess O&M Activities					
MO-2 Select and Implement BMPs					
MO-3 City Construction/Development Procedures					
MO-4 Expand Stormwater Training Program					
Full Implementation					

MO-1
Inventory and Assess the Potential for Stormwater Pollution in O&M Activities at City-Owned Facilities and in City Field Operations

Detailed Description:
Identify and inventory City facilities and field operations with potential water quality impacts. Review and evaluate current policies and procedures of City maintenance and operations (O&M) programs at these fixed City facilities and the field operations. Identify opportunities for the incorporation of stormwater BMPs in City O&M activities. City O&M programs will also establish staff training plans. This BMP will also include:

a. Maintain SWPPP at the Dry Creek Wastewater Treatment Plant;
b. Maintain SWPPP at the City of Roseville Corporation Yard;
c. Continuing the practice of discharging of chlorinated water to the sanitary sewer system from City- owned swimming pools; and
d. Address satellite material storage facilities, parking lots, buildings, treatment plants, and police and emergency service stations for inclusion into the SWPPP program.

Measurable Goals

Milestones

1. Identify all City-owned properties and City field operations with stormwater pollution potential.
2. Review O&M policies and procedures at City sites with identified potential pollution generating activities.

Ongoing

1. Review up to six O&M policies and procedures per year.

Goal:
Minimize water quality impacts due to stormwater runoff from City-owned facilities and field operations conducted by City staff.

Implementing Departments:
Each applicable City department will be responsible for review of their respective facilities and for coordinating the review of shared facilities.

EU – coordinating department.

Dependencies/Coordination:
No other BMPs must be developed in order for MO-1 to be implemented.

Implementation:

1. Identify and prioritize all City-owned properties and field operations with stormwater pollution potential.
2. Review and inspect facilities and field operations with significant stormwater pollution potential.
3. Identify potential pollution generating O&M activities and the potential pollutants associated with those activities at City facilities and field operations.

MO–2

Review and Assess the O&M Practices Identified in MO-1 as Potential Stormwater Pollution Sources for the Selection and Incorporation of BMPs to the Maximum Extent Practicable

Detailed Description:

Identify BMPs currently in place for City operation maintenance activities. Assess the effectiveness of BMPs currently in place. Identify and select any additional BMPs necessary to protect water quality. Each City department will select the appropriate BMPs and modify their existing O&M policies and procedures to reflect BMP implementation. This MCM includes, but is not limited to:

a. BMPs for street cleaning/sweeping and repair;
b. BMPs for stormwater system maintenance;
c. BMPs for landscaping, fertilizing, and pest control for parks and City maintained properties;
d. BMPs for storing cleaning and maintenance materials for City-owned buildings;
e. BMPs for trenching, service repairs, and emergency work;
f. BMPs for pet waste management and the enforcement of City Ordinances 7.14.010 and 8.02.240 to avoid contaminated runoff to the stormwater system.

Measurable Goals

Milestones

1. Identify and evaluate all O&M BMPs currently in place.
2. Select new or modified BMPs for identified O&M activities.
3. Implement BMPs.
4. Document new O&M procedures.

Ongoing

1. Update up to six O&M policies and procedures per year for inclusion of new BMPs as necessary.
2. Annually assess the adequacy of BMPs implemented that reporting year. The assessment shall include a recommendation for the continuation or modification of the reviewed BMP.

Goal:

Minimize water quality impacts due to stormwater runoff related to City operation maintenance activities.

Implementing Departments:

Each applicable City department will be responsible for review of their respective operations, and the selection and implementation of appropriate stormwater BMP.

EU – Coordinating department.

Dependencies/Coordination:

MO-1 must be developed in order for MO-2 to be implemented.

Implementation:

1. Identify stormwater BMPs currently used in City O&M activities.
2. Evaluate effectiveness of currently implemented BMPs.
3. Up-date or select new BMPs, as necessary, for each activity identified as a potential source of stormwater pollution.
4. Incorporate new BMPs into O&M activities.
5. Evaluate effectiveness of new BMPs.
6. Replace or modify BMPs as necessary.
7. Document new O&M procedures including the up-dated BMPs.

MO-3
Review Construction and Development Procedures for City-Owned Facilities

Detailed Description:
City financed or constructed projects are not subjected to the same review process as projects developed by private parties. Therefore, it is important to develop explicit procedures for City construction and redevelopment projects for conformance with City stormwater runoff requirements, and ensure that post-construction stormwater controls and operating procedures are included in City projects. This BMP includes:

a. Monitoring City construction and redevelopment projects for conformance with the State General Construction Permit. Verifying stormwater BMPs are implemented and maintained at each construction site;
b. Including language in City contract documents requiring the submission of a Stormwater Pollution Prevention Plan prior to the beginning of any construction activities. Require all contractors hired by the City to comply with stormwater BMP requirements of the General Construction Permit; and
c. Developing procedures for construction stormwater runoff inspections at City projects. Documenting the inspection of City construction sites.

Goal:
Ensure stormwater runoff controls are incorporated into the design and construction of City financed or constructed projects.

Implementing Departments:
Each City department will be responsible for the review of stormwater runoff requirements at their respective facilities. Departments will coordinate the review of all shared facilities. Public Works and Environmental Utilities will conduct the inspections. City Attorney will assist with updating the standard City contract language.

EU – Coordinating department.

Dependencies/Coordination:
No other BMPs must be developed in order for MO-3 to be implemented.

Implementation:
1. Evaluate existing City project review process.
2. Develop stormwater runoff control review and inspection procedures for City projects.
3. Incorporate stormwater runoff control review and inspection into current City project development process.
4. Train City designers and inspectors on stormwater runoff control procedures at City owned or financed projects.

Measurable Goals

Milestones
1. Assess and revise the current internal review process for City projects to include stormwater management.
2. Establish policy to incorporate stormwater control BMPs into City projects.
3. Train City designers and inspectors on the new internal stormwater review and inspection procedures.
4. Update standard City contract language to include stormwater runoff control requirements.

Ongoing
1. Review all SWPPPs for City projects meeting the criteria set forth in the State General Permit for Construction Activities.
2. Inspect all City projects that require a SWPPP for implementation and maintenance of stormwater BMPs.
3. Update and review inspection procedures every 2½ years based on employee feedback.

MO-4
Develop And Expand City O&M Training Programs to Include Stormwater Pollution Prevention

Detailed Description:
Develop employee-training programs to inform staff and maintenance personnel of the issues related to stormwater management. Train city staff on new City policies and procedures including stormwater BMPs. Training topics may include, but are not limited to, spill prevention, materials management, preventative maintenance, and source and treatment control measures. This BMP includes:

a. Distribute existing SWPPP manuals to facility managers. Provide additional copies to facility staff on an as-needed basis. Provide training to familiarize facility staff with the BMPs of the existing SWPPP; and
b. Enhance existing City training programs for staff by including up-dated policies and procedures that include stormwater BMPs. Partnering on training with other jurisdictions and the public/private sector to minimize costs.

Measurable Goals

Milestones

1. Identify topics for employee training.
2. Identify/develop training courses.
3. Implement employee training schedule.

Ongoing

1. Up-date training topics as new stormwater BMPs are included in City policies and procedures.
2. Conduct an employee survey bi-annually.
3. Incorporate employee feedback into training program material.

Goal:
Increase awareness and active participation of City personnel to stormwater related activities.

Implementing Departments:
Each applicable City department will be responsible for review for their respective facilities and for coordinated review of all shared facilities.

EU – Coordinating department.

Dependencies/Coordination:
MO-1 and MO-2 must be completed in order to implement MO-4.

Implementation:
1. Identify topics for employee training.
2. Identify/develop training materials.
3. Incorporate stormwater management material into existing O&M training classes.
4. Implement employee training schedule.

Section 4: Monitoring and Reporting

The monitoring and reporting components of City of Roseville's SWMP are described in this section. The objectives of Roseville's monitoring program are as follows:

- Assessing compliance with the General Permit;
- Measuring and improving the effectiveness of SWMP;
- Characterizing stormwater discharges;
- Identifying sources of pollutant; and
- Assessing the overall health and evaluating long-term trends in the City's receiving waters.

The City will monitor and assess its SWMP to ensure BMP effectiveness in accordance with the provisions of the General Permit. Furthermore, the City will conform to any additional monitoring requirements that may be imposed by the RWQCB. Specifically, the Illicit Discharge Detection and Elimination, Construction Site Stormwater Runoff and the Municipal Operations Minimum Control Measures (MCMs) will include visual monitoring in the form of inspections to ensure identification and cessation of illicit stormwater discharges and proper implementation of BMPs.

In compliance with the terms of the General Permit, the City will submit an annual report to the RWQCB detailing status and effectiveness of its SWMP by the September 15th of each year or as otherwise required by the Board. In this report the City shall evaluate compliance with its permit conditions, evaluate and assess the effectiveness of its BMPs, summarize the results of any monitoring performed, summarize the activities planned for the next reporting cycle, and, if necessary, propose any changes to the SWMP.

Section 5: Implementation Schedule

The City of Roseville's SWMP implementation schedule for the five-year period beginning in the 2003/2004 fiscal year and ending with the 2007/2008 fiscal year is presented in Table 1. The implementation schedule provides the program management milestones anticipated during the permit term. The implementation schedule will provide a framework for program planning and resource allocations to implement the program activities.

In general, program activities that build upon existing City programs and activities are implemented early within the five-year period. In addition, the construction site runoff minimum control measure is also implemented on an aggressive schedule due to the amount of construction activity anticipated in the City during the early years of the program. The public outreach, public involvement, and illicit discharge detection and elimination MCMs are also implemented early.

It is anticipated that a stormwater ordinance will be adopted by the end of the second year of the permit. The new development and redevelopment MCM will be implemented beginning in fiscal year 2004/2005 with development of technical criteria followed by incorporation of technical criteria into the development review process in year three of the program. Ordinances will be updated to include new development and redevelopment requirements in fiscal year 2006/2007. The municipal operations MCM will be phased in beginning in fiscal year 2004/2005.

The implementation schedule targets fiscal year 2007/2008 for full implementation of the SWMP.

References

Draft State Water Resources Control Board NPDES General Permit, Waste Discharge Requirements for Storm Water Discharges from Small Municipal Storm Sewer Systems (MS4s), 8 January 2003

40 CFR Parts 9, 122, 123 and 124, NPDES Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule, 8 December 1999

City of Roseville General Plan, 18 November 1992

City of Roseville Demographic, Development & Employment Profile, 2001-2002, November 2002

Sacramento, CA Urbanized Area, Storm Water Entities as Defined by the 2000 Census, 14 August 2002

Tables

Table 1: Implementation Schedule

Elements and Components	Fiscal Year (July 1st to June 30th)				
Public Outreach (PO)	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
PO-1 Early implementation plan					
PO-2 Strategic program					
PO-3 Construction outreach					
Full Implementation					
Public Involvement (PI)	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
PI-1 Website					
PI-2 Watershed management					
PI-3 Public body updates					
PI-4 Storm drain labeling					
Full Implementation					
Illicit Discharge Detection and Elimination (IDDE)	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
IDDE-1 Discharge detection					
IDDE-2 Illicit connections/non-stormwater discharges					
IDDE-3 Storm water sewer system map					
IDDE-4 Stormwater ordinance					
IDDE-5 Utilizing existing programs					
IDDE-6 Long-term outreach					
Full Implementation					
Construction Site Runoff (CSR)	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
CSR-1 Revised ordinances					
CSR-2 City standards					
CSR-3 Design review guidance					
CSR-4 Enhanced reporting system					
CSR-5 Inspection/enforcement program					
CSR-6 Outreach/training program					
Full Implementation					
New Development and Redevelopment (ND)	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
ND-1 Develop review process					
ND-2 Technical Criteria					
ND-3 Post-construction ordinances					
ND-4 Regulatory requirements for private controls					
ND-5 Outreach and technical assistance					
Full Implementation					
Municipal Operations (MO)	**2003/4**	**2004/5**	**2005/6**	**2006/7**	**2007/8**
MO-1 Inventory and Assess O&M programs					
MO-2 Select and Implement BMPs					
MO-3 City construction/development procedures					
MO-4 Expand stormwater management training					
Full Implementation					

BMP Development and Initial Implementation Begins =

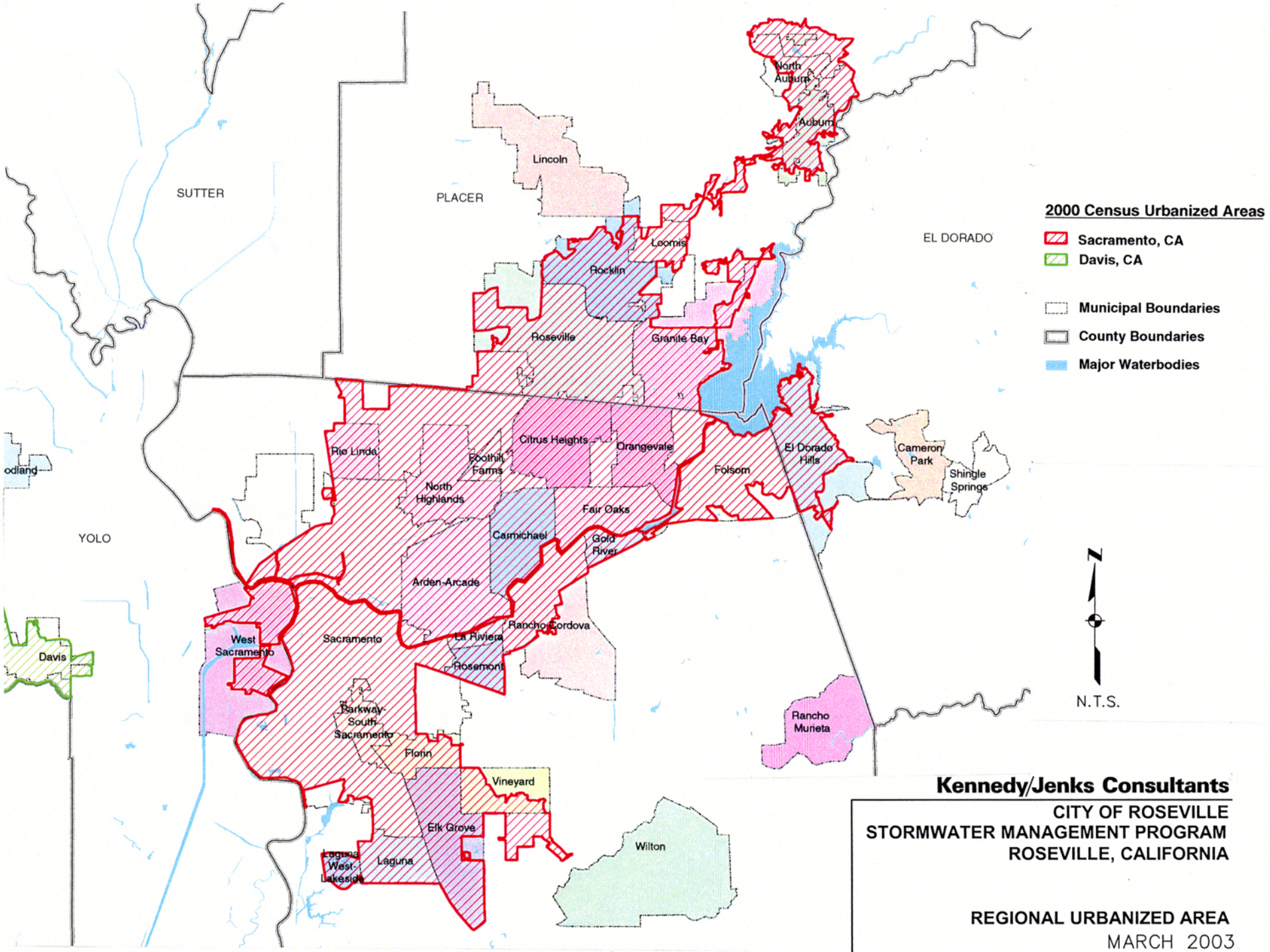
BMP Implementation Continues with Evaluation and Refinement =

BMP Implementation has not Begun =

Table 2: Responsible Persons

Minimum Control Measure	Primary	Secondary
Public Outreach (PO)	**Kelye McKinney** Environmental Utilities Dept. (916) 774-5552	**Delyn Ellison-Lloyd** Environmental Ultilities Dept. (916) 746-1748
Public Involvement (PI)	**Kelye McKinney** Environmental Utilities Dept. (916) 774-5552	**Delyn Ellison-Lloyd** Environmental Ultilities Dept. (916) 746-1748
Illicit Discharge Detection and Elimination (IDDE)	**Kelye McKinney** Environmental Utilities Dept. (916) 774-5552	**Steve Anderson** City Fire Department (916) 774-5821
Construction Site Runoff (CSR)	**Kelye McKinney** Environmental Utilities Dept. (916) 774-5552	**Guy Howes** Public Works Department (916) 774-5430
New Development (ND)	**Kelye McKinney** Environmental Utilities Dept. (916) 774-5552	**Chris Kraft** Public Works Department (916) 774-5339
Municipal Operations (MO)	**Kelye McKinney** Environmental Utilities Dept. (916) 774-5552	**Delyn Ellison-Lloyd** Environmental Utilities Dept. (916) 746-1748

Figures



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CITY OF ROSEVILLE
STORMWATER MANAGEMENT PROGRAM
ROSEVILLE, CALIFORNIA

REGIONAL URBANIZED AREA
MARCH 2003
Figure 1
K/J 022732.00

SOURCE: US CENSUS BUREAU TIGER DATA, 2000 CENSUS

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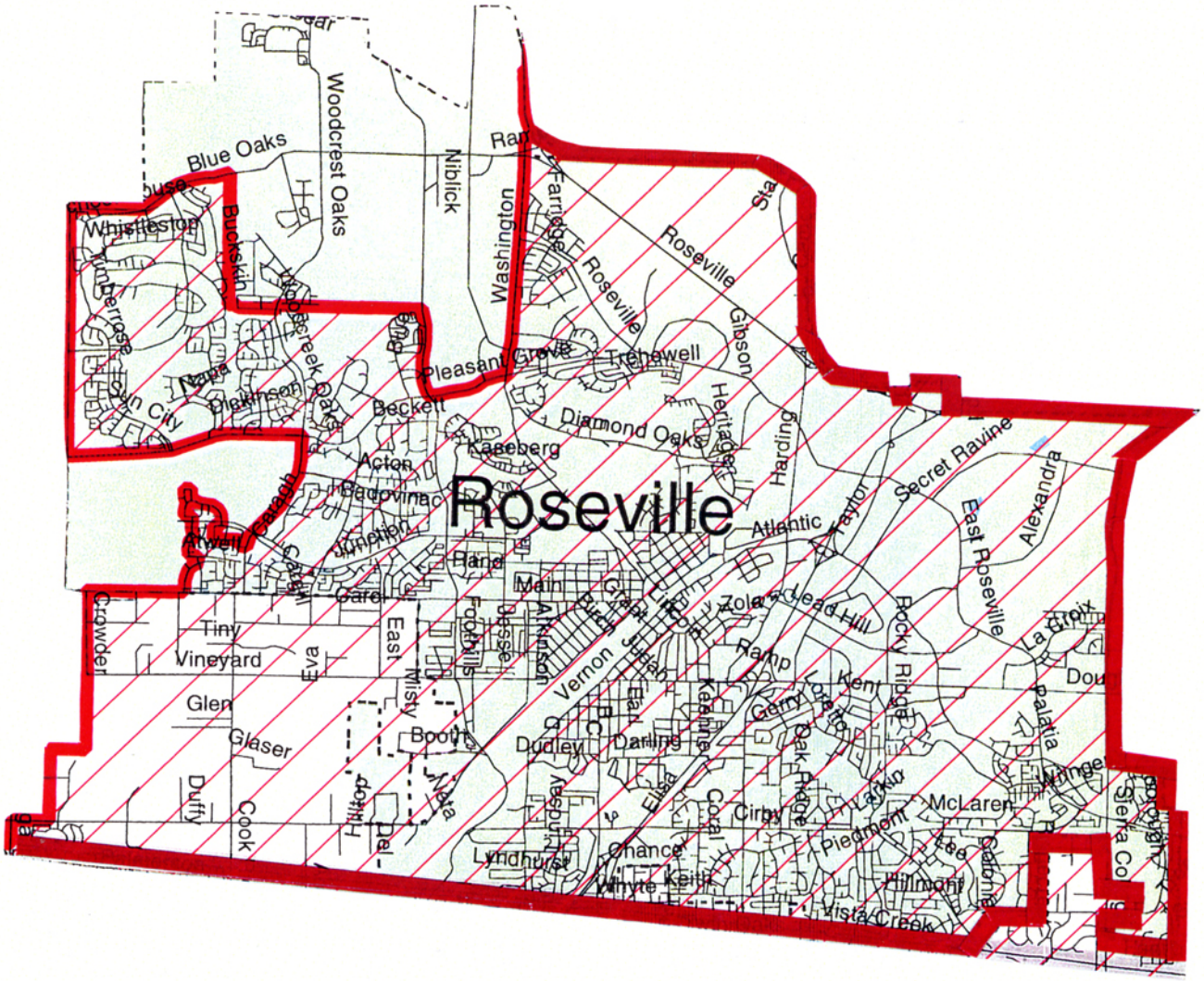

LEGEND

URBANIZED AREA

SOURCE: US CENSUS BUREAU TIGER DATA, 2000 CENSUS

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CITY OF ROSEVILLE
STORMWATER MANAGEMENT PLAN
ROSEVILLE, CALIFORNIA

CITY URBANIZED AREA

MARCH 2003

Figure 2

K/J 022732.00