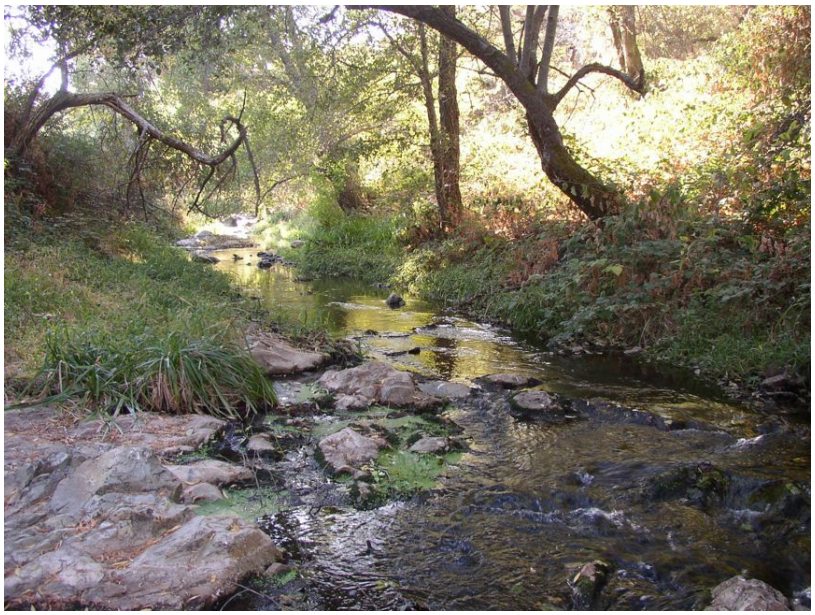
CITY OF PLACERVILLE
STORM WATER MANAGEMENT PLAN

OEMC Project No. 03-261

Prepared for:
City of Placerville
487 Main Street
Placerville, CA 95667



June 2005

Owen Engineering & Management Consultants, Inc.
3377 Coach Lane, Suite K
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GLOSSARY OF TERMS

authorized non-storm water discharge	Certain categories of discharges that are not composed entirely of storm water but are not found to pose a threat to water quality. They include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration (as defined at 40 CFR § 35.2005(20)) to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditions condensate; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; and discharges or flows from emergency fire fighting activities. If any of the above authorized non-storm water discharges (except flows from fire fighting activities) are found to cause or contribute to an exceedance of water quality standards or cause or threaten to cause a condition of nuisance or pollution, the category of discharge must be prohibited.
BMP	Best Management Practice. Schedule of activities, prohibition of practices, maintenance procedure, and other management practice to prevent or reduce storm water pollution. BMPs may include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
BMP, Source Control	Any BMP that aims to prevent or reduce storm water pollution by reducing the potential for contamination at the source of pollution.
BMP, Structural	Any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.
BMP, Treatment Control	Any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.
C	Centigrade
City	City of Placerville
CFR	Code of Federal Regulations
County	El Dorado County
CWA	Federal Clean Water Act
DCIA	Directly connected impervious area. The area covered by a building, impermeable pavement, and/or other impervious surfaces, which drains directly into the storm drain without first flowing across permeable land area (e.g., lawns).
EPA	United States Environmental Protection Agency
F	Fahrenheit

GLOSSARY OF TERMS

General Construction Permit	Order No. 99-08-DWQ NPDES General Permit No. CAS000002 Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity, adopted on August 19, 1999 and modified on December 2, 2002.
General Industrial Permit	Water Quality Order No. 97-03-DWQ NPDES General Permit No. CAS000001 Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities.
General Small MS4 Permit	Water Quality Order No. 2003-01005-DWQ NPDES General Permit No. CAS000004 Waste Discharge Requirements from Small Municipal Separate Storm Sewer Systems, which was adopted on April 30, 2003.
illicit non-storm water discharge	Any discharge to the Small MS4 that is not composed entirely of storm water except discharges pursuant to a separate NPDES permit and authorized non-storm water discharges.
MEP	Maximum Extent Practicable. Technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve.
mg/L	milligrams per liter
Minimum Control Measure	A storm water program area that must be addressed by all regulated Small MS4s. The six minimum control measures are addressed in Sections 4 through 9.
MS4	Municipal separate storm sewer system. Conveyance system or system of conveyances (including roads, culverts and other drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains).
MS4, small	A MS4 that is not permitted under the federal Phase I storm water regulations, which is owned or operated by the United States, a state, city, county, district, or other public body. Small MS4s include storm sewer systems at school, college and university campuses. Small MS4s do not include separate storm sewer systems in very discrete areas, such as individual buildings.
MS4, small non-traditional	A MS4 that is operated at a separate campus or institution (e.g., school site, hospital or prison).
MS4, small regulated	A Small MS4 that discharges to a water of the United States or another MS4 regulated by an NPDES permit.
MS4, small traditional	A MS4 that is operated throughout a community (e.g., city or county).
new development	Land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and grease
O&M	operations and maintenance

GLOSSARY OF TERMS

outfall	A point where a MS4 discharges to waters of the United States and does not include open conveyances connecting two municipal storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States (40 CFR § 122.26(b)(9)).
point source	Any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff (40 CFR § 122.2).
redevelopment	The creation or addition of at least 5,000 square feet of impervious area on an already developed site. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition of a structure; structural development including an increase in gross floor area and/or exterior construction or remodeling; and land disturbing activities related with structural or impervious surfaces.
RWQCB	California Regional Water Quality Control Board, Central Valley Region
SIC	standard industrial classification
Storm Event	A rainfall event that produces more than 0.1 inch of precipitation and that is separated from the previous storm event by at least 72 hours of dry weather.
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
Treatment	The application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media adsorption, biodegradation, biological uptake, chemical oxidation and UV radiation.
TSS	total suspended solids
U.S.	United States
U. S. EPA	United States Environmental Protection Agency
UV	ultraviolet
WDID	Waste Discharge Identification
WWTP	Wastewater Treatment Plant

SECTION 1
EXECUTIVE SUMMARY

SECTION 1

EXECUTIVE SUMMARY

1.1 INTRODUCTION

The City of Placerville is located in the Sierra Nevada foothills east of Sacramento. Urban runoff from areas located within the City limits is primarily discharged to Hangtown Creek. Hangtown Creek is tributary to Weber Creek and the South Fork of the American River.

The United States Environmental Protection Agency (U. S. EPA) has established the following two-phased program to address storm water discharges from municipal separate storm sewer systems (MS4s), industrial and construction activities to surface waters (e.g., Hangtown Creek):

- The Phase I regulations require that storm water management programs be developed and implemented by Large MS4s (serving populations of 100,000 people or more), certain industrial activities and construction activities disturbing five acres or more.

- The Phase II regulations require that storm water management programs be developed and implemented by Small MS4s (serving populations of less than 100,000) and construction activities disturbing one acre or more.

In California, the federal storm water regulations for Small MS4s are being implemented through Water Quality Order No. 2003-01005-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Small MS4 Permit), which was adopted on April 30, 2003 by the State Water Resources Control Board (SWRCB). The City of Placerville (City) has been specifically designated by the RWQCB as the owner and operator of a Small MS4.

The main goal of the General Small MS4 Permit is to protect water quality from urban runoff pollution. This is to be accomplished by addressing the various ways storm water quality can be impacted by the public, municipal activities, development and redevelopment. Compliance will require a coordinated effort by City staff (administration, community development, public works, and operation and maintenance) to implement the Storm Water Management Plan (SWMP).

1.2 REQUIREMENTS

The General Small MS4 Permit requires that the City:

- Submit a Notice of Intent to comply with the terms of the Small MS4 General Permit to the California Regional Water Quality Control Board, Central Valley Region (RWQCB) by October 27, 2003.

- Develop a SWMP that includes Best Management Practices (BMPs) that address the six minimum program areas identified below. The selected BMPs must reduce pollutants in storm water runoff to a technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. The SWMP must also include measurable goals and timetables for implementation. The six minimum control measures are:

  - ✓ Public Education and Outreach on Storm Water Impacts;

  - ✓ Public Involvement/Participation;

- ✓ Illicit Discharge Detection and Elimination;
- ✓ Construction Site Storm Water Runoff Control;
- ✓ Post-Construction Storm Water Management in New Development and Redevelopment; and
- ✓ Pollution Prevention/Good Housekeeping for Municipal Operations.

- Conduct construction site inspections to verify that BMPs are in place and properly maintained.
- Conduct surveillance monitoring to confirm that illicit non-storm water discharges are detected and eliminated.
- Submit annual reports to the RWQCB describing progress in SWMP implementation.

1.3 BEST MANAGEMENT PRACTICES

The BMPs that will be implemented by the City are listed in Table 1.1 and are summarized below. The BMPs are described in greater detail in Sections 4 through 9.

1.3.1 Public Education and Outreach

- **BMP PE-1. Develop Educational Program.** Identify existing or develop new educational and training materials (including brochures, checklists, inspection forms, etc.) that can be used to effectively educate the public, train employees and inform consultants and contractors regarding urban runoff. Confer with El Dorado County and/or other related storm water agencies and organizations in compiling suitable educational materials and resources. Develop a plan and schedule for program implementation.
- **BMP PE-2. Educate the Public.** Educate the public using educational materials.
- **BMP PE-3. Train City Employees.** Train City employees, including public works and maintenance and operations) using educational materials and meetings.
- **BMP PE-4. Inform Consultants and Contractors.** Inform consultants (including architects and engineers), developers, and contractors using educational materials.

Table 1.1. BMP Summary.

Minimum Control Measure	BMPs		SWMP Section
	No.	Description	
1. Public Education and Outreach on Storm Water Impacts	PE-1	Develop Educational Program	4
	PE-2	Educate the Public	4
	PE-3	Train City Employees	4
	PE-4	Inform Consultants and Contractors	4
2. Public Involvement/Participation	PI-1	Public Notice	5
	PI-2	Storm Drain Marking Program	5
	PI-3	Local Watershed Input	5
	PI-4	Community Activity	5
3. Illicit Discharge Detection and Elimination	ID-1	Legal Authority	6
	ID-2	Map Preparation	6
	ID-3	Illicit Discharge Elimination	6
4. Construction Site Storm Water Runoff Control	CS-1	Legal Authority	7
	CS-2	Plan Review	7
	CS-3	Site Inspection	7
	CS-4	Public Inquiries/Complaints	7
5. Post-Construction Storm Water Management in New Development and Redevelopment	PC-1	Legal Authority	8
	PC-2	Design Standards	8
	PC-3	Site Inspection	8
6. Pollution Prevention/Good Housekeeping	PP-1	City Facilities – General	9
	PP-2	Hangtown Creek WWTP	9
	PP-3	Spill Prevention/Response	9

1.3.2 Public Involvement/Participation

- **BMP PI-1. Public Notice.** Provide notice, as required, regarding the public meeting at which the City Council will consider adoption of a resolution authorizing the Public Works Director to implement and enforce the SWMP.

- **BMP PI-2. Storm Drain Marking Program.** Enlist volunteers and implement a phased program to label drainage inlets to indicate that the inlets drain to the creek (e.g. *Discharges to Creek*).

- **BMP PI-3. Local Watershed Input.** Identify organizations and individuals interested in the local watershed and conduct meetings at least annually to obtain input.

1.3.3 Pollution Prevention/Good Housekeeping

- **BMP PP-1. City Facilities – General.** Evaluate existing housekeeping, material storage, waste disposal, and equipment cleaning procedures. Develop and implement modifications necessary to prevent pollution.

- **BMP PP-2. Hangtown Creek WWTP.** Implement the SWPPP for the WWTP.

- **BMP PP-3. Spill Prevention/ Response.** Evaluate existing procedures. Develop and implement modifications necessary to address spill response at all City facilities.

1.3.4 Illicit Discharge Detection and Elimination

- **BMP ID-1. Legal Authority.** Amend municipal code, as needed, to prohibit illicit non-storm water discharges to the City storm drainage system.

- **BMP ID-2. System Map.** Develop a storm drain system map that shows the location of all drainage inlets, conveyance facilities (e.g. pipes and open channels or ditches) and outfalls and the waters of the United States that receive discharges from those outfalls.

- **BMP ID-3. Illicit Discharge Elimination.** Develop and implement a program that will lead to the detection and elimination of illicit non-storm water discharges to the City storm drainage system.

1.3.5 Construction Site Storm Water Runoff Control

- **BMP CS-1. Legal Authority.** Amend municipal code, as needed, to require construction site operators to install and maintain adequate erosion and sediment controls to reduce pollutants in storm water runoff.

- **BMP CS-2. Plan Review.** Modify existing City procedures, as needed, to assure construction plans and specifications are adequately reviewed to verify that erosion, sedimentation, and construction material and waste controls are adequate to reduce pollutants in storm water runoff.

- **BMP CS-3. Site Inspection.** Modify existing City procedures, as needed, to assure that site conditions are adequately inspected by City staff to assure erosion, sediment, and construction material and waste controls are adequately in place and maintained in order to reduce pollutants in storm water runoff.

1.3.6 Post-Construction Storm Water Management in New Development and Redevelopment

- **BMP PC-1. Legal Authority.** Amend municipal code, as needed, to require that post-construction BMPs be considered during the planning and design process for new and remodeled improvements that involve the disturbance of one or more acres.

- **BMP PC-2. Design Standards.** Develop City post construction facility design standards that are suitable and effective for preventing post-construction storm runoff pollution from new development and redevelopment.

The listed BMPs primarily involve establishment of adequate legal authority, education of the public and City employees, drainage system mapping and evaluation and revision of the existing City procedures and design standards. Ultimately, SWMP implementation will result in additional City and private capital and operating costs for management of urban runoff to protect the quality of waters in Hangtown Creek.

SECTION 2
INTRODUCTION

SECTION 2
INTRODUCTION

2.1 BACKGROUND

The City of Placerville is located in the Sierra Nevada foothills, approximately 40 miles east of Sacramento, in El Dorado County (County). The City limits (see Figure 2.1) encompass approximately 5.8 square miles, of which approximately 87 percent (or 5.1 square miles) is within the Hangtown Creek watershed. The remaining portions of the City are within the Big Canyon Creek (9 percent) and Weber Creek (4 percent) watersheds.

Hangtown Creek is tributary to Weber Creek, which is tributary to the South Fork of the American River. The Hangtown Creek watershed contains approximately 9.4 square miles. The headwaters are located approximately 0.6 miles upstream of the City limits in Smith Flat. The creek terminus is located approximately 1.1 miles downstream of the City limits.

Ground surface elevations within the City range from approximately 1,500 feet to 2,200 feet. Average precipitation is approximately 38 inches per year.

2.2 REGULATORY REQUIREMENTS

2.2.1 Federal and State Requirements

Section 402(p) of the Clean Water Act requires that the United States Environmental Protection Agency (U. S. EPA) establish a phased program to regulate storm water discharges from municipal separate storm sewer systems (MS4s) and industrial activities. A MS4 is a conveyance system or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) designed or used for collecting or conveying storm water.

The Phase I federal storm water regulations were promulgated on November 16, 1990. The Phase I regulations require that storm water permits be issued for Large MS4s (serving populations of 100,000 people or more), certain industrial activities and construction activities disturbing five acres or more.

The Phase II federal storm water regulations were promulgated on December 8, 1999. The Phase II regulations require that storm water permits be issued for Small MS4s (serving populations of less than 100,000) and construction activities disturbing one acre or more.

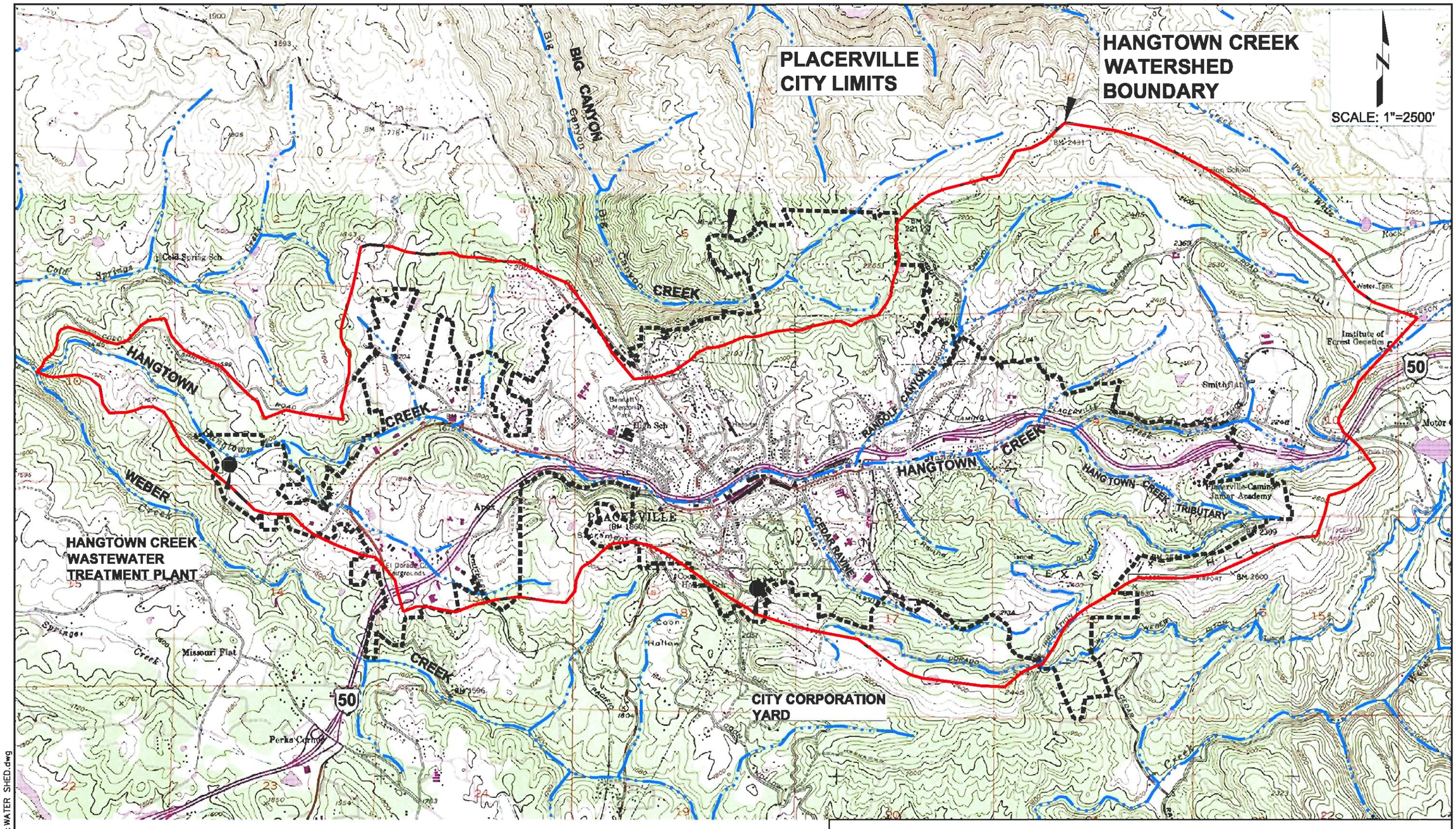

Figure 2.1. Hangtown Creek Watershed

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In California, the federal storm water regulations for Small MS4s, industrial activities and construction activities are being implemented through the following three statewide general permits adopted by the State Water Resources Control Board (SWRCB) and enforced by local California Regional Water Quality Control Boards:

- Water Quality Order No. 2003-01005-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems, which was adopted on April 30, 2003 (General Small MS4 Permit). The General Small MS4 Permit is applicable to the operators of two types of MS4s that are not permitted under the federal Phase I storm water regulations:

  - ✓ Traditional Small MS4s. Designated in Attachments 1 or 2 to the General Small MS4 Permit: MS4s serving small urbanized cities and counties and areas of special concern to the SWRCB or a California Regional Water Quality Control Board due to high population density, high growth potential, significant contribution of pollutants to an interconnected permitted city or county, or due to the discharge urban runoff to a sensitive water body.

  - ✓ Non-traditional Small MS4s. Anticipated to be designated by the RWQCB: MS4s that serve public campuses (including schools and community colleges), military bases, prisons, and hospital complexes.

- Water Quality Order No. 97-03-DWQ NPDES General Permit No. CAS000001 Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities (General Industrial Permit), which was adopted on April 17, 1997. The General Industrial Permit applies to certain identified industrial activities (e.g. wastewater treatment plants, public transportation maintenance facilities). The SWRCB is currently considering adoption of a revised General Industrial Permit.

- Water Quality Order No. 99-08-DWQ NPDES General Permit No. CAS000002 Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity, which was adopted on August 19, 1999 and was modified on December 2, 2002 (General Construction Permit). The General Construction Permit applies to construction projects that result in land disturbance of one acre or more.

2.2.2 General Small MS4 Permit Requirements

The General Small MS4 Permit requires that the City:

- Submit a Notice of Intent to comply with the terms of the Small MS4 General Permit to the RWQCB by October 27, 2003. The City is designated by the SWRCB as a regulated Small MS4 in Attachment 2 to the General Small MS4 Permit because the City operates a MS4 that has a high population density and discharges to a sensitive water body. However, all the creeks that the City MS4 discharges to are currently meeting water quality objectives (based on 2002 303(d) last adopted by the SWRCB).

- Develop a Storm Water Management Plan (SWMP) that includes Best Management Practices (BMPs) that address the following six minimum program areas. The selected BMPs must reduce pollutants in storm water runoff to a technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. The SWMP must also include measurable goals and timetables for implementation. The six minimum control measures include:

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

- Conduct construction site inspections to verify effective BMPs are in place and maintained.

- Conduct surveillance monitoring to detect illicit non-storm water discharges.

- Submit annual reports to the RWQCB describing progress in SWMP implementation.

The General Small MS4 Permit also includes supplemental requirements that apply to cities subject to growth of at least 25 percent over ten years or that serve populations over 50,000. These requirements include receiving water limitations and certain mandatory design standards for new construction. However, the City has not grown 25 percent over ten years and only serves a population of 10,250 based on California Department of Finance estimates. Based on U. S. Census records, the City's population grew approximately 15 percent between 1990 and 2000 (8,355 in 1990 and 9,610 in 2000). Consequently the City is not required to comply with the supplemental requirements.

2.3 PROGRAM BENEFITS

The benefits of the program include clarification of storm water pollution prevention requirements, enlistment of public support for storm water management, elimination of runoff containing wastes to the storm drainage system, improvement of creek water quality in the City vicinity.

SECTION 3
PROGRAM OVERVIEW

SECTION 3

PROGRAM OVERVIEW

3.1 STORM WATER MANAGEMENT PLAN

The BMPs required by the Small MS4 General Permit are presented in Sections 4 through 9. The BMPs address each of the six minimum control measures and include measurable goals and schedules for implementation. The BMPs presented in each section are summarized below and interrelationships are noted:

Section 4: Public Education and Outreach for Storm Water Impacts. The BMPs are intended to inform the public regarding storm water pollution and provide training for City employees regarding new requirements and procedures. Where applicable, the BMPs are also cross-referenced in each of the other sections.

Section 5: Public Involvement/Participation. The BMPs are intended to comply with State and local public notice requirements, and involve the public in SWMP implementation.

Section 6: Illicit Discharge Detection and Elimination. The BMPs are intended to assist the City in eliminating illicit non-storm water discharges. The BMPs include adoption of amendments to the municipal code (prohibitions against illicit non-storm water discharges) and preparation of a comprehensive storm drainage system map. The City does not have a map that shows the existing storm drainage system and the outfalls to waters of the United States.

Section 7: Construction Site Storm Water Runoff Control. The BMPs are intended to mitigate storm water pollution caused by erosion, improper storage of construction materials, and improper disposal of construction wastes. The BMPs include amendments to the municipal code (construction site control requirements), revision of City plan review and site inspection procedures; and establishment of City procedures to receive and respond to public complaints regarding construction site runoff quality.

Section 8: Post-Construction Storm Water Management in New Development and Redevelopment. The BMPs are intended to require that new development or redevelopment projects that disturb one acre or more are designed to mitigate long-term impacts on storm water runoff quality and quantity. The BMPs include amendments to the municipal code (new development and redevelopment design requirements), and establishment of design standards to that would mitigate storm water pollution.

Section 9: Pollution Prevention/Good Housekeeping for Municipal Operations. The BMPs are intended to mitigate storm water pollution caused by runoff from municipal facilities. The BMPs include evaluation of existing practices and implementation of revised housekeeping and maintenance procedures to prevent storm water pollution.

Section 10: Monitoring and Reporting. Monitoring and reporting requirements are presented in Section 10. These include construction site inspection, monitoring for illicit non-storm water discharges and submittal of annual reports to the RWQCB.

Section 11: Certification. The SWMP certification required by the Small MS4 Permit is provided.

SECTION 4
PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

SECTION 4

PUBLIC EDUCATION AND OUTREACH ON STORM WATER IMPACTS

4.1 REQUIREMENT

In accordance with the General Small MS4 Permit, the City must:

> "…implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff."

4.2 DESCRIPTION

Public education and outreach is important for success of the storm water management program because it will allow the City to:

- Enlist cooperation from the local community;
- Increase public awareness of how storm water runoff quality can be degraded and the need for storm water management;
- Help the public understand what they can do to reduce storm water pollution; and
- Ensure City employees understand and comply with the Small MS4 General Permit requirements.

In order to comply with the General Small MS4 Permit, the City must implement a program to inform the public about the storm runoff impacts on surface waters and enlist public support in SWMP implementation. The BMPs listed below include identification of suitable educational materials and methods for educating the public and training City staff, and informing consultants and contractors. The overall objective is to educate the public and City staff regarding storm water issues and to obtain their cooperation.

4.3 BEST MANAGEMENT PRACTICES

The following BMPs will be implemented:

- **BMP PE-1. Develop Educational Program.** Identify existing or develop new educational and training materials (including brochures, checklists, inspection forms, etc.) that can be used to effectively inform the public and train staff regarding storm water runoff control. Confer with El Dorado County, and/or other related storm water agencies and organizations in compiling existing guidance materials (checklists, inspection forms, etc.) that can be used to educate the public, train City employees, and inform consultants and contractors regarding the new procedures required to mitigate storm water pollution. The program shall address:
  - ✓ Measures that can be taken to prevent storm water pollution (public);
  - ✓ The need to control pollutants at their source; eliminate illicit non-storm water discharges; revise City construction site plan review, inspection procedures, and design standards (City staff, consultants and contractors); and
  - ✓ The educational methods and frequencies.

- **BMP PE-2. Educate the Public.** Inform the public using educational materials developed in BMP PE-1 regarding storm water pollution and the BMPs that the City will be implementing in accordance with the SWMP (e.g., PP-1, PP-3, ID-3, CS-2, CS-3, CS-4 and PC-2). Target audiences will include residents (adults and children), business owners, developers and contractors. Subtasks include:

  - ✓ Distribution of educational materials; and

  - ✓ Discussion of storm water quality issues at public meetings.

- **BMP PE-3. Train City Employees.** Train City employees using educational materials developed in BMP PE-1 regarding storm water pollution and the BMPs that the City will be implementing in accordance with the SWMP. Target employee groups include public works, community development, and parks and recreation. Subtasks include:

  - ✓ Distribution of educational materials; and

  - ✓ Conducting training sessions or sending employees to storm water pollution prevention classes or workshops.

- **BMP PE-4. Inform Consultants and Contractors.** Inform architects, engineers, developers, and contractors using educational materials developed in BMP PE-1 regarding storm water pollution and the BMPs that the City will be implementing in accordance with the SWMP. Subtasks include:

  - ✓ Distribution of educational materials;

  - ✓ Providing information regarding training opportunities in the Placerville vicinity; and

  - ✓ Speaking to professional groups.

Table 4.1 describes each of the BMPs, including the steps and schedule for BMP implementation.

Table 4.1. Minimum Control Measure – Public Education and Outreach.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Program Development			
BMP PE-1. Develop Educational Program. Identify existing and develop new educational and training materials (e.g., brochures, checklists, inspection forms, etc.) that can be used to effectively inform the public and train staff regarding storm water runoff controls. Identify target public and employee audiences. Develop strategy for education and training. Confer with El Dorado County and/or other related storm water agencies and organizations in compiling existing guidance materials (i.e., checklists, inspection forms) that can be used to educate the public, train City employees, and inform consultants and contractors regarding the new procedures required to mitigate storm water pollution. The educational and training materials shall address: • Measures that can be taken to prevent storm water pollution (public); and • The need to eliminate illicit non-storm water discharges, new construction plan review and construction inspection procedures, and new design standards and source control requirements.	Identify educational materials and target audiences and develop education strategy.	6/30/05 (Initiate Ongoing Program)	Public Works Director

Table 4.1. Minimum Control Measure – Public Education and Outreach.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Program Implementation			
BMP PE-2. Educate the Public. Use the educational materials developed in BMP PE-1. Target audiences will include residents, business owners, developers and contractors. Subtasks include: • Distributing educational materials; and • Discussing storm water quality issues at public meetings. Consider use of newspaper articles; distribution of storm water magnets, storm water displays; providing information to public schools; and/or use of the City web page to address urban runoff issues. Present information at public meetings.	Initiate public education program.	6/30/05 (Initiate Ongoing Program)	City Engineer
BMP PE-3. Train City Employees. Use the educational materials developed in BMP PE-1. Target employee groups include public works, community development, and parks and recreation. Subtasks include: • Distributing educational materials; and • Conducting training sessions.	Train employees regarding storm water quality requirements. Provide training for a minimum 90% of the target City employees at least annually.	6/30/05 (Initiate Ongoing Program)	City Engineer

Table 4.1. Minimum Control Measure – Public Education and Outreach.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
BMP PE-4. Inform Consultants and Contractors. Use the educational materials developed in BMP PE-1. Subtasks include: • Distributing educational materials; • Imposing storm water quality requirements as conditions of approval on plans for development projects, and • Requiring BMPs as part of engineering improvement plans.	Educate consultants and contractors regarding storm water quality requirements.	6/30/05 (Initiate Ongoing Program)	City Engineer

SECTION 5
PUBLIC INVOLVEMENT/PARTICIPATION

SECTION 5

PUBLIC INVOLVEMENT/PARTICIPATION

5.1 REQUIREMENT

In accordance with the General Small MS4 Permit, the City must:

> "…at a minimum comply with State and local public notice requirements when implementing a public involvement/participation program."

5.2 DESCRIPTION

Public involvement/participation is important to obtain broader public support, incorporate public expertise, and take advantage of other related programs. The potential BMPs include public meetings, volunteer water quality monitoring, volunteer educators and speakers, storm drain stenciling, community clean-ups, and "adopt a storm drain" programs.

In order to comply with the General Small MS4 Permit, the City must implement a program to involve the public in SWMP implementation. The BMPs listed below include notifying the public regarding the City's plan for SWMP implementation, enlisting volunteers for the storm drain stenciling program, and reaching out to individuals, agencies and organizations interested in the local watershed. The overall objective is to involve the public in SWMP development and implementation.

5.3 BEST MANAGEMENT PRACTICES

The following BMPs will be implemented:

- **BMP PI-1. Public Notice.** Provide requisite notice regarding the public meeting at which the City Council will consider adoption of a resolution authorizing the Public Works Director to implement and enforce the SWMP.

- **BMP PI-2. Storm Drain Marking Program.** Enlist volunteers and implement a program to label the City's drainage inlets (e.g. Discharges to Creek) to clarify that the inlets drain to the creek. Drainage inlets will be labeled in a phased program (25 percent per year).

- **BMP PI-3. Local Watershed Input.** Identify organizations and individuals interested in the Hangtown Creek watershed and meet with representatives at least annually to obtain input.

- **BMP PI-4. Community Activity.** Support public involvement in measures that involve improvement of water quality in Hangtown Creek.

Table 5.1 describes each of the BMPs, including the anticipated steps and time schedule for implementation.

Table 5.1. Minimum Control Measure – Public Involvement/Participation.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Notify Public			
BMP PI-1. Public Notice. Provide requisite notice regarding public meetings at which the City Council will consider adoption of a resolution directing the Public Works Director to implement and enforce the SWMP.	Post requisite notice.	9/30/05 (Complete)	Public Works Director
Public Participation			
BMP PI-2. Storm Drain Marking Program. Develop program. Enlist volunteers and implement program to label the City's storm drains. Stencil or mark drain inlets in a phased program.	Enlist volunteers. Stencil or otherwise label the drainage inlets.	6/30/06 (33% Complete) 6/30/07 (66% Complete) 6/30/08 (100% Complete)	City Engineer
BMP PI-3. Local Watershed Input. Identify organizations and individuals interested in the Hangtown Creek watershed and meet with representatives at least annually to obtain input.	Attend meetings with watershed organizations and other interested parties, at least annually, to obtain input.	6/30/05 (Initiate Ongoing Program)	City Engineer
BMP PI-4. Community Activity. Support activities that will involve the public in clean up of the Hangtown Creek watershed and consider support for volunteer Hangtown Creek monitoring.	Investigate volunteer water quality monitoring program on Hangtown Creek. Support creek "clean up" days.	6/30/05 (Initiate Ongoing Program)	City Engineer

SECTION 6
ILLICIT DISCHARGE DETECTION AND ELIMINATION

SECTION 6

ILLICIT DISCHARGE DETECTION AND ELIMINATION

6.1 REQUIREMENT

In accordance with the General Small MS4 Permit, the City must:

"1) Develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR § 122.26(b)(2)) into the regulated Small MS4;

2) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the U. S. that receive discharges from those outfalls;

3) To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions;

4) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit;

5) Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste…"

However, the City is only required to address the following categories of authorized non-storm water discharges or flows where they are identified as significant contributors of pollutants to the Small MS4:

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 water;
11. springs;
12. water from crawl space pumps;
13. footing drains;
14. lawn watering;
15. individual residential car washing;

16. flows from riparian habitats and wetlands;

17. dechlorinated swimming pool discharges; and

18. discharges or flows from fire fighting activities.

If the RWQCB Executive Officer determines that any of the individual or classes of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U. S., or poses a threat to water quality standards (beneficial uses), the Executive Officer may require the City to monitor and submit a report and to implement BMPs on the discharge.

6.2 DESCRIPTION

Illicit discharge detection and elimination is important for eliminating discharges that can significantly degrade surface water quality and threaten aquatic life, wildlife, and human health. They consist of discharges to the storm drainage system that are not composed entirely of storm water (excluding authorized non-storm water discharges). Illicit discharges include cross-connections with the sanitary sewer system and waste discharges entering drainage inlets (e.g., paint clean up wash water and used oil).

In order to comply with the General Small MS4 Permit, the City must develop, implement, and enforce a program to detect and eliminate illicit non-storm water discharges. The BMPs listed below include amendments to the municipal code, development of a map showing storm drainage patterns, facilities and outfalls within city limits, periodic surveillance for non-storm water discharges during dry weather, and corrective actions to eliminate illicit discharges. The overall objective is to assure that illicit non-storm water is not discharged into the City MS4.

6.3 BEST MANAGEMENT PRACTICES

The following BMPs will be implemented:

- **BMP ID-1. Legal Authority.** Amend the municipal code, as needed, to prohibit illicit non-storm water discharges to the City MS4. The policy must:

  - ✓ Require that illicit non-storm water discharges be eliminated; and
  - ✓ Contain effective mechanisms for enforcement of the municipal code.

- **BMP ID-2. Map Preparation.** The City does not have maps that show the location of existing outfalls. The City will develop maps that show the location of existing outfalls and the waters of the United States. The subtasks include:

  - ✓ Preparation of a base map;
  - ✓ Compilation of records from existing construction drawings;
  - ✓ Identification of areas where outfall data is missing;
  - ✓ Field observations to locate existing facilities; and
  - ✓ Map preparation.

- **BMP ID-3. Illicit Discharge Elimination.** Develop and implement a program to detect and eliminate illicit non-storm water discharges to the City MS4. The subtasks include:

- ✓ Evaluation of sites to identify existing or potential illicit discharges including the following:

  - Custodial wash water disposal practices;
  - Washdown of outdoor eating areas and other paved surfaces;
  - Building washdown; and
  - Vehicle/equipment washing (including fundraiser car washes).

- ✓ Evaluation of alternative disposal practices, including the following:

  - Use dry methods (e.g., sweeping) or methods using minimal water (e.g., mopping) for surface cleaning, if possible;
  - Provide additional sinks, where needed, for custodial disposal (e.g., mop water);
  - Drain wash water to pervious areas where runoff will infiltrate or to the sanitary sewer.
  - Contain and collect wash water runoff generated by cleaning buildings, outdoor eating areas or other facilities or equipment (e.g., using cover mats over drainage inlets, pipe plugs, or booms) and dispose of by pumping into the sanitary sewer (e.g., into sink or cleanout) or by infiltrating in landscaped areas; and
  - Require that fundraiser car washes be located where runoff will not enter the storm drain, but will be contained on site, infiltrate into ground or enter the sanitary sewer. If necessary, place sandbags or other blocking devices to prevent runoff from entering the storm drain.

- ✓ Education of City employees regarding prohibition related to illicit non-storm water discharges (accomplished through BMPs ID-1, PE-2 and PE-3);

- ✓ Development of a program to conduct periodic surveillance to confirm that illicit discharges are not occurring. This may include visual observations and, possibly, collection and analysis of runoff samples; and

- ✓ Enforcement of the City prohibition against illicit non-storm water discharges.

Table 6.1 describes each of the BMPs, including the anticipated steps and time schedule for implementation.

Table 6.1. Minimum Control Measure – Illicit Discharge Detection and Elimination.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Municipal Code			
BMP ID-1. Legal Authority. Review existing municipal code and identify sections that must be revised or augmented to effectively prohibit illicit non-storm water discharges into the City MS4, and establish a tiered enforcement approach to correct code violations. Draft required ordinance amendments. The amendments must include specific enforcement tools (e.g., requiring illicit dischargers to immediately cease and desist from discharging to receiving waters or the storm sewer; remove illicit discharges as soon as practicable; and require clean up and abatement or recovery of the City costs to clean up and abate the discharge).	Review existing municipal code.	8/01/05 (Complete)	Public Works Director
	Adopt required amendments to municipal code.	12/31/05 (Complete)	
Outfall Map			
BMP ID-2. Map Preparation. Develop plan for mapping of the City outfalls. Show known outfalls and receiving streams based on existing records. Identify data gaps. Field locate existing outfalls.	Develop plan.	6/30/05 (Complete)	City Engineer
	Map 33 percent complete.	6/30/06 (Complete)	
	Map 66 percent complete.	6/30/07 (Complete)	
	Map 100 percent complete.	6/30/08 (Complete)	
	Update map annually.	7/01/08 (Initiate Ongoing Program)	

Table 6.1. Minimum Control Measure – Illicit Discharge Detection and Elimination.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Illicit Discharge Elimination			
BMP ID-3. Illicit Discharge Elimination. Develop plan to detect and eliminate illicit non-storm water discharges to City drainage system and illegal dumping. Include identification of priority sites for inspection and enforcement, and receiving reports regarding illicit discharges from the public (e.g., consider a hotline). Amend municipal code to require private parking lot owners to sweep weekly. Train City employees involved in the program. Develop inspection procedures/inspection checklists for inspectors. Utilize a tiered approach to training. Include ongoing yearly training (90 percent of all employees general training/100 percent of impacted employees specific training). Establish procedures for enforcement of code violations. Utilize a tiered approach. Establish a system for tracking corrections of violations.	Develop plan.	6/30/06 (Complete)	City Engineer
	• Train City employees involved in the program (see BMP PE-3), and • Educate the public and businesses regarding environmental hazards (see BMP PE-3).	6/30/06 (Initiate Ongoing Program)	
	Conduct surveillance to identify and eliminate illicit non-storm water discharges	6/30/07 (Initiate Ongoing Program)	

SECTION 7
CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

SECTION 7

CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

7.1 REQUIREMENT

In accordance with the General Small MS4 Permit, the City must:

> "…develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include the development and implementation of, at a minimum:
>
> 1) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law;
> 2) Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;
> 3) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
> 4) Procedures for site plan review which incorporate consideration of potential water quality impacts;
> 5) Procedures for receipt and consideration of information submitted by the public; and
> 6) Procedures for site inspection and enforcement of control measures."

7.2 DESCRIPTION

Construction sites can be a significant source of polluted storm water runoff. Sediment is usually the primary pollutant of concern. However, storm water runoff can also be polluted by improper storage of construction materials and improper disposal of construction wastes (e.g. concrete truck washout, spilled petroleum products, paint, etc.).

In order to comply with the General Small MS4 Permit, the City must require and enforce effective construction site controls. The BMPs listed below include amendments to the existing municipal code, and evaluation and revision of existing City procedures for review of construction plans, inspection of construction sites and response to inquiries and complaints regarding construction site runoff. The overall objective is to assure that all land disturbance projects comply with the General Construction Permit.

7.3 BEST MANAGEMENT PRACTICES

The following BMPs will be implemented:

- **BMP CS-1. Legal Authority.** Amend the municipal code, as needed, to require construction site operators to install and maintain adequate erosion and sediment controls to reduce pollutants in storm water runoff. The policy must:

  - ✓ Address projects that result in land disturbance of one acre or more, and projects that disturb less than one acre if they are part of a "larger common plan of development" (i.e. the installation of construction site controls cannot be avoided by breaking up large projects into small pieces that involve less than one acre of land disturbance);

  - ✓ Contain effective mechanisms for enforcement of the municipal code; and

  - ✓ Assure that land disturbance activities with the City limits comply with the General Construction Permit.

- **BMP CS-2. Plan Review.** Modify existing City procedures, as needed, to assure construction plans and specifications are adequately reviewed to verify that erosion, sedimentation, and construction material and waste controls are adequate to reduce pollutants in storm water runoff, and the construction project complies with the General Construction Permit (where appropriate). The subtasks include:

  - ✓ Evaluation of existing plan review procedures and develop of revised procedures;

  - ✓ Identification of minimum BMPs that are suitable and effective for preventing pollution of storm runoff in the City vicinity;

  - ✓ Training of City employees regarding the revised procedures; and

  - ✓ Education of developers, architects, engineers, and contractors regarding the revised requirements (see BMP PE-4).

- **BMP CS-3. Site Inspection.** Modify existing City procedures, as needed, to assure that site conditions are adequately inspected by City staff to assure erosion, sediment, and construction material and waste controls (e.g., concrete truck washout, paint clean up wash water, etc.) are adequately in place and maintained in order to reduce pollutants in storm water runoff. The subtasks include:

  - ✓ Evaluation of existing plan review procedures and develop revised procedures;

  - ✓ Training of City employees regarding the revised procedures; and

  - ✓ Education of consultants, developers, and contractors regarding the revised requirements.

- **BMP CS-4. Public Inquiries/Complaints.** Modify existing City procedures, as needed, to assure public inquiries and complaints regarding construction site storm runoff are adequately documented, considered, and addressed. The subtasks include:

  - ✓ Evaluation of existing procedures for receiving and responding to public comments and develop of revised procedures; and

  - ✓ Training of City employees regarding the revised procedures.

Table 7.1 describes each of the BMPs, including the anticipated steps and time schedule for implementation.

Table 7.1. Minimum Control Measure – Construction Site Storm Water Runoff Control.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Municipal Code			
BMP CS-1. Legal Authority. Review relevant sections of the municipal code. Identify amendments needed to assure the City has adequate legal authority to require and enforce the construction site controls necessary to reduce pollutants in storm water runoff, including implementation of effective erosion and sediment BMPs, and prohibiting non-storm water discharges. Develop tiered approach for enforcement of violations of municipal code requirements regarding construction site controls (e.g., verbal warning, notice of violation with time schedule, Stop Work orders, etc.).	Identify necessary amendments to municipal code.	8/01/05 (Complete)	Public Works Director
	Revise municipal code as required. Establish tiered enforcement approach to correct violations.	12/31/05 (Complete)	
City Procedures			
BMP CS-2. Plan Review. Increase awareness regarding the need for construction site storm water management. Review existing procedures. Identify procedures that should be revised or augmented to assure construction plans include effective BMPs, Construction SWPPPs are prepared (where applicable), and that grading permit applicants provide proof of coverage under the California General Construction Permit (where applicable).	Increase public, contractor and City employee awareness of the construction storm water management program.	10/01/04 (Initiate Ongoing Program)	City Engineer
	Implement City plan review procedures that require implementation of effective construction site BMPs.	6/30/05 (Complete)	
	Train City employees (see BMP PE-3) regarding plan review procedures. Inform architects and contractors (see BMP PE-4) regarding the revised plan review procedures.	7/01/05 (Initiate Ongoing Program)	

Table 7.1. Minimum Control Measure – Construction Site Storm Water Runoff Control.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
City Procedures (Continued)			
BMP CS-3. Site Inspection. Review existing procedures. Identify procedures that should be revised or augmented to assure effective BMPs are both in-place and are maintained on construction sites in accordance with the approved construction plans and Construction SWPPP (where applicable). Establish criteria for identification of priority sites.	Review existing City site inspection procedures.	6/30/05 (Complete)	City Engineer
Develop procedures for site inspection, including checklists for inspectors. Develop plan to assure that construction sites greater than 1 acre are inspected twice during the dry season and that during the wet season: • Priority sites are inspected weekly; and • Other sites are inspected every two weeks. Establish a system and procedures for enforcement of code violations. Establish a system for tracking and correction of violations.	Implement effective construction site inspection procedures. Provide training for City employees (see BMP PE-3) and inform consultants and contractors (see BMP PE-4) regarding City site inspection procedures.	7/1/05 (Initiate Ongoing Program)	
BMP CS-4. Public Inquiries/Complaints. Develop City procedures for receipt, tracking, and response to public inquiries or complaints regarding construction site runoff.	Review current procedures for response to public inquiries/complaints.	6/30/05 (Complete)	City Engineer
	Implement effective procedures for receipt, tracking and response to public inquiries or complaints regarding construction site runoff. Train City employees (see BMP PE-3) regarding response procedures.	7/1/05 (Initiate Ongoing Program)	

SECTION 8
POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

SECTION 8

POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

8.1 REQUIREMENT

In accordance with the Small MS4 General Permit, the City must:

> "1) Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts;
>
> 2) Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for your community;
>
> 3) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law…; and
>
> 4) Ensure adequate long-term operation and maintenance of BMPs."

8.2 DESCRIPTION

Studies have indicated that prior planning and facility design is the most cost-effective approach to mitigating the storm water quality degradation that can result from urban development. Following construction, storm runoff can be impacted by both the types of pollutants in storm runoff (e.g. sediment, oil and grease, nutrients, pesticides and heavy metals) and the increased quantity of runoff resulting in downstream stream bank scouring and flooding.

In order to comply with the General Small MS4 Permit, the City must require post-construction storm runoff be addressed in the planning and design process, and that the City provides for long-term operation and maintenance (O&M) to maintain the effectiveness of post-construction BMPs (e.g. detention basins). The BMPs listed below include amendments to existing municipal code, evaluation, and revision of existing City requirements for the design of new facilities, and verification that the City provides for O&M of post-construction BMPs. The overall objective is to assure that impacts to storm runoff are adequately considered when designing City facility improvements.

8.3 BEST MANAGEMENT PRACTICES

The following BMPs will be implemented:

- **BMP PC-1. Legal Authority.** Amend the municipal code, as needed, to address storm runoff from new development and redevelopment that disturbs equal to or greater than one acre. The amendments will require that:

  - ✓ New facilities are designed in accordance with City design standards so as to include post-construction BMPs and minimize new impervious areas and new pollutant sources.

  - ✓ The City provides for long-term maintenance of installed post-construction BMPs.

- **BMP PC-2. Design Standards.** Develop City post-construction facility design standards that are suitable and effective for preventing storm runoff pollution from new development or redevelopment after the construction is complete. The subtasks include:

  - ✓ Evaluation of the effectiveness of existing design standards. Consider adoption of revised standards that address the following:

    - Conservation of Natural Areas. Where possible, concentrate or cluster development on portions of the site and leaving remaining land in the natural, undisturbed conditions. Preserve riparian areas and wetlands.

    - Protection of Slopes and Channels. Require that BMPs be included to prevent upstream runoff from flowing down the slope face, stabilize disturbed slopes, revegetate with native vegetation and install energy disruptions (e.g., rip rap) at storm drain, channel and culvert outlets.

    - Storm Drain System Stenciling or Signage. Require installation of stencils with new development.

    - Outdoor Material Storage. Require that materials with the potential to pollute storm water are stored in impervious areas that are covered and/or within secondary containment.

    - Trash Containers. Require that the areas be designed to contain trash and that prevent run-on from outside areas.

    - Restaurants. All outdoor wash areas contained must be covered and connected to the sanitary sewer.

    - Retail Gasoline Dispensing Areas. The areas must be covered and sloped to prevent storm water run-on. Concrete pavement must extend at least 6.5 feet from the corner of the dispenser or the length at which the hose and nozzle can be operated plus 1 foot.

    - Automotive Repair Shops. Maintenance bays shall be indoors or covered. Vehicle or equipment wash areas shall be covered and connected to the sanitary sewer. Fuel dispensing areas shall be designed as required for retail gasoline dispensing areas.

    - Parking Lots. Minimize impervious coverage. Infiltrate (e.g., vegetated swales) or treat runoff from lots with 25 or more spaces.

  - ✓ Identification of suitable structural BMPs. These may include construction of storm water storage or detention improvements, infiltration facilities, and vegetative swales and buffers.

  - ✓ Identification of suitable non-structural BMPs. These may include master planning to locate new improvements away from sensitive areas, preserving existing site vegetation and minimizing site disturbance.

  - ✓ Employee training regarding the revised standards and long-tem maintenance requirements.

- ✓ Provide mechanism and funding for ongoing inspection and maintenance to ensure BMP effectiveness (e.g., parking lot runoff treatment devices).

- ✓ Education of designers regarding the revised standards.

- **BMP PC-3. Site Inspection.** Develop and implement procedures to assure that the City inspects structural or treatment control BMPs on at least an annual basis to verify proper maintenance and operation of structural BMPs (e.g., containment structures) and treatment of BMPs (e.g., sand/oil separators, absorbent pillows, etc.). The inspections must be documented.

Table 8.1 describes each of the BMPs, including the anticipated steps and time schedule for implementation.

Table 8.1. Minimum Control Measure – Post-Construction Storm Water Management in New Development and Redevelopment.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
Legal Authority			
BMP PC-1. Legal Authority. Review existing municipal code and identify amendments needed to assure the City has adequate legal authority to require that: • Post-construction BMPs be considered for all construction projects that disturb one acre or more; and • Privately owned post-construction BMPs are adequately maintained (e.g., require long-term maintenance agreements). Establish a system and procedures for tiered enforcement of code violations.	Review existing municipal code.	8/01/06 (Complete)	Public Works Director
	Revise City municipal code as required.	12/31/06 (Complete)	
Design Standards			
BMP PC-2. Design Standards. Review existing standards and identify requirements or standards that should be added regarding post-construction BMPs for new development or redevelopment. Develop a program to inspect the quality of storm water runoff after a major event in areas where post-construction runoff controls are utilized. Evaluate effectiveness of post-construction BMPs. Ensure that the public works construction and maintenance projects and private projects conform to the same standards.	Review existing design standards. Identify suitable post-construction BMPs.	6/30/06 (Complete)	City Engineer
	Revise City design requirements as necessary to implement post-construction BMPs.	6/30/07 (Complete)	
	Implement revised design standards. Train employees and designers (see BMP PE-4) regarding post-construction BMP design standards.	7/01/07 (Initiate Ongoing Program)	

Table 8.1. Minimum Control Measure – Post-Construction Storm Water Management in New Development and Redevelopment.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
City Procedures			
BMP PC-3. Site Inspection. Conduct inspections to verify that public and privately owned post-construction controls are operating properly and adequately maintained. Evaluate post-construction effectiveness.	Implement program.	7/01/07 (Initiate Ongoing Program)	City Engineer

SECTION 9
POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

SECTION 9

POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

9.1 REQUIREMENT

In accordance with the Small MS4 General Permit, the City must:

"1) Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and

2) Using training materials that are available from U. S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance."

9.2 DESCRIPTION

Pollution prevention/good housekeeping for municipal operations requires that the City examine existing facilities to identify source control and maintenance measures that can be taken to mitigate urban runoff pollution. The control measures include maintenance activities, schedules for maintenance and inspection, and material storage and disposal procedures.

In order to comply with the General Small MS4 Permit, the City must maintain City facilities in a neat and clean condition and implement pollution prevention practices. The BMPs listed below include good housekeeping, and spill prevention and response. The City facilities of greatest concern would include the corporation yard, street improvements, the parking lots and parking garage, and the WWTP.

Pollution prevention and good housekeeping practices at the Hangtown Creek WWTP are already covered by a site-specific Storm Water Pollution Prevention Plan (SWPPP). The City has filed a NOI with the SWRCB regarding compliance with the General Industrial Permit at the Hangtown Creek WWTP. WDID Number 5S09S008022 has been assigned for storm water discharges from the facility.

9.3 BEST MANAGEMENT PRACTICES

The following BMPs will be implemented:

- **BMP PP-1. City Facilities – General.** Evaluate existing housekeeping, material storage, waste disposal and equipment cleaning procedures. Develop and implement appropriate modifications necessary to prevent pollution. Subtasks include:

  <u>Corporation Yard</u>

  - ✓ Daily cleaning of work areas. Work areas shall not be hosed down, but dry or damp mopped;

  - ✓ Placement of drip trays or pans beneath vehicles and equipment that are leaking while awaiting servicing or during servicing; and

- ✓ Inspection of work areas regularly to verify the facilities are clean and uncluttered.

Material Storage

- ✓ Placement of significant materials (e.g., petroleum products, solvents, paint, pesticides, fertilizers, waste materials, batteries, etc.) indoors, under a structural cover or tarp;

- ✓ Placement of materials that could leak or spill (e.g., oil, bags of fertilizer, etc.) within secondary containment; and

- ✓ Keeping dumpster lids closed to prevent contact with precipitation. Never place liquid waste in dumpsters. Sweep up dumpster area regularly (do not hose down).

Street Improvements and Parking Lots

- ✓ Sweeping regularly;

- ✓ Use of absorbent materials, where needed, to clean up heavy deposits of oil; and

- ✓ Monitoring of runoff during storm events to verify BMP effectiveness.

Storm Drainage System

- ✓ Removal of accumulated debris from catch basins and storm drains at least annually;

- ✓ Removal of debris, trash, and sediment from drainage inlet grates regularly throughout the rainy season;

- ✓ Evaluation of effectiveness of the existing storm drain inspection and cleaning programs;

- ✓ Identification of additional equipment required to maintain the storm drainage system; and

- ✓ Identification of tributary areas subject to erosion and feasible alternatives for mitigation. Implement corrective measures.

Pool

- ✓ Identification of where pool drainage is discharged; and

- ✓ Confirming that pool discharges are adequately dechlorinated prior to entering the storm drain system.

- **BMP PP-2. Hangtown Creek WWTP.** Implement existing SWPPP for Hangtown Creek WWTP.

- **BMP PP-3. Spill and Leak Prevention/ Response.** Identify areas where spills/leaks could occur. Identify existing materials (e.g., absorbent powder), equipment (e.g., containment socks and pallets), and procedures (e.g., immediate containment of spilled material, proper disposal of absorbent, etc.). Develop and implement procedural modifications necessary to address spills at all City facilities, including containment and cleanup of all spills using absorbent materials. Maintain absorbent materials where needed for rapid response by City employees.

Table 9.1 describes each of the BMPs, including the anticipated steps and time schedule for implementation.

Table 9.1. Minimum Control Measure – Pollution Prevention/Good Housekeeping.

BMP	Measurable Goal	Implementation Schedule	
		Date	Responsible Individual
City Facilities			
BMP PP-1. City Facilities – General. Review existing City housekeeping, material storage, waste disposal, equipment and facility cleaning, and street and municipal parking lot sweeping procedures. Identify procedures that should be revised or augmented to assure reduction of pollutants in storm water to the maximum extent practicable. Inventory and categorize streets and document street sweeping activities. Outline the proposed frequency of street sweeping. City Corporation Yard - Develop Pollution Prevention Plans to prevent or reduce pollutant runoff from municipal operations (facilities and activities). The plans should include: • Review of facilities and activities that may contribute pollutants; • Identification of problem areas and effective corrective actions; and • Identification of BMPs that will be implemented at facilities and as part of municipal operations. Develop a procedure to obtain employee feedback regarding BMP effectiveness.	Review existing City procedures and activities.	6/30/06 (Complete)	Public Works Director
	Revise City procedures, as necessary. Train City employees (see BMP PE-3) regarding revised procedures.	6/30/07 (Initiate Ongoing Program)	
	Develop Pollution Prevention Plan for City Corporation Yard.	6/30/07 (Complete)	
BMP PP-2. Hangtown Creek WWTP. Continue implementation of existing SWPPP.	Implement SWPPP.	Ongoing Program	Wastewater Treatment Plant Superintendent
Spills and Leaks			
BMP PP-3. Spill Prevention/Response. Review existing City spill/leak prevention, response, and cleanup procedures, and equipment. Identify procedures that should be revised or augmented to assure reduction of pollutants in storm water to the maximum extent practicable.	Review existing City spill/leak response and clean up procedures and equipment.	6/30/06 (Complete)	Public Works Director
	Implement effective City procedures. Train City employees (see BMP PE-3) regarding revised procedures.	6/30/07 (Complete)	

SECTION 10
MONITORING AND REPORTING

SECTION 10

MONITORING AND REPORTING

10.1 MONITORING

In accordance with the General Small MS4 Permit, the City must accomplish the following.

10.1.1 Construction Site Inspections

The City must inspect construction activities that result in land disturbance of one acre or more to verify that effective BMPs are in place and are properly maintained. The inspections must be documented.

10.1.2 Surveillance for Illicit Non-Storm Water Discharges

The City must conduct surveillance to detect and eliminate illicit non-storm water discharges, including illegal dumping. The surveillance activities must occur regularly and be documented (see BMP ID-3).

10.1.3 Structural or Treatment Control BMPs

The City must inspect (see BMP PC-3) structural or treatment control BMPs, on at least an annual basis, to verify proper maintenance and operation of structural BMPs (e.g. containment structures) and treatment BMPs (e.g. sand/oil separators, absorbent pillows, etc). The inspections must be documented.

10.2 REPORTING

10.2.1 Annual Reports

After being permitted, the City must submit annual reports to the RWQCB by September 15 of each year. The reports must summarize the activities performed throughout the preceding reporting period (July 1 through June 30) and must include:

"a. The status of compliance with 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 storm water activities the Permittee plans to undertake during the next reporting cycle;

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

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

10.2.2 Noncompliance Reports

The City must notify the RWQCB within thirty days if it is unable to certify compliance with the SWMP or other General Small MS4 Permit requirements:

> "Instances of noncompliance resulting in emergencies (i.e., that endanger human health or the environment) shall be reported orally to the RWQCB within 24 hours from the time the discharger becomes aware of the circumstance and in writing to the RWQCB within five days of the occurrence. The notification shall identify the noncompliance event and an initial assessment of any impact caused by the event, describe the actions necessary to achieve compliance, and include a time schedule indicating when compliance will be achieved. The time schedule and corrective measures are subject to modification by the RWQCB Executive Officer."

10.3 RECORDS

10.3.1 Record Retention

The City must keep records required by the Small MS4 Permit for at least five years or the duration of the General Permit (if the permit term is extended beyond five years). The RWQCB Executive Officer may specify a longer time for record retention.

10.3.2 Record Submittal

The City must submit records to the RWQCB Executive Officer upon request.

10.3.3 Record Availability

The City must make its records, including the Small MS4 Permit and SWMP, available to the public during regular business hours.

SECTION 11
CERTIFICATION

SECTION 11

CERTIFICATION

11.1 CERTIFICATION

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

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

_____ _____

Date John Driscoll, City Manager