

CITY OF PLACERVILLE

STORM WATER MANAGEMENT PLAN

Prepared for
City of Placerville
3101 Center Street
Placerville, CA 95667

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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 absorption 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
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 this 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

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 absorption, 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

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 Creeks 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 water (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 Education 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.