CITY OF PETALUMA
PHASE II NPDES
STORM WATER MANAGEMENT PLAN

Project No. 03-205501-030

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1.0 EXECUTIVE SUMMARY

The federal Storm Water Phase II Final Rule required operators of small municipal separate storm sewer systems (MS4s) to comply with the National Pollutant Discharge Elimination System (NPDES) regulations by March 10, 2003. The Phase II Rule was the follow-up to the United States Environmental Protection Agency's (EPA) Phase I NPDES Program, promulgated in 1990 as part of the Clean Water Act. Phase I required municipalities with populations over 100,000 to implement programs and practices to reduce pollutants in storm water runoff. The Phase II Rule requires cities with populations between 10,000 and 100,000 to do the same. A NPDES permit is required because storm water discharges from selected cities and other institutions are considered sources of pollution. The City of Petaluma has been automatically designated to comply with the Phase II Rule by the EPA because of its population size.

The City is located within the Petaluma River watershed, which supports beneficial uses for cold and warm freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habit, and contact and non-contact water recreation.

The San Francisco Bay Regional Water Quality Control Board (Regional Board) is the regulatory agency having NPDES permit oversight authority for Petaluma. Representatives from Winzler & Kelly have had several conversations with Ms. Selina Louie, Petaluma's Regional Board storm water contact, to discuss the development of the plan, the Regional Board's goals, their expectations, and their comments to the original Storm Water Management Plan.

Impacts from urban, construction, land development, atmospheric deposition, and agricultural runoff have resulted in the listing of the Petaluma River on the 2002 Clean Water Act's Section 303(d) list for nutrients, pathogens, sediment, diazinon, and nickel (nickel is listed for the tidal portion of the River). Section 303(d) of the federal Clean Water Act requires that states identify water bodies that do not meet water quality standards. Total Maximum Daily Loads (TMDLs) are then developed for each water body on the list, and include identifying sources of pollutants, defining how much of a pollutant a water body can tolerate while still meeting water quality standards, and specifying actions that create solutions. Nutrients, pathogens, and sediment are listed as "medium priority" pollutants, while diazinon and nickel are listed as "low priority" pollutants for the Petaluma River.

During the initial permit term, the City's Storm Water Management Plan (Plan) will focus efforts and resources on best management practices (BMPs) that address the reduction of nutrients, pathogens, and sediment in the City's storm water, the "medium" priority pollutants in the Petaluma River water body. The City's future storm water management program could address the low priority pollutants, diazinon, and nickel, if such constituents continue to cause impairment to the River, resulting in a "medium" or "high priority" listing by the Regional Board.

The State Water Resources Control Board adopted the General Storm Water Permit (General Permit) on April 30, 2003. In order to be in compliance with the permit, Petaluma submitted to the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) on March 6, 2003 a Notice of Intent form, a Plan, and 50% of the annual permit fee of $7,500. Due to the fact that Petaluma submitted their Plan prior to the adoption of the State General Permit, the Plan needed

to be revised to reflect the final permit requirements. Those revisions have been incorporated into this version of the Plan. The Plan acts as the City's permit, describing actions including BMPs, measurable goals, and timetables for what are defined as Minimum Control Measures (MCMs). The City has already put into practice many of the measures required by the General Permit, but will need to formalize and document what has been done for reporting purposes. Other program requirements will be implemented over a five-year period, which is the length of the first permit term. During the five-year permit term, Petaluma must submit annual reports to the Regional Board that document and convey progress in implementing the six MCMs. The six MCMs required by the permit are:

- Public Education and Outreach
- Public Participation/Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control
- Post-Construction Storm Water Management
- Pollution Prevention for Municipal Operations

The positive aspect is Petaluma has already implemented actions to address some of the EPA's Menu of BMPs for each of the six MCMs. These include pollution prevention, requiring construction projects to implement and maintain erosion control practices during grading activities, street sweeping, and other activities. There are several agencies and non-profit groups that Petaluma will want to establish partnerships with, such as the Sonoma County Water Agency, Sonoma Waste Management Agency, Empire Waste Management, and the Southern Sonoma County Resource Conservation District. The purpose of these partnerships will be to share in the implementation of other elements of the Plan, such as public education, outreach, involvement, and participation.

The negative aspect is that the Phase II NPDES program is an un-funded federal mandate. Budgeting for additional street sweeping and storm drain maintenance, and the preparation of the Plan have already taken place. Petaluma's costs for materials and the annual permit fee are estimated at upwards of $30,000 for the first year of implementation, and between $29,000 and $33,000 for the remainder of the permit term. In addition to these costs, personnel estimates to implement and manage the program are estimated at a minimum of three full-time equivalents (3.0 FTEs). Most of these additional activities will be accomplished with existing staff. However, to help address this need, the Department of Water Resources and Conservation (WR&C Department) has budgeted to add three new field staff for storm water operations maintenance. These three staff will be utilized as field staff, and will perform duties, which will include, but will not be limited to, storm water BMPs. In subsequent years of the permit term, a Storm Water Planning Specialist (or similar) position may be added to assist the Program Leader with all of the administrative duties associated with the management of this program. According to Regional Board staff, failure to implement the program and the minimum required BMPs could result in third-party lawsuits, notices of violation, additional regulatory requirements, and possible fines of up to $27,500 per day.

The WR&C Department is taking the lead in the implementation of the Storm Water Management Program (SWMP). The Program Leader will be the Engineering Manager for the WR&C Department, Mr. Dean Eckerson. The Program Leader and WR&C Department will be working closely with the Community Development Department, the Public Facilities & Services Department, and other city departments and agencies to implement the Plan.

The General Permit requires that all Notices of Intent (NOIs), Plans, certifications, reports, and other information prepared be signed by either the principal executive officer, ranking elected official, or duly authorized representative. For the City, the authorized representative is the WR&C Department Director, Mr. Michael Ban.

New language and elements will be incorporated into existing documents such as the City's General Plan, Environmental Information Form, and Building and Community Development Department (CD Department) inspection procedures. An ordinance prohibiting non-storm water discharges will be adopted that will clarify and enforce what can and cannot be discharged to the City's storm drain system. In addition, the existing erosion control and grading ordinance will be updated for construction activities disturbing one acre or more. Ordinance language will allow City staff to enforce those changes necessary to reduce pollutants to the City's storm drains and subsequently to the Petaluma River, and will support the implementation of this comprehensive program.

The City will also develop and implement a Post-Construction Storm Water Management Program for new development and redevelopment by the end of the five-year permit term. This will include an ordinance requiring compliance with post-construction design standards and long-term maintenance of BMPs, an enforcement response plan, and plan review procedures. The City is subject to this requirement because it serves a population over 50,000.

2.0 BACKGROUND

2.1 Regulatory Background

The federal Storm Water Phase II Final Rule required operators of small municipal separate storm sewer systems (MS4s) to obtain a National Pollutant Discharge Elimination System (NPDES) permit by March 10, 2003. The Phase II Rule was the follow-up to the United States Environmental Protection Agency's (EPA) Phase I NPDES Program, promulgated in 1990 as part of the Clean Water Act. Phase I required municipalities over 100,000 to implement programs and practices to reduce pollutants in storm water runoff. The Phase II Rule requires cities between 10,000 and 100,000 to do the same. A NPDES permit is required because storm water discharges from selected cities and other institutions are considered sources of pollution. The City of Petaluma has been automatically designated to comply with the Phase II Rule by the EPA because of its population size.

The State Water Resources Control Board adopted the General Permit on April 30, 2003. In order to be in compliance with the permit, Petaluma submitted a Notice of Intent form, a Storm Water Management Plan (Plan), and 50% of the annual permit fee of $7,500 to the SFBRWQCB on March 6, 2003. Due to the fact that Petaluma submitted their Plan prior to the adoption of the State General Permit, the Plan needed to be revised to reflect the final permit requirements. Those revisions have been incorporated into this version of the Plan.

The Plan acts as the City's permit, describing actions that include BMPs, measurable goals, and timetables for what are defined as MCMs. During the five-year permit term, Petaluma must submit annual reports to the Regional Board that document and convey progress in implementing the six MCMs.

The Phase II Rule automatically requires NPDES permits for small MS4s located in urbanized areas. Generally, cities between 10,000 and 100,000 fall into this category, unless the state or federal government designated them due to their proximity to sensitive water bodies or other criteria. "Urbanized area" is a census term applying to a land area comprising of one or more places (towns) and an adjacent densely settled surrounding area that together have a residential area of at least 50,000 population, and a density of at least 1,000 people per square mile. The City's neighbors, Cotati, Rohnert Park, and Sonoma, are also new Phase II permittees. Once a small entity is designated into the storm water program based on urbanized area boundaries, it cannot apply for a waiver.

The Phase II Rule requires implementation of the BMPs to the maximum extent practicable (MEP). Implementation of this standard will typically require the development and implementation of BMPs and the achievement of measurable goals to satisfy each of six defined MCMs. The Plan is a program that coordinates the six MCMs so that when they are implemented together, they should result in reductions in pollutants discharged to waterways. The six MCMs required by the permit are:

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

2.2 City Resources

A brief introduction to each of the City Departments that will be involved in the implementation of this Plan is provided below.

2.2.1 Department of Water Resources and Conservation

The WR&C Department currently handles all storm water maintenance issues involved with the water distribution, storm water conveyance, and sewer collection systems. As the department housing the Program Leader, much of the coordination and information-gathering responsibilities will reside with this department. The Program Leader will require functional authority (the ability to obtain work from staff members that are not directly supervised) over the positions identified in the other city departments. WR&C Department personnel will be heavily involved in the implementation of BMPs in the Illicit Discharge Detection and Elimination and Pollution Prevention/Good Housekeeping of Municipal Operations MCMs. These activities are described in detail in sections 5.3 and 5.6 of this Plan, as well as in Table 1 (Attached).

2.2.2 Community Development Department

The CD Department is compromised of three main divisions; Building, Engineering, and Planning. The Building division currently conducts plan reviews and field inspections of all proposed construction to assure compliance with all state and local building codes. The Engineering division provides development review and public works inspection services for new residential, commercial, and industrial development within the City of Petaluma. Review services insure that improvement plans, final/parcel maps, building permits, and excavation permits comply with City regulations, policies, and standards. The inspections verify that the

BMPs and procedures specified in the storm water pollution prevention plan (SWPPP) and erosion control plans are followed. The Planning Division implements public policy and provides project review for new development in Petaluma. The Planning team provides project review and environmental processing for all planning entitlement proposals including subdivisions, planned unit developments, commercial and residential design review, historic district review, use permits, variances and annexations.

These three divisions will be heavily involved in the implementation of BMPs in the Construction Site Storm Water Runoff Control and Post-Construction Storm Water Management in Development MCMs. These activities are described in detail in sections 5.4 and 5.5 of this Plan, as well as in Table 1.

2.2.3 Public Facilities and Services (PF&S) Department

The mission of the PF&S Department is to manage the construction, maintenance, and operation of the City's buildings and street infrastructure. The PF&S Department will be involved in the implementation of various BMPs within this Plan.

2.2.4 Parks and Recreation (P&R) Department

The P&R Department oversees the operation and maintenance of the City's forty-one parks as well as the Petaluma Marina. The P&R Department also manages the implementation of the City's Integrated Pest Management Program (IPM), which all landscape contractors working on City-owned property are required to adhere to. The P&R Department will be involved with the implementation of various BMPs in the City's Plan.

2.2.5 General Plan Administration (GPA) Department

The GPA Department is responsible for the leadership and management of the community effort to prepare and implement the Petaluma 2004-2025 General Plan, and to manage implementation projects. The GPA Department manages the City's website, as well as GIS mapping. GPA Department personnel will be involved in the implementation of various BMPs in this Plan, including the development of a storm water webpage.

2.3 Outside Agencies

Local agencies and nonprofits also contribute to many activities that ultimately reduce storm water pollution, and improve surface water quality to the Petaluma River and its tributaries. The Sonoma County Department of Health Services (SCDHS) maintains a database with an inventory of all retail food facilities within Sonoma County, and conducts unannounced inspections of retail food facilities in Petaluma. The Southern Sonoma Resource Conservation District (SSRCD) developed the Petaluma Watershed Enhancement Plan, which established the formation of the Petaluma Watershed Council (PWC). Volunteer creek workdays provide local school workshops and field trips, and co-hosted educational workshops for the Adopt-A-Watershed program. Projects include Marin Creek restoration, Santa Rosa Junior College (Petaluma campus) riparian habitat restoration on Capri Creek, Lichau Creek, Lynch Creek, Willowbrook Creek erosion repairs, and sponsoring a levee maintenance permit. SSRCD also has a designated Petaluma Watershed Coordinator. The Sonoma Ecology Center is developing a watershed map for the region that will be available in the future.

The Sonoma County Waste Management Agency (SCWMA) conducts annual household hazardous waste collection days, and with the cooperation of Empire Waste Management, Inc., offers residential curbside oil recycling and other typical recycling, such as paper, glass, plastic, tin, and aluminum. The nonprofit clean water advocacy group WaterKeepers of Northern California has a subset called Petaluma RiverKeeper that has volunteer patrols that document problem areas along the Petaluma River.

3.0 ADMINISTRATION, PLANNING, AND FUNDING

WR&C Department is taking the lead and will be working closely with the CD Department, PF&S Department, and other city departments to implement the program activities over the next five years. The City will also be working cooperatively with the Sonoma County Water Agency (SCWA), the SCWMA, Empire Waste Management, and the SSRCD to ensure that resources are utilized efficiently, and that BMPs implemented by each of the agencies do not conflict with or duplicate one another.

The schedule for implementation of the SWMP incorporates a phased approach to implementation of the BMPs over the five-year permit term. The first two years will be focused primarily on creating the legal and administrative framework for the SWMP. During this time, existing ordinances will be modified to include Phase II storm water requirements, new ordinances will be created to address missing elements of the SWMP, design standards will be revised, the post-construction runoff program will be developed, maintenance procedures will be updated/revised to reflect new practices, and training will occur for municipal staff from various departments to educate City employees on the Plan and concepts such as pollution prevention. Following these changes, the remainder of the permit term will primarily be focused on implementing the remaining BMPs. Throughout the permit term, the City will coordinate storm water activities within departments, between departments, and amongst the other Phase II communities in Sonoma County. This will be the primary job of the Program Leader.

Budgeting for additional street sweeping and storm drain maintenance, and the preparation of the Plan have already taken place. Petaluma's costs for materials and the annual permit fee are estimated at upward of $30,000 for the first year of implementation, and between $29,000 and $33,000 for the remainder of the permit term. In addition to these costs, personnel estimates to implement and manage the program are estimated at a minimum of three full-time equivalents (3.0 FTEs). Most of these additional activities will be accomplished with existing staff. However, to help address this need, the WR&C Department has budgeted to add three new field staff for storm water operations maintenance. These three staff will be utilized as field staff, and will perform duties, which will include, but will not be limited to, storm water BMPs.

Approximately 60% of one FTE, or 0.6 FTE, will be utilized for the Program Leader to carry out the organization, coordination, supervision, and direction of the City's Plan. Other departments will need to devote time to implementing their respective responsibilities for the program as well. The CDD will need 0.3 FTEs to handle the plan review and 0.1 FTE for post-construction storm water BMPs for all development projects within the City. The Building and CDD inspectors will require 0.2 FTEs to review storm water BMP placement in construction plans, and several inspections of sites following rainfall events of a designated magnitude.

As the program expands, Petaluma may also add a Storm Water Planning Specialist (or similar) position in future years of the permit term to oversee the data entry, data tracking, secretarial, and other administrative tasks the Program Leader would be more effective to delegate. The paperwork and record-keeping portion of the Program Leader's position is substantial, and the Program Leader's time would be spent more efficiently in program development and coordination.

The City currently funds its storm water activities through the Storm Drainage Fund. Upon implementation of the SWMP, the City will be exploring other sources for funding. This includes participation in the Adopt-A-Waterway program, which is described in detail in Section 5.1.

3.1 Geographic and Land Use Description

3.1.1 Petaluma River Watershed

Petaluma is located approximately 35 miles northwest of San Francisco, in southwestern Sonoma County, along the Highway 101 corridor. The city limits area is approximately 13.1 square miles in size, with a year 2000 population of approximately 54,548 residents.

An in-depth study of the watershed surrounding the City of Petaluma was conducted by the Southern Sonoma Resource Conservation District and was summarized in a report, entitled, *Petaluma Watershed Enhancement Plan*, dated July 1999. The following description of the watershed is taken from that report.

Located in southern Sonoma County, California, and a portion of northeastern Marin County, California, the Petaluma River Watershed encompasses a 146 square mile, pear-shaped basin. The watershed is approximately 19 miles long and 13 miles wide with the City of Petaluma near its center.

The headwaters and ephemeral tributaries of Petaluma River begin on the steep southwest slopes of Sonoma Mountain, the southern slopes of Mecham Hill, and the eastern slopes of Weigand's Hill and Mt. Burdell. The confluence of Willow Brook, Liberty Creek, and Weigand's Creek form the headwaters of the Petaluma Watershed just upstream of Rainsville Road and Stony Point Road. The Petaluma River itself flows across the Denman Flat area and through the City of Petaluma. Tidal influence extends upstream of the confluence with Lynch Creek. The Petaluma River empties into the northwest portion of San Pablo Bay.

The lower 12 miles of the Petaluma River flow through the Petaluma Marsh. Major tributaries in the eastern portion of the watershed include Lichau Creek, which flows into Willow Brook and feeds into Denman Flat area near Stony Point Road and Rainsville Road, Lynch Creek, Adobe Creek, and Ellis Creek. These tributaries flow through both unincorporated land and land within the City of Petaluma limits before joining the Petaluma River.

Three major creeks are located on the western side of the watershed. Wiggin's Creek and Marin Creek flow into Liberty Creek, which also feeds into Denman Flat.

3.1.2 City of Petaluma Watershed

The City's surface water system consists of ditches, natural and improved (mechanized) channels, pipes, and culverts along and within several drainage areas that lie both outside of and

within the City limits. All of these drainage areas discharge into the Petaluma River which then flows south and east to San Pablo Bay.

The identified creeks flowing through the City are Adobe Creek, Capri Creek, Corona Creek, Kelly Creek, Lynch Creek, Thompson Creek, and Washington Creek. Two additional channels, North Corona Channel and Willow Brook, also lie within the City. All of the creeks and channels discharge into the Petaluma River, which flows through the City from northwest to southeast. Additionally, a number of unnamed channels exist in all sections of the City and are the City's, SCWA, or private property owner's responsibility to maintain.

The flows within many of the drainage areas are predominantly seasonal in nature. The channels are periodically dry, or contain only small nuisance water flows, but are impacted by storm flows during the rainy season, from October to April.

The City's storm drain system is shown on the City's storm drain maps. The Petaluma River is the most prominent waterway in the region, flowing generally along Petaluma's western boundary. Figure 1, Watershed Features Map, illustrates the Petaluma River Basin watershed designations and water features of the area.

3.1.3 Land Use

The most intensively developed area within the Petaluma River watershed is the City of Petaluma, which consists largely of single-family residential and public lands (including schools, the hospital, and state park lands). Land Uses in the watershed include intensive urban development, rural residential, agriculture, and open space. The urban development is concentrated within the city limits of Petaluma. Figure 2, City of Petaluma Existing Land Use Map, illustrates and defines the land use patterns within the City's sphere of influence.

4.0 POLLUTANTS OF CONCERN

Enactment of the Federal Water Pollution Control Act of 1972 established federal laws to reduce or eliminate pollutants in waters of the United States. As amended in 1977, these laws became known as the Clean Water Act (CWA). Section 303(d) of the CWA requires states to identify and list all surface waters that do not meet applicable water quality standards. The surface waters on the list do not meet applicable water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The CWA further requires states to establish priority rankings for the listed water bodies and develop action plans, known as Total Maximum Daily Loads (TMDLs) to reduce or eliminate the identified pollutants and improve water quality in support of designated beneficial uses.

In compliance with the CWA, the State Water Resources Control Board identified a 22-mile-long segment of the Petaluma River as not meeting water quality standards. Impacts from urban runoff, construction, land development, and agricultural runoff have resulted in the CWA Section 303(d) listing of the Petaluma River for nutrients, pathogens, and sediment in this jurisdiction. The TMDLs for these pollutants are identified as a medium priority, and are expected to be completed in the next several years. Recently, diazinon was added to the CWA Section 303(d) list for the Petaluma River, with a low priority TMDL.

The NPDES Phase II General Permit requires permittees to address the priority pollutants identified in their watershed. The City's Storm Water Management Program is designed to reduce or eliminate the priority pollutants in the watershed, and to improve water quality in support of the beneficial uses of surface water bodies. The Petaluma River watershed supports beneficial uses for cold and warm freshwater habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habit, and contact and non-contact water recreation.

4.1 Medium-Priority Pollutants

During the initial permit term, the City's Plan will focus efforts and resources on BMPs that address the reduction of nutrients, pathogens, and sediment in the City's storm water, the "medium" priority pollutants in the Petaluma River water body. The City's future Plan could address the low priority pollutants, diazinon and nickel, if such constituents continue to cause impairment to the River, resulting in a "medium" or "high priority" listing by the Regional Board.

4.1.1 Nutrients

Nutrients consist of algae-growth stimulating substances such as ammonia, nitrogen, and phosphorus. Unionized ammonia, the more toxic portion of total ammonia, is toxic to fish, especially when water begins to become more basic, around 7.8 pH units.

For the Petaluma River, nutrients are listed as a medium TMDL priority pollutant. Sources of nutrients are described as agriculture, construction/land development, and urban runoff/storm sewers. The TMDL for nutrients will be developed by the Regional Board as part of an ongoing watershed management effort.

4.1.2 Pathogens

Pathogens consist of total and fecal coliform, E. coli, and Enterococci. Most recently, the pathogen focus has been on fecal coliform and Enterococci, the less costly and more definitive indicator organisms of fecal contamination.

For the Petaluma River, pathogens are also listed as a medium priority pollutant. The sources of pathogens are the same as for nutrients—agriculture, construction/land development, and urban runoff/storm sewers.

4.1.3 Sediment

Sediment impairment was identified more recently, and is primarily concerned with urban development, construction, and agricultural runoff. Sediment is measured by turbidity – a measurement of the more fine particles or cloudiness of water, sediment – the soil that sinks to the bottom of a water body, suspended material – the larger particles that can be removed by chemical addition, and settleable matter – the particles that eventually settle to the bottom of a water body. Sediment is also considered a medium priority pollutant by the Regional Board.

4.2 Low Priority Pollutants

Diazinon and nickel (Petaluma River tidal portion) are listed as low priority pollutants in the Petaluma River watershed, in addition to the medium priority listings for nutrients, pathogens, and sediment. Diazinon is a commonly used pesticide, and is listed as a pollutant that impairs the

Petaluma River in both the upper reaches as well as in the tidal portion of the river. Diazinon is linked to harmful effects on aquatic life and has been detected in concentrations exceeding water quality standards.

Nickel is the second low-priority pollutant causing impairment to the tidal portion only of the Petaluma River. Potential sources of this pollutant are municipal point sources, storm water runoff, and atmospheric deposition. Nickel is also linked to harmful effects on aquatic life. According to the 303(d) list, the California Toxic Rule dissolved criteria and the National Toxic Rule total criteria have been exceeded by nickel. Elevated water levels and sediment tissue levels have also been recorded. A Regional Monitoring Program was conducted between March 1993 and April 2001, during which there were four incidents of the Basin Plan water quality standards for nickel being exceeded. However, the City will focus its SWMP on the medium priority pollutant in the initial five-year permit due to the fact that the Regional Board has given them a higher priority at this time. The City's future Plans may address these low priority pollutants, if they continue to cause impairment to the River.

5.0 MINIMUM CONTROL MEASURES

The Phase II Rule defines a Plan as a program consisting of six elements or MCMs that, when implemented together, are expected to achieve reductions of pollutants discharged into receiving water bodies, in this case, the Petaluma River and its tributaries. Each of the six MCMs is described below, along with the types of activities that are included in the MCM. Table 1, Storm Water Management Plan – At A Glance, will provide additional details pertaining to current and planned BMPs, implementation plans, measurable goals to measure the success of BMPs, the time frames for implementation, pollutants addressed, audiences targeted, and the individuals or agency responsible for the implementation of the BMPs. The six MCMs required by the General Permit are described in the following sections.

5.1 Public Education and Outreach

The Public Education and Outreach MCM consists of distributing materials and performing outreach to inform citizens about impacts polluted storm water runoff can have on the Petaluma River and its tributaries. Most people are unaware that there are everyday activities that they perform that have negative impacts on the creeks near their homes and businesses. When people are marginally aware that they may be contributing some form of pollution, their actions, multiplied by the millions of inhabitants within San Francisco Bay watershed could have a positive cumulative effect. There is greater compliance with the program, as the public becomes aware of their personal responsibility for protecting water quality.

Several storm-water-related activities related to this MCM are currently implemented within the City. Detailed descriptions of these activities along with implementation plans to expand on the activities are provided in the following table.

Table 2 – Current BMPs for Public Education and Outreach

BMP	Detailed Description of Existing Program	Reference to Table 1
Sonoma County Water Agency, Water Education Program	The SCWA's Watershed Education Program is designed to help educators teach students the value of water as an important natural resource and to promote water conservation and stewardship of the watershed. The program includes classroom visits and field trips. Each year the SCWA sends information packets to schools throughout Sonoma and North Marin County with order forms for free educational materials, teacher workshops, and field trips. The SCWA also has a lending library and educational materials such as a computer game that focuses on pollution prevention. The SCWA is planning to expand its outreach by making curriculum materials available to teachers of grades 7 through 12. In 2002, seven Petaluma schools participated in field studies and classroom instructional presentations. In addition, 13 Petaluma schools used SCWA's free curriculum materials. Included were ten 3rd grade classes, two 4th grade classes, and five 5th grade classes. The City plans on meeting with the SCWA to discuss the possibility of adding a storm water element to the existing program. This will be done as part of a focus project that will also include meeting with representatives from CS2 and the Petaluma Watershed Foundation (PWF) regarding potential collaboration on storm water and pollution prevention literacy and awareness activities in schools. Based on the meetings, the City will decide on the best method for implementing a storm water education program and work with the SCWA for implementation. The City will evaluate the effectiveness of the storm water messages by giving students pre- and post-presentation quizzes regarding storm water issues.	Page 1, PE&O BMPs 6.a-6.f
Community and Schools for Career Success (CS2)	CS2 was established in October of 1999 by the California Department of Education to replicate in California the successful Massachusetts school improvement model. Locally, CS2 recently secured grant funding to print over 100 of the PWF's new laminated watershed posters for distribution throughout Casa Grande and Petaluma High Schools. CS2 has also worked to incorporate environmental curriculum in science classrooms throughout the area. As described above, the City will meet with representatives from CS2 as part of its focus project to add storm water concepts to curriculum within Petaluma Schools.	Page 1, PE&O BMPs 6.a-6.f

BMP	Detailed Description of Existing Program	Reference to Table 1
SCWA Pet Waste Signs	The SCWA began working with the City of Santa Rosa in 2001 to develop a sign that could be placed at access points to SCWA-owned flood control channels/walking paths that would encourage the public to pick up after their pets. The SCWA has committed to working with interested municipalities to develop a sign that can be placed on any SCWA-owned channel/walking path. Once a sign is finalized, the SCWA will begin installing the signs at popular entrances to SCWA channels. The City will work with the SCWA to develop a sign that can be placed on SCWA-owned channels within the City.	Page 2, PE&O BMP 9.b
Education Materials to Food Facilities	The SCDHS conducts annual unannounced inspections of retail food facilities in Petaluma. Educational materials are handed out during the inspection, and include the City of Petaluma "Food Facility Storm Water Pollution Prevention Guidelines" booklet (Appendix A). A detailed description of the SCDHS inspections and implementation plans for the City to coordinate with the SCDHS are described in Section 5.4, Illicit Discharge Detection and Elimination MCM.	Page 5, IDDE BMPs 6.a-6.d
Pre-Treatment Program	US Filter distributes educational materials during pre-treatment inspections of industrial users and automotive facilities. Examples of the educational materials are provided in Appendix A. A detailed description of the pre-treatment program along with implementation plans to expand on the program are included in Section 5.4, Illicit Discharge Detection and Elimination MCM.	Page 5, IDDE BMPs 6.a-6.f
Water Resource Conservation Programs	The public outreach and education component of the City's Water Conservation Program includes bill stuffers, free water conservation devices, rebate offers, irrigation repair incentives, educational information, and a web page that presents water conservation information. The City is a member of the California Urban Water Conservation Council, and has both a Water Waste Prohibition Ordinance and a Water-Efficient Landscape Ordinance (Appendix B).	N/A

In addition to the BMPs listed above, the City will be participating in the Adopt-A-Waterway program. Adopt-A-Waterway is a national organization that brings together the public and private sectors to raise money for local governments. It accomplishes this through corporate sponsorships to comply with government regulations and clean up pollution caused by urban and storm water runoff. The funds are raised through recruiting local business sponsors. In exchange for 50% of the sponsorship revenues from the signage program, local governments allow a limited number of stylized signs that integrate companies' logos with important environmental messages, to be placed in high traffic areas throughout the community. Examples of signs and additional program information are provided in Appendix C. The only requirement for the use of sponsorship monies raised by Adopt-A-Waterway is that they be spent for storm water pollution prevention activities.

In addition to receiving 50% of the sponsorship funds, local governments participating in the program may receive comprehensive public educational materials and educational messages broadcast on radio and television through "The Clear Solution" program at no additional cost. This includes television and radio ads produced by Adopt-A-Waterway and educational materials such as a newsletter, community and business brochures, children's activity books, and educational displays for special events.

The Program Leader will be coordinating with the Adopt-A-Waterway program to express the City's interest and obtain additional details. The Program Leader will also arrange an Adopt-A-Watershed spokesperson to conduct a presentation at a City Council meeting, and will seek approval from the City Council to take part in the program. The City will work with Adopt-A-Waterway to initiate the program upon approval by the City Council, and will continue to participate throughout permit term. A more specific performance measure will be developed for this BMP after more information on the Program is obtained.

This public education and outreach program will increase public awareness and serve as a positive community and public relations program. In addition, the program will provide the City with a revenue stream they can count on year after year to implement storm water pollution prevention activities.

In addition, the City will be developing and distributing educational materials that focus on storm water pollution prevention and the City's priority pollutants, including a web page that will provide information on the SWMP, citizen call-in number, upcoming workshops and more. In order to be more cost-effective and time-efficient, the City will partner with other agencies and Phase II communities, as encouraged by the Regional Board. Petaluma will, as the largest of the new Phase II municipalities in Sonoma County, invite other, smaller MS4s in Sonoma County and within the San Francisco Bay watershed to meet on a regular basis to share ideas and resources. One of the goals of gathering together the MS4 communities for regular meetings is to develop a common message for public outreach efforts, such as "Only Rain Down the Storm Drain." This message will be disseminated throughout the county to various audiences through various media. The City will also be conducting a baseline data-gathering program for this MCM, which will include reviewing other agency methods to gather baseline information for Public Education and Outreach MCM, developing a method to gather its own baseline information, and conducting a pilot test of the method.

Please refer to Table 1 for a comprehensive list of the BMPs that will be implemented to provide public education and outreach, as well as the quantifiable targets for each of the activities.

5.2 Public Participation/Involvement

Public participation and outreach provides opportunities for citizens to participate in program development and implementation, including publicizing public hearings and/or encouraging citizen representatives in a watershed group. As with public education and outreach, the City is currently implementing several public involvement and participation programs, often in partnership with local volunteer organizations. Detailed descriptions of these activities along with implementation plans to expand on the activities are provided in the following table.

Table 3 – Current BMPs for Public Participation and Involvement

BMP	Detailed Description of Existing Program	Reference to Table 1
City Council Meetings	An overview of the Phase II NPDES program was presented to the City Council at the January 27, 2003 meeting. The public was invited to attend and comment on the overview of the requirements of the Phase II program. The final draft of the Plan was presented to the City Council for comment on February 24, 2003. A copy of the agenda and minutes from each of the meetings is provided in Appendix D. The City will be presenting Annual Staff Reports to the City Council regarding the status of the SWMP in order to keep the local government officials and the public informed of the progress of the City's Storm Water Program.	N/A
Annual River Cleanup Event	Petaluma River Cleanup Events have been held annually since 1995. The events have been sponsored by a wide range of businesses within the City and have involved the community in removing trash and litter from the Petaluma River. The most recent event was held on April 27, 2003. Participants included various sections of the community; schools, clubs, businesses, individuals, City staff, Council members, City Manager, and the Mayor. The event included 160 participants with 30 prizes awarded. Forty-five cubic yards of debris and five cubic yards of recyclables were removed from the river during the event. A flyer and Power Point presentation for the April 27, 2003 event is provided in Appendix E. The City will begin charting the number of participants and amount of trash collected over the years. The City will also begin advertising the annual event on its website and will increase its coordination effort with local school districts to encourage student participation.	Page 2, PI&P BMPs 4.a-4.c
Southern Sonoma Resource Conservation District (SSRCD)	The SSRCD identifies local conservation problems and guides solutions on a voluntary basis. The SSRCD covers the Sonoma Creek Watershed from Kenwood to the Bay, the Petaluma River Watershed, and the upper half of Stemple Creek Watershed in Sonoma County. The SSRCD developed the PWC to coordinate volunteer activities along the watershed and has continuously involved local school children through the Adopt-a-Watershed Program in recent restoration projects on several creeks within the Petaluma Watershed. The City will be coordinating with the SSRCD to improve participation by offering to advertise SSRCD workshops and events on the City's storm water web page.	Page 3, PI&P BMP 5.

BMP	Detailed Description of Existing Program	Reference to Table 1
Storm Drain Stenciling	In past years, storm drain stenciling has been performed by the WR&C Department in conjunction with local Girl and Boy Scout troops, elementary schools, and high schools. In the past, WR&C Department personnel have visited local schools that have requested to participate in stenciling efforts, and have given them a brief description of the hydrologic cycle along with stenciling kits. As the stencils were placed, the children and supervisors highlighted the storm drains on the storm drain maps. However, these events were not continuous, and stenciling has not occurred in the City for several years. The City will be developing a storm drain stenciling program during the first five-year permit term. The first step will be to determine how many storm drains need to be stenciled, as well as the general condition (readability) of previously stenciled drains. The City will develop a program that documents and prioritizes stenciling options, including participation in grants and use of volunteers groups and schools, and then commence implementation. The goal of the program is to have 100% of storm drains stenciled by the end of the permit term.	Page 3, PI&P BMPs 6.a-6.c

In addition to the BMPs listed above, the City will be spearheading the formation of a Citizens Storm Water Group. This will begin with identifying the purpose and structure of the group, advertising the formation of the group to potentially interested parties via various media, and holding meetings with interested parties.

The City will also be developing a water quality monitoring program. This will include reviewing the methods and protocols of other local monitoring programs, including the Russian River First Flush Event. The City will also meet with other Phase II MS4s, CS2, and PWF to discuss ideas for water quality monitoring, which the groups have expressed interest in during previous correspondence. Based on the research, the City will develop and oversee the implementation of a monitoring program using volunteers to collect samples for field-testing annually during first flush events. The City will use the data to assess the overall degree to which the City's Plan is reducing pollutants to the MEP.

A summary of each BMP that the City proposes implementing as a part of this MCM is provided in Table 1.

5.3 Illicit Discharge Detection and Elimination

Illicit Discharge Detection and Elimination consists of developing a plan to systematically check the storm drain system for connections to sewer or septic systems. It includes developing a storm drain system map and informing the community of hazards associated with illegal discharges and improper disposal of wastes. In addition to those mentioned above, non-stormwater discharges are identified as commercial car wash and laundry wastewaters, grease from restaurants, radiator flushing disposal, spills from auto accidents, improper disposal of household toxics, and automotive fluids. This MCM also includes adopting an ordinance to prohibit non-storm water

discharges into the storm sewer system and the implementation of appropriate procedures and actions. The most common steps taken to eliminate illicit connections are to locate the problem areas, find the source of the discharge, remove or correct the illicit discharge, and lastly, document the actions taken to illustrate progress.

Several components of the Illicit Discharge Detection and Elimination requirements for MS4s are currently being implemented in the City. Detailed descriptions of these activities along with implementation plans to expand on the activities are provided in the following table.

Table 4 – Current BMPs for Illicit Discharge Detection and Elimination

BMP	Detailed Description of Existing Program	Reference to Table 1
SCWA Illicit Discharge Call-In Lines	During working hours, the public can call (707) 521-1845 to report a problem in a SCWA flood control channel directly to the Flood Control Channel Maintenance Coordinator. Additionally, the public can call (707) 523-1070, the SCWA's number that is staffed 24-hour per day. The staff member answering this line will contact the appropriate response personnel. If the spill is not located in a SCWA channel, the caller will be referred to the proper local authority for response. The SCWA will be developing a record-keeping system for tracking public calls and their responses over their next five-year permit term. The information will include who called, why, and any follow-up activities, including forwarding the call to another appropriate agency or dispatching a SCWA crew to the site (or both), or other appropriate responses. The City will be establishing its own call-in line that citizens can use to report illicit discharges, and will use the website to advertise the phone number and to educate the public regarding illicit discharges. All public comments received via the call-in line will be documented, including follow-up procedures. In addition, the City will coordinate with the SCWA to update them on the appropriate response personnel who should be notified, and to obtain a record of calls from the City for reporting purposes.	Page 4, IDDE BMP 4.e
Sonoma County Waste Management Authority (SCWMA) Community Cleanup Events	The SCWMA sponsors annual household toxic roundup days and business hazardous waste collection days in the City. The 2003 business hazardous waste collection day is scheduled for September 26, 2003; the household toxic roundup day is scheduled for September 27, 2003. The City will coordinate with SCWMA to discuss documenting the volume of wastes collected and the possibility of increasing the community cleanup events to twice per year.	Page 5, IDDE BMP 5.

BMP	Detailed Description of Existing Program	Reference to Table 1
Hazardous Materials Program	The Petaluma Fire Department (PFD) has the responsibility of regulating the County's Certified Unified Program Agency (CUPA) programs within Petaluma. These programs include the Hazardous Materials Business Plan Program, the Hazardous Waste Program, the Underground Tank Program, the Accidental Release Program, and the portions of the Uniform Fire Code that address hazardous materials. Inspections of businesses in the City that are included in any of these programs are conducted on a routine basis. The City will be coordinating with PFD to become familiar with current inspection protocols and to establish criteria for inspecting facilities for verification of storm water BMPs in the City. The City will work with the PFD to implement the established inspection criteria and to obtain inspection activity information to be summarized in the Annual Reports.	Page 5, IDDE BMPs 6.a-6.d
Sonoma County Department of Health Services (SCDHS) Restaurant Inspections	The SCDHS maintains a database with an inventory of all retail food facilities within Sonoma County, and conducts unannounced inspections of retail food facilities in the City. All food facilities are inspected at least once per year. In the past, the SCDHS and the City of Santa Rosa Public Works Department have entered into a Memorandum of Understanding to establish criteria for inspecting retail food facilities for verification of storm water BMPs. Documents related to storm water inspection reports, complaints, and enforcement actions are maintained in the retail food facility files at the SCDHS office. The City will be coordinating with the SCDHS to become familiar with current inspection protocols and to establish criteria for inspecting facilities for verification of storm water BMPs in the City. The City will work with the SCDHS to implement the established inspection criteria, possibly through a one-year memorandum of understanding. The inspection activity information will be summarized in the Annual Reports.	Page 5, IDDE BMPs 6.a-6.d
Pre-Treatment Program	US Filter conducts pre-treatment inspections of Significant Industrial Users (SIUs), Industrial Users (IUs), Retail Gasoline Outlets (RGOs), and Automotive Service Facilities (ASFs) in the City. SIUs are inspected at least once per year, while IUs are inspected once every two years. Violating industries are inspected more often. Inspectors look at chemical and hazardous waste storage, sample site locations, paperwork, and Spill Prevention and Control Plans. The inspectors are required to have passed the California Wastewater and Environment Association (CWEA) test. The inspectors have also attended CWEA seminars on industrial hazardous waste.	Page 5, IDDE BMPs 6.a-6.f

BMP	Detailed Description of Existing Program	Reference to Table 1
Pre-Treatment Program (continued)	The City will be coordinating with US Filter to become familiar with current inspection protocols and to establish criteria for inspecting facilities for verification of storm water BMPs in the City. The City will work with US Filter to implement the established inspection criteria, and will provide copies of the Annual Pre-Treatment Reports as part of the Annual Storm Water Program Reports.	
Storm Sewer System Map	The City's storm drain system has been mapped in Auto Cad. The storm drain map provides a comprehensive infrastructure map of the City that is used to coordinate storm drain maintenance activities. The City will be keeping the map up-to-date by recording new storm drain inlets, outfalls, and receiving water bodies.	Page 5, IDDE BMP 9.
Sonoma Green Business Program	There are currently 11 out of an approximate total of 100 automotive facilities within the City that are part of the Sonoma Green Business Program. This program provides facilities an opportunity to work closely with their local environmental regulatory agencies in coming into compliance with a variety of environmental regulations. Benefits and incentives include a 10% reduction in annual CUPA fees, window logo stickers, and the use of logo on stationary. Economic savings result from pollution prevention and waste reduction activities that are learned through the program. The City of Petaluma's Industrial Waste Department (contracted out to US Filter) is the lead agency overseeing the program within the City. A copy of the Green Business Automotive Checklist is provided in Appendix F. The City will work to increase the participation of automotive industries in the program as part of a focus project. This will include working with US Filter and the SCDHS to send information about the Sonoma Green Business Program along with self-assessment packets to eligible automotive facilities within the City. The City will also provide the incentive of advertising the Green Business Program and the participating businesses within the City annually in the Petaluma Courier and on the City website. The number of certified Green Business Facilities will be tracked on a yearly basis.	Page 5, IDDE BMPs 10.a-10.c

Several major activities will be conducted as part of this MCM in addition to those listed above. For example, the City will be developing training manuals for this MCM that will provide initial training on the City's SWMP and procedures. The manuals will be started during the first fiscal year of the permit using available educational materials, an overview of the Phase II requirements, model storm water ordinances, and applicable sections of this Plan. In addition, a quiz will be developed based on training manual materials. Initial training will be provided by circulating the training manuals and quizzes to the appropriate staff. The training manuals will be

a work in progress, with training materials and documents such as the storm water ordinance and the enforcement response plan being added to the manuals upon adoption. The manuals and quizzes will then be used to train newly hired employees who will take part in the implementation of the City's program.

The City will also be developing and adopting a storm water ordinance and an enforcement response plan (ERP). First, the City will review existing storm water ordinances and enforcement procedures. The City will then develop a storm water pollution prevention ordinance, which will be reviewed by the City Attorney and presented to the City Council for adoption, followed by training of the appropriate staff on the new ordinance. In addition, the City will evaluate the effectiveness of the ordinance and assess the need for amendments in the fiscal year 07/08, and will make amendments as necessary.

Various information will be identified during the development of the ERP, including: the various anticipated violation scenarios, the actions that the City will take for each of the identified violation scenarios, time frames for response actions, staff that will conduct response actions, and the scenarios in which enforcement will be escalated. The City will then incorporate the procedures into an official ERP and provide training to the appropriate staff. Implementation of the ERP will begin in fiscal year 05/06.

The City will also be conducting storm sewer system scoping and identification and inspection of drop inlets in identified high-risk areas for dry weather flows. Please refer to Table 1 for detailed implementation plans for these activities as well as a comprehensive list of the BMPs that will be implemented as part of this MCM.

5.4 Construction Site Storm Water Runoff Control

Construction site storm water runoff control consists of developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acre. The soil that can be carried from a construction site during a relatively short period of time would take much longer to erode under naturally vegetated conditions. Excess sediment requires periodic dredging of drainage channels and navigable water bodies and destroys aquatic habitat. This MCM includes the development of an erosion and grading ordinance or policy that requires implementation of appropriate sediment controls. Also required are procedures for municipal site plan review of construction plans, ensuring that the types of controls and precautions that will be taken during the wet season are clearly indicated and are adequate for the site conditions. Site inspections and checklists must be developed that verify that the erosion control plan has been implemented as permitted. Sites disturbing more than one acre, or less than one acre but part of a larger common plan of development or sale, are required to obtain a Statewide Construction Storm Water Permit by submitting a Notice of Intent and preparing a SWPPP.

The City’s CD Department is already performing many of the activities associated with this MCM. The majority of the SWPPPs prepared and implemented in the City adequately reduce or eliminate construction site pollutants from entering surface waters. Detailed descriptions of these activities along with implementation plans to expand on the activities are provided in the following table.

Table 5 – Current BMPs for Construction Site Storm Water Runoff Control

BMP	Detailed Description of Existing Program	Reference to Table 1
Grading and Erosion Control Ordinance	The City's current Grading and Erosion Control Ordinance was passed on July 18, 1984 (Section 1, Chapter 17.31 "Grading and Erosion Control"). The ordinance provides design standards and requires the appropriate permits, grading plans, soils and reconnaissance reports, and erosion and sediment control plans to be submitted to the City for review prior to commencing work. The ordinance also provides plan review and construction site inspection guidelines. A copy of the ordinance is provided in Appendix G. The City will be revising its current design standards in the ordinance to reflect new Phase II requirements after identifying appropriate guidance documents. The City will also be adding language to various sections of the current ordinance to officially require the following: compliance with the state Construction Storm Water General Permit, including submittal of a SWPPP, review of SWPPPs for compliance with the requirements set forth in Section A of the updated Construction Storm Water General Permit, and the control of wastes such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at construction sites. The revised ordinance will be adopted through appropriate City Council procedures. Following the adoption of the ordinance, training of appropriate staff on the revised ordinance will occur.	Page 6, CSSWRC BMPs 3.a-3.f
Plan Review Procedures	The grading, soil, and erosion and sediment control plans are reviewed by personnel in the CD Department and require approval prior to beginning construction. If deemed incomplete, letters are sent to the contractor requiring edits and re-submittals. In addition, prior to the commencement of new construction, the developer, the contractor, and representatives of the City convene in a pre-construction meeting in which the City stresses the importance of the erosion control and good housekeeping at the site. As a part of the Plan, the City will begin using the revised design standards and application review guidelines during the review of new permit applications.	Page 7, CSSWRC BMP 5.
Environmental Review Guidelines	The City has developed local Environmental Review Guidelines to satisfy Section 15022 of the California Environmental Quality Act (CEQA), which mandates that each public agency adopt objectives, criteria, and specific procedures for administering its responsibility under the Act. The City's guidelines provide a consistent and orderly basis for City evaluation of individual projects. The City's guidelines include	Page 7, CSSWRC BMPs 6.a-6.c

BMP	Detailed Description of Existing Program	Reference to Table 1
Environmental Review Guidelines (continued)	preliminary review and exemptions, environmental review processes, charts, and applicable forms and checklists. Due to the length of the guidelines, a copy of the guidelines in their entirety is not provided in this Plan. However, a copy of the City's Environmental Information Form and Initial Study checklist is provided in Appendix H. The City will review and compare the current Environmental Information Form with the Municipal Urban Runoff Program's (MURP) sample revisions to Environmental Information Forms, and will incorporate the necessary revisions to increase information on potential significant hydrologic and water quality impacts.	
Construction Site Inspections	Construction activities disturbing 1 acre or more are required to prepare a SWPPP. All ground disturbing construction activities posing a threat to surface water quality are required to implement appropriate erosion control measures. Prior to the rainy season (Oct. 1 through April 15), the City sends letters to developers with projects under construction reminding them of the erosion control requirements and ensuing inspections. Inspections are performed by the City's Building and Public Works inspectors on all new construction sites at least once per year, typically before the first rainfall event, to ensure the necessary BMPs are in place. Violations observed during the inspections are expressed to the contractor by phone and in writing, and a notice of violation is given, which includes a time limit for corrective action. Follow-up inspections are completed to verify that corrective actions have been implemented and all BMPs are functioning properly. A copy of the City's current inspection form is provided in Appendix I. As part of the preparation of this Plan, the City's consultant, Winzler & Kelly, has developed a series of simple, informative brochures for distribution to developers and contractors that are coordinated with a checklist for the building and Public Works inspectors to take to the jobsite. The checklist is used to document the BMPs the project described in its SWPPP. At the end of each fiscal year, the inspectors simply need to summarize facts, such as how many stop work orders were issued, or the number of repeat site visits made, and how many of each type of brochure were distributed to document what was done for this MCM. The City will review and revise the current inspection checklist and brochures as necessary. The inspectors will also receive training on the use of the checklist and brochures. Examples of the current brochures and checklist are provided in Appendix J.	Page 7-8, CSSWRC BMPs 8., 9.a-9.c, & 10.a-10.d

BMP	Detailed Description of Existing Program	Reference to Table 1
	In addition, the City will begin conducting spot inspections of select construction sites within 48 hours of a major storm event.	

As with the Illicit Discharge Detection and Elimination MCM, training manuals will be developed for this MCM and will be used to provide initial training on the City's SWMP and procedures. The training manuals will be a work in progress, with training materials and documents such as the revised grading and erosion control ordinance and the enforcement response plan being added upon adoption. The manuals and associated quizzes will be used to train newly hired employees who will take part in the implementation of the City's program.

The City will also be developing an official ERP for the grading and erosion control ordinance. To do so, the City will review its current enforcement procedures, evaluate any necessary revisions based on the new ordinance and Phase II requirements, and then combine the existing enforcement procedures and necessary revisions into an official ERP. The appropriate staff will then receive training on the ERP, followed by implementation in fiscal year 05/06.

In addition, the City will coordinate with Phase I and II communities to identify and participate in joint training opportunities for construction site inspectors. Please refer to Table 1 for a comprehensive list of the BMPs that will be implemented as part of this MCM, as well as the quantifiable targets for each of the activities.

5.5 Post-Construction Storm Water Management

Post-construction storm water management is necessary in areas undergoing new development and redevelopment because of the impact of runoff from those areas. Studies have indicated that prior planning and designs that minimize pollutants in post-construction discharges are the most cost-effective means of storm water quality management. Two forms of post-construction runoff impact water quality. As rainwater flows over areas altered by development, it picks up small particles of soil and chemicals such as oil and grease, pesticides, fertilizers, metals, and fecal matter and enters creeks and other water conveyances. Once there, these pollutants impair aquatic habitat and impact surface water quality. Urban runoff also impacts water bodies by increasing the volume and velocity of water entering storm drains and creeks. Urban development replaces natural vegetation with impervious surfaces such as rooftops, driveways, parking lots, and streets. Impervious surfaces prevent water from soaking into the ground – thus not replenishing groundwater supplies, and sends unnaturally large, short-term volumes of storm water to creeks. The combination often results in streambed scouring and downstream flooding, leading to loss of aquatic and sometimes human life and property damage.

Initial training for this MCM included attendance by the City's CD Department staff at the Santa Rosa Area SUSMP Workshop held on October 9, 2003. Additional training will be obtained by developing a training manual for this MCM. The manual will be started during the first fiscal year of the permit using available educational materials, overview of the Phase II requirements, a

copy of Attachment 4 of the General Permit, the City of Santa Rosa's SUSMP, and applicable sections of this Plan. The manual and associated quiz will be distributed to the appropriate staff. Additional training materials and documents such as the ordinance and enforcement response will be added to the manual upon adoption, and the manual and quiz will be used to train newly hired employees who will take part in the implementation of the City's program.

The City will also develop an ordinance to require projects to include long-term operation and maintenance of appropriate BMPs to address post-construction runoff. The City will first review the design standards and enforcement procedures contained in Attachment 4 of the General Permit as well as in the City of Santa Rosa's SUSMP. The City will then decide either to incorporate the design standards contained in Attachment 4 of the General Permit or to revise the standards to make them more appropriate for the City. If deemed necessary, different design standards will be developed and will be sent to the Regional Board for approval. The City will also develop requirements for the long-term maintenance of BMPs in new development and redevelopment. The ordinance will then be brought before the City Council for adoption, followed by training of the appropriate staff and implementation. In the final year of the permit, the City will develop evaluation criteria for determining the effectiveness of the ordinance.

An Enforcement Response Plan is also required for this MCN. Various information will be identified during the development of the ERP, including: the anticipated violation scenarios, the actions that the City will take for each of the identified violation scenarios, time frames for response actions, staff that will conduct response actions, and the scenarios in which enforcement will be escalated. The City will incorporate the procedures into an official ERP and provide training to the appropriate staff. Implementation of the ERP will begin in fiscal year 05/06.

The City will review and revise its current project review process to ensure compliance with the new post-construction design standards and will begin using the adopted design standards for the review of new development and redevelopment plans in 05/06.

A summary of each BMP that the City proposes implementing as a part of this MCM is provided in Table 1.

5.6 Pollution Prevention/Good Housekeeping for Municipal Operations

Much of the responsibility for reducing polluted storm water runoff falls on the municipality operating the storm water system. This MCM requires MS4 operators to examine and alter their actions in order to reduce polluted runoff from municipal facilities, streets, parking lots, open spaces, and corporation yards (the location of vehicle maintenance operations, and the storage of road repair materials, vehicle fluids, and hazardous materials) into local water bodies. This measure requires the development of an Operation and Maintenance (O&M) Plan, training City employees on storm drain maintenance and good housekeeping and pollution prevention techniques, and determining which BMPs and goals will work best for the City.

Several storm water activities related to this MCM are currently implemented within the City. Detailed descriptions of these activities, along with implementation plans to expand on the activities, are provided in the following table.

Table 6 – Current BMPs for Pollution Prevention/Good Housekeeping

BMP	Detailed Description of Existing Program	Reference to Table 1
Draft Operation and Maintenance Plan	As part of an element of the General Plan Update, the City contracted with Black and Veatch Corporation to prepare a Storm Water Master Plan in 2002 that would comply with the Phase II requirements. Black and Veatch conducted a facilities review that documented existing drainage and maintenance-related activities, including the identification of storm drainage and street sweeping problem areas. An April 2003 Draft O&M Plan was developed based on the findings of the facility review. The Draft O&M Plan describes the requirements for personnel, equipment, training, materials, and other budget expenditure estimates necessary to properly maintain the surface water system and meet the requirements of the Phase II Final Rule. The Draft O&M Plan recommends schedules for storm system maintenance, street sweeping, creek and river maintenance, employee training, and record keeping. A copy of the Draft O&M Plan is provided in Appendix K. The Draft O&M Plan is expected to be finalized and adopted by July 2004. The City will implement the recommendations and requirements set forth in the City's Draft O&M Plan after adoption.	Page 10, PPGH BMPs 2.-7.
Integrated Pest Management Program	All landscape contractors working on City-owned property are required to adhere to the City's IPM Program. The program ensures employee education and training, limitations on pesticide and insecticide use, reporting and record keeping, and review of landscape installations. A detailed description of the City's IPM Program is provided in Appendix L. The City will review its current IPM Program adopted in August 1999, to evaluate consistency with goals to reduce nutrients. If deemed necessary, the City will recommend new procedures that will result in additional reduction of nutrients into surface water.	Page 11, PPGH BMPs 9.a-9.b

A training manual will also be developed for this MCM and will be used to provide initial training on the City's SWMP and procedures. The training manuals will include available educational materials, overview of the Phase II requirements, BMP Maintenance Fact Sheets, and applicable sections of the Draft O&M Plan. A quiz will also be developed based on the training manual materials. The manuals and quizzes will be circulated to the appropriate staff to provide initial training, and will also be used to train newly hired employees who will take part in the implementation of the City's program.

The City will also be conducting a focus project to address existing Fossil Filters located in downtown storm drains and catch basins. This will include coordinating with the contractor who

supplies the filters to develop a maintenance schedule for the existing filters, perform maintenance, and assess the feasibility of retrofitting other City-maintained catch basins/storm drains with Fossil Filters or other methods of storm water protection. If determined feasible, the City will select areas to install filters in catch basins and storm drains, such as the City fire stations and parking lots.

The City will also ensure that its corporation yards are currently in compliance with the General Industrial Permit and that the requirements are being met. If necessary, the City will implement procedures to meet the General Industrial Permit requirements. Please refer to Table 1 for a comprehensive list of the BMPs that will be implemented as part of this MCM, as well as the quantifiable targets for each of the activities.

6.0 MONITORING AND EVALUATION

Regular meetings between the Program Leader and departments responsible for implementing the Plan will be conducted throughout each year. These meetings will create a forum to document and discuss progress and problems with BMP implementation, and allow the Program Leader to receive important feedback from City staff on the status of implementation of individual BMPs, and the effectiveness of programs throughout the year. Having this information will allow the Program Leader to implement changes to the Plan on an as-needed basis, thereby maintaining the intended flexibility of the document.

Feedback loops are also important when it comes to the receipt of comments and suggestions from the citizens of the City. To achieve this, the City will establish a call-in line and website for citizens to express storm water concerns, particularly with regard to storm water issues at construction sites and illicit discharges. The advertisement of this phone number and website address will be done via utility bills or other public educational materials.

The City will benefit from establishing a monitoring program that will provide baseline data on selected field parameters. Such a program will allow the City to evaluate the effectiveness of its storm water program in reducing priority pollutants such as sediment and nutrients over time. Although the City realizes that the General Permit does not require chemical monitoring at this time, a BMP to coordinate efforts amongst groups to achieve this type of baseline characterization is included in the Plan. It is not known at this time exactly what form this characterization effort may take, but the City's goal is to work with groups in the watershed to develop an approach acceptable to the SFBRWQCB.

Each year of the permit, the City is required to submit an Annual Report to the Regional Board that captures the previous fiscal year's storm water management activities, and the results of those activities. The first report is due on September 15, 2004, and will document the activities that took place between March 10, 2003 and June 30, 2004. Subsequent annual reports are due September 15th of each year and will summarize the activities performed July 1st of the preceding year through June 30th of the current year. The City will continuously document activities that took place during the fiscal year, and regularly determine if measurable goals were achieved, and assess the success or failure of the selected BMPs included in the attached tables. If modifications need to be made to alter a BMP to make it more successful, the City will make those changes and note the decision in the annual report. Petaluma's Plan is a dynamic document that will be revised and updated annually to reflect the progress of the program. The Annual

Reports will demonstrate the City's current efforts to reduce pollutants to the maximum extent practicable, as well as future plans for the storm water management program.

7.0 SIGNATORY REQUIREMENT

This Plan must be signed and certified by a principal executive officer, ranking elected official, or duly authorized representative.

> *"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 assure 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."*

_____ _____

Michael Ban
Department of Water Resources
and Conservation Director
City of Petaluma

Date

8.0 ACRONYM LIST

Acronym	Definition
BMP	Best Management Practice
CEQA	California Environmental Quality Act
CSSWRC	Construction Site Storm Water Runoff Control
EPA	Environmental Protection Agency
FTE	Full Time Equivalent
IDDE	Illicit Discharge Detection and Elimination
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer System
MURP	Municipal Urban Runoff Program
N/A	Not Applicable
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
PCSWM	Post-Construction Storm Water Management
PE&O	Public Education and Outreach
PI&P	Public Involvement and Participation
Plan	Storm Water Management Plan
PPGH	Pollution Prevention/Good Housekeeping
PWC	Petaluma Watershed Council
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SCWMA	Sonoma County Waste Management Agency
SCWA	Sonoma County Water Agency
SSRCD	Southern Sonoma Resource Conservation District
SUSMP	Standard Urban Storm Water Mitigation Plan
SWMP	Storm Water Management Program
SWPPP	Storm Water Pollution Prevention Plan
TMDL	Total Maximum Daily Load

Table 1. City of Petaluma
Storm Water Management Plan
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Minimum Control Measure	BMP #	Activity/Best Management Practices	Implementation Start Date					Implementation Plan	Quantifiable Target/ Evaluation Tool	Message(s) / Pollutants Addressed	Target Audience(s)	Implementer(s)
			FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08					
Public Education and Outreach		**Increase Public Awareness**										
	1.a	Adopt-A-Waterway Program		X				Coordinate with the Adopt-A-Waterway Program to express the City's interest in the program and obtain additional details; *Note: See SWMP text pgs. 12-13 and Appendix C for a description of the Adopt-A-Waterway Program.*	Coordination conducted	Cleaner Cities, Cleaner Waterways / Visual Outreach Program	Adopt-A-Waterway	Program Leader
	1.b			X				Arrange for an Adopt-A-Waterway spokesperson to conduct a presentation at a City Council meeting	Presentation conducted		City Council and Public	Program Leader, Adopt-A-Waterway Spokesperson
	1.c			X				Obtain approval from the City Council to initiate program within Petaluma	City Council approval		City Council	Program Leader
	1.d			X				Submit Work Plan to RWQCB	Work Plan submitted		SFRWQCB	Program Leader
	1.e			X				Initiate program	Program initiated		Public	Adopt-A-Waterway, Program Leader
	1.f				X	X	X	Continue participation in the Adopt-A-Waterway Program	Continued participation; Note: A more specific target will be developed following obtainment of additional program information		Public	
	2.a	Creek Signage Program		X				Identify creeks and waterways; develop prototype signs	All creeks identified; prototype signs made	Awareness and proximity of local creek	General Public	Program Leader
	2.b				X			Develop signage program and secure funding for implementation	Program documented; adequate funding secured		Funding Partners	Program Leader
	2.c				X			Submit work plan to RWQCB	Work plan submitted		SFRWQCB	Program Leader
	2.d					X	X	Implement program	Program implemented; signs posted on all identified creeks		General Public	Program Leader
		Educational Materials Development										
	3.a	Partnerships with other MS4s	X	X	X	X	X	Regularly attend the monthly Phase II Storm Water Management Meetings	Number of Meetings attended	Coordination with other Phase II MS4s / Common Storm Water Message	Phase II MS4s	Program Leader
	3.b			X				Research existing educational materials, including bi-lingual materials, available from U.S. EPA, the State, or other organizations. See Resource Binder and EPA Stormwater Outreach Materials CD for examples and links	Research completed and materials identified	Common message throughout county	MS4s, General Community	Program Leader
	3.c			X				Coordinate with other Phase I and II MS4s in Sonoma County to encourage collaboration on the sharing/development of educational materials	Coordination at meetings conducted			
	3.d			X				Work with other Phase II MS4s in Sonoma County to present a common educational message, such as "Only Rain Down the Storm Drain"	Common message developed			
	4	Nutrient and Pathogen Education		X				Use or develop a brochure or flyer regarding the impacts of nutrients and pathogens from pet waste on water quality. *Note: See Measurable Goal 9.a for distribution.*	Brochure/flyer developed or identified for use	Pathogen and nutrient reductions	General Community	Program Leader
	5	Facility Materials				X		Identify existing or develop educational materials for Marina, Turning Basin and Airport Operations & Aircraft Maintenance that identify appropriate BMPs. *See Measureable Goal 11. for distribution*	Materials/brochures identified and/or developed	Reduce pollutants to surface and storm water at these facilities	Boating/ sailing/ flying communities	P&R Dept., and facility managers
		Outreach to Schools										
	6.a	Focus Project: Education to Students		X		~~X~~		Meet with SCWA to discuss possibility of adding a storm water element to their existing School Water Education Program. *Note: See SWMP text pg. 11 for a description of the SCWA program*	Meeting(s) conducted	Link between water conservation and storm water pollution prevention	SCWA Water Education Division	Program Leader
	6.b			X		~~X~~		Meet with representatives from CS2 and PWF regarding potential collaboration on storm water and pollution prevention literacy and awareness activities by adding storm water concepts to curriculum within Petaluma Schools. *Note: See SWMP text pg. 11 for a description of CS2 and PWF*	Coordination conducted	Various storm water pollutants/pollution prevention	CS2 and PWF	

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	6.c				X	~~X~~		Based on the meetings, decide on the best method for implementing a storm water education program within the Petaluma schools	Decision on which program to implement		NA	
	6.d				X	~~X~~		Develop program and identify desired success rate for effectiveness measure	Program developed and desired success rate for effectiveness measure identified		Students	
	6.e					X		Conduct a pilot test of the program	Effectiveness Measure: Evaluate effectiveness to desired success rate of storm water messages by giving students pre- and post- presentation quizzes regarding storm water issues.	Awareness of storm water issues		Program Leader, School Representative
	6.f					X	X	If pilot test deemed successful, program to be implemented	Program implemented if pilot test deemed successful	General pollution prevention and storm water concepts		

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Public Education and Outreach		**Characterize Public Knowledge**										
	7.a	Baseline Data Gathering		X	~~X~~			Review other agencies methods to gather baseline information for Public Education and Outreach MCM	Review conducted	Public Opinion	General Community	Program Leader
	7.b			X	~~X~~			City to develop a method to gather its own baseline information	Method developed			
	7.c			X	~~X~~			Conduct a pilot test of the method	Pilot test completed			
	7.d				X	X		Implement the method	Effectiveness Measure: Rate of return on baseline data collection method at least 50 %			
	7.e						X	Re-evaluate data; determine effectiveness; identify need to update	New data need(s) identified			
		Outreach to General Public										
	8.a	Educational Displays and Pamphlets		X				Develop and evaluate alternative methods and venues for advertising	Advertisement methods and venues identified	Awareness of storm water issues	General Public	Program Leader
	8.b				X			Conduct pilot program to identify advertisement method(s) and venue(s)	Most feasible and cost effective advertisement campaign identified			
	8.c				X	X	X	Implement broad distribution, including providing materials for the static library displays as part of Earth Day and Pollution Prevention Week	Advertisement materials distributed			
	9.a	Nutrient and Pathogen Education			X	X	X	Distribute the pet waste management brochures at pet stores and veterinarians' offices	Pet waste information is available at several locations in the City	Pathogen and nutrients - awareness of pet waste impacts	~~Pet Owners~~ General Community	Program Leader, Parks & Rec Dept.
	9.b					X		Work with SCWA to develop a sign that can be placed on SCWA owned channels within the City. *Note: See SWMP text pg. 12 for a description of the SCWA pet waste signs program*	Coordination conducted			
	10.a	Storm Water Web Page			X			Discuss feasibility of creating and maintaining a storm water web page on the City's website	Staff met and made recommendations regarding creation of a new webpage	Use of website to educate public about storm water pollution prevention	General Public	Program Leader, City GIS Manager
	10.b					X		Develop new webpage for City website supplying info on the SWMP, hotline numbers, upcoming workshops/events, FAQ, etc	Web page developed	Awareness of storm water issues	Petaluma Residents	Program Leader, General Plan Administration Dept.
	11	Facilities Materials					X	Make educational materials available at the Marina, Turning Basin and Airport	Materials available	Reduce pollutants to surface and storm water	Boating/ sailing / flying communities	Program Leader, Facility managers
Public Involvement/ Participation		**Outreach to Local Government Officials and Community**										
	1	Public Notification and Public Comment	X					Nofity the public of the 60-day posting on the State Water Resources Control Board Website for review and comment upon receipt of posting notification from the S.F. Bay Regional Water Quality Control Board. Work with the Regional Board on responses to comments	Public notification made, comments received, responses to comments submitted	Awareness of City's SWMP, public opportunity to comment	General Public	Program Leader
	2.	Staff Reports to City Council		X	X	X	X	Present Annual Staff Reports in October to City Council and public regarding the status of the SWMP, including a summary of objectives met, changes implemented, goals abandoned and reasons why	Reports completed; comments received	Awareness of City's Storm Water Management Program, Public opportunity to comment on the direction of the program	City Council, General Community	Program Leader
	3.a	Citizen's SWMP Group					X	Develop purpose and structure for a citizen's storm water group	Purpose and structure developed	Public Involvement	General Community	Program Leader
	3.b						X	Advertise the formation of the group to potentially interested parties via various media	Advertising completed			
	3.c						X	Hold meeting with all interested parties	Meeting held and results documented			
		Community Participation										
	4.a	River Cleanup Event		X	X	X	X	City to advertise the Annual River Clean-up event on the web-site and other potential methods of advertising. *Note: See SWMP text pg. 14 and Appendix E for a description of the Annual River Clean-Up event*	Advertising conducted	Cleaner Creeks mean Cleaner Water	Public	General Plan Administration Dept.

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	4.b			X	X	X	X	Chart the number of participants and amount of trash collected over the years	On-going documentation completed	Baseline Data	NA	US Filter
	4.c				X	X	X	Coordinate with the school districts to encourage student participation in the Annual River Clean-Up Events	Coordination conducted	Student Participation	School Districts	Program Leader

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			FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08					
Public Involvement/ Participation	5.	Local Watershed Group			X	X	X	Coordinate with the Southern Sonoma RCD (SSRCD) to advertise SSRCD workshops / events on the City's storm water web page. *Note: See SWMP text pg. 14 for a description of recent activities performed by the SSRCD*	Advertisement conducted	Community involvement increases understanding and concern for watershed restoration activities	Public	Program Leader
		Storm Drain Stenciling										
	6.a	Storm Drain Stenciling		X				Determine how many storm drains need to be stenciled, as well as the general condition (readability) of previously stenciled drains. *Note: See SWMP text pg. 15 for a description of past storm drain stenciling efforts*	Identify number of storm drains to be stenciled	Storm water message	City of Petaluma	WR&C Dept., Program Leader
	6.b			X				City to develop a storm drain stenciling program that documents and prioritizes stenciling options, including participation in grants and use of volunteers groups and schools	Program developed	Stenciling pollution prevention message on storm drains.	City of Petaluma	
	6.c			X	X	X	X	Implement program	Effectiveness Measure: 100% of storm drains stenciled at end of permit term		City of Petaluma	
		Water Quality Monitoring										
	7.a	Evaluation of Overall Program Goals of Water Quality Protection				X		Review the methods and protocols of the Russian River First Flush Event to determine if applicable to Petaluma watershed	Review conducted	Baseline Data / Debris, turbidity, nutrients	Program Leader	Program Leader, Additional Staff to be Identified
	7.b					X		Meet with CS2, PWF, and other Phase II MS4s to discuss ideas for water quality monitoring	Coordination conducted		CS2 and PWF	
	7.c					X		Develop a monitoring program using volunteers to collect samples for field testing annually during first flush events	Program developed		City of Petaluma / Public	
	7.d					X	X	Implement program	Program Implemented			To Be Identified
	7.e						X	Develop evaluation criteria for determining improvement in water quality to the MEP	Effectiveness Measure: Based on evaluation criteria, assess improvement in water quality over the years		City of Petaluma	Program Leader
Illicit Discharge Detection and Elimination		**City Employee Training**										
	1.a	Training Manual	X					Develop training manual using available educational materials, overview of the Phase II requirements, model storm water ordinances, and applicable sections of this Plan	Training manual development initiated	Initial Training on City's Program and Procedures and pollution prevention concepts	City Employees	Program Leader, Staff to be identified
	1.b		X					Develop pre-training and post-training quiz based on training manual materials	Quiz established			
	1.c		X					Provide initial training by circulating the training manual and quiz to the appropriate staff	Manual and quiz circulated to appropriate staff			
	1.d		X	X	X	X	X	Add additional training materials and documents such as the storm water ordinance and enforcement response plan to the manual upon adoption	Additional materials added as appropriate			
	1.e		X	X	X	X	X	Use the manual and pre-training and post-training quiz to train newly hired employees who will take part in the implementation of the City's program	Effectiveness Measure: Quizzes returned by new staff, 90% comprehension documented			

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			FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08					
Illicit Discharge Detection and Elimination		**Storm Water Ordinance**										
	2.a	Ordinance	X					Research and review existing storm water ordinances, including enforcement procedures. See the City of Santa Rosa's and the model ordinance from the MURP, both of which are provided in the Resource Binder	Ordinances researched	Human and environmental health risks associated with illegal discharges and improper disposal of waste	NA	CD Dept., Program Leader
	2.b		X					Develop a storm water pollution prevention ordinance prohibiting non-storm water discharges, including surface cleaning operations	Ordinance developed	Requirements and prohibitions regarding storm water	Public	CD Dept., Program Leader
	2.c		X					Have the ordinance reviewed by the City Attorney	Ordinance reviewed by City Attorney	Requirements and prohibitions regarding storm water	City Attorney	Program Leader
	2.d			X				Adopt ordinance through appropriate City Council procedures	Ordinance adopted	Awareness and consent regarding the storm water ordinance	City Council	Program Leader, WR&C Dept.
	2.e			X				Conduct initial training for appropriate staff on the new ordinance	Initial training conducted and documented		City Staff	Program Leader, CD Dept., WR&C Dept.
	2.f			X				Implement ordinance	Ordinance being applied	Human and environmental health risks associated with illegal discharges and improper disposal of waste	City of Petaluma	Program Leader, CD Dept.
	2.g						X	Evaluate effectiveness of ordinance and assess the need for amendments	Evaluation of ordinance conducted	Ordinance effectiveness and applicability	City of Petaluma	Program Leader
	2.h						X	Make any amendments to the ordinance deemed necessary	Ordinance amended as necessary			
		Illicit Discharge Detection Program Implementation										
	3.a	Enforcement Response Plan		X				Identify the various anticipated violation scenarios	Violation scenarios identified	Establish authority and procedures to ensure compliance with ordinance	Appropriate City staff to be identified / Public	WR&C Dept.
	3.b			X				Identify the actions that the City will take for each of the identified violation scenarios	Violation response actions identified			
	3.c			X				Identify time frames for response actions	Time frames identified			
	3.d			X				Identify staff that will conduct response actions	Staff identified			
	3.e			X				Identify the scenarios in which enforcement will be escalated	Scenarios warranting escalated enforcement identified			
	3.f			X				Incorporate into an official Enforcement Response Plan	Official Enforcement Response Plan developed			
	3.g			X				Train appropriate staff on the Enforcement Response Plan, including project review and permitting processes	Training conducted			
	3.h				X	X	X	Implement Enforcement Response Plan measures	Implementation commenced			
	4.a	Call-in Line			X			Establish a call-in line that citizens can use to report illicit discharges	Call-in line established	Public's help to identify illicit discharges	Public	Program Leader; To Be Identified
	4.b				X			Use the web-site to advertise the phone number and to educate the public regarding illicit dischargers	Outreach conducted			Program Leader, CD Dept., General Plan Administration Dept.
	4.c				X			Establish a plan for responding to complaints	Response Plan developed		Contractors/ City Inspectors	CD Dept., Program Leader
	4.d				X	X	X	Document all public comments received via the call-in line, including follow-up procedures	Documentation completed		City of Petaluma	Administrative Staff
	4.e				X	X	X	Coordinate with SCWA to obtain the recordkeeping information for public calls and the response procedures. *Note: See SWMP text pg. 16 for a description of the SCWA's call in lines*	Coordination conducted		SCWA	Program Leader
Illicit Discharge Detection and Elimination	5.	Community Clean-Up Events		X	X	X	X	Coordinate with SCWMA to discuss increasing the community clean-up events to twice per year. *Note: See SWMP text pg. 16 for a detailed description of the community clean-up events*	Coordination conducted	Household toxics and business hazardous waste	SCWMA	Program Leader

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			FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08					
	6.a	Enhance / Revise Existing Inspections			X			Coordinate with Petaluma Fire Department, SCDHS, and US Filter to become familiar with current inspection protocols. *Note: See SWMP text pgs. 17-18 for a description of current CUPA programs, restaurant inspection, and the pre-treatment program*	Coordination Conducted	Understanding of current inspection protocols / storm water inspection criteria added	PFD, SCDHS, US Filter	Program Leader, PFD, SCDHS, US Filter
	6.b				X			Work with the PFD, SCDHS, and US Filter to establish criteria for inspecting facilities for verification of storm water BMPs in the City	Coordination Conducted, Criteria established			
	6.c					X		Work with PFD, SCDHS, and US Filter to implement established inspection criteria, possibly through one year memorandums of understanding	Inspection criteria implemented, memorandums of understanding developed (if applicable)			
	6.d					X	X	Obtain inspection activity information to be summarized in the Annual Reports.	Inspection activity information obtained and summarized			
	6.e		X	X	X	X	X	Inspectors will continue to distribute educational materials to business owners and operators during pre-treatment inspections. *Note: See pg. 2 of Appendix A for examples of materials currently distributed during pre-treatment inspections.*	Educational materials distributed	Educational Outreach	Industrial Businesses	
	6.f				X	X	X	Proceed with enforcement action when inspections identify repeat violations, in accordance with Enforcement Response Plan *(Measurable Goal 3.h)*	Enforcement action taken to correct violation	Compliance with storm water ordinance and NPDES regulations	Violators	Program Leader, Code Enforcement Staff
	7.a	Storm Sewer System Scoping				X		Identify the potential areas for illicit connections, such as older parts of the City	High risk areas identified	Storm sewer maintenance and reduction of illicit connection & trash, sediment, and unknown materials reduction	City of Petaluma	WR&C Department
	7.b					X		Set goals for scoping certain areas of the storm sewer lines in the identified potential areas for illicit connections	Goals set			
	7.c						X	Begin scoping storm sewer lines	Scoping conducted			
	7.d						X	Document the results of the inspections in each Annual Report, including actions taken in the event of identified illicit connections	Inspection results summarized in Annual Reports		SFRWQCB	Program Leader
	8.a	Illegal Dumping Inspections and Outreach				X		Identify areas that appear to receive illegally dumped materials based on citizen call-in line and City staff observations.	Identification of high risk areas	Human and environmental health risks associated with illegal discharges and improper disposal of waste	City of Petaluma	WR&C Dept.
	8.b					X		Identify high risk areas for dry weather flows	High risk areas identified			
	8.c					X	X	Inspect all drain inlets (DIs) in high risk areas for dry weather flows	DIs inspected	Storm sewer maintenance and trash, sediment, and unknown materials reduction		
		Storm Sewer System Map										
	9.	Map Revisions	X	X	X	X	X	Keep map up-to-date by recording new storm drain inlets, outfalls and receiving water bodies. *Note: See SWMP text pg. 18 for a description of the current Storm Sewer System Map*	Maps updated quarterly	Accurate storm drain maps will help locate illicit discharges and or dischargers	City of Petaluma	WR&C Dept.
		Educational Outreach										
	10.a	Focus Project: Green Business Program			X			Work with the SCDES and US Filter to send information about the Sonoma Green Business Program along with self-assessment packets to eligible automotive facilities within the City. *Note: See SWMP text pg. 18 and Appendix F for a description of the Green Business Program*	Information and Self-assessment packets sent to eligible automotive facilities	Pollution Prevention concepts	Automotive industry	US Filter, SCDES, Program Leader
	10.b				X	X	X	Advertise the Green Business Program and the participating businesses within the City annually in the Petaluma Courier and on City website	Advertisement conducted	Incentive for businesses to join program	Public/Businesses	Program Leader
	10.c				X	X	X	Track the number of certified Green Business Facilities on a yearly basis	Effectiveness Measure: An increase in the number of automotive facilities that have become certified green business facilities	Effectiveness of Outreach Efforts	Program Leader	US Filter, SCDES, Program Leader

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			FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08					
Construction Site Storm Water Runoff Control		**Develop Training Materials**										
	1.a	Training Manual	X					Develop training manual using available educational materials, overview of the Phase II requirements, BMP brochures, inspection report and applicable sections of this Plan	Training manual started	Initial Training on City's Program and Procedures	Current Construction Site Inspectors and other Appropriate Public Employees	Program Leader, CD Dept.
	1.b		X					Develop pre-training and post-training quiz based on training manual materials	Quiz established			
	1.c		X					Provide initial training by circulating the training manual and quiz to the appropriate staff	Manual circulated to appropriate staff			
	1.d		X	X	X	X	X	Add additional training materials and documents such as the revised ordinance and enforcement response plan to the manual upon adoption	Additional materials added as appropriate			
	1.e		X	X	X	X	X	Use the manual and pre-training and post-training quiz to train newly hired employees who will take part in the implementation of the City's program	Effectiveness Measure: Quizzes returned by new staff, 90% comprehension			
		Grading and Erosion Control Ordinance										
	2.a	Design Standards	X					Identify appropriate guidance document for revision of design standards to reflect new Phase II requirements	Guidance document identified	Improve requirements for erosion and sediment control	Developers, Engineers, and Contractors / City Staff conducting plan review	CD Dept., Program Leader
	2.b		X					Revise current design standards in the ordinance to reflect new Phase II requirements	Design Standards revised			
	3.a	Ordinance Sections	X					Add language to ordinance sections 17.31.050 and 17.31.130 to officially require compliance with the State's General Construction Permit, including submittal of a SWPPP. *Note: See SWMP text pg. 20 for a description of the City's existing Grading and Erosion Control Ordinance. A copy of the ordinance is provided in Appendix G*	Language added			
	3.b		X					Add language to ordinance section 17.31.140 to require the review of SWPPPs for compliance with the requirements set forth in Section A of the updated General Construction Permit	Language added			
	3.c		X					Add language to the ordinance requiring operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at construction sites	Language added			
	3.d			X				Adopt revised ordinance through appropriate City Council procedures	Revised Grading and Erosion Control Ordinance Adopted		City Council	
	3.e			X				Train appropriate staff on the revised ordinance	Training conducted		CD Dept. and Construction Site Inspectors	
	3.f			X				Implement ordinance	Ordinance being applied		Developers, Engineers, Contractors	

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Construction Site Storm Water Runoff Control	4.a	Enforcement Response Plan		X				Review current enforcement procedures	Current enforcement procedures reviewed	Establish authority and procedures to ensure compliance with ordinance	CD Dept. / Developers, Engineers, and Contractors	Program Leader, CD Dept.
	4.b			X				Evaluate necessary revisions to current enforcement procedures based on new ordinance and Phase II requirements	Revisions to current enforcement procedures identified			
	4.c			X				Combine the existing enforcement procedures and necessary revisions into an official Enforcement Response Plan	Official Enforcement Response Plan developed			
	4.d			X				Train appropriate staff on the new Enforcement Response Plan	Training provided			
	4.e				X			Begin implementing Enforcement Response Plan measures	Implementation commenced			
	4.f					X	X	Continue implementation	ERP implemented and enforced			
		Review and Inspections										
	5.	Application Review		X				Use revised design standards and guidelines during application review for new permit applications. *Note: See SWMP text pg. 20 for a description of existing plan review procedures*	New standards and guidelines used to review permit applications	Reduction of erosion and runoff from construction sites	Developers and Contractors	CD Dept.
	6.a	CEQA Environmental Information Form					X	Review sample MURP revisions to Environmental Information Forms. A copy of the sample MURP revisions is provided in Section 6.F of the City's Resource Materials Binder	Review conducted	Increased consideration to potential significant hydrologic and water quality impacts		
	6.b						X	Review City's current Environmental Information Form*Note: See SWMP text pgs. 20-21 for a description of the City's Environmental Review Guidelines for implementing CEQA. A copy of the City's Environmental Information Form and Initial Study checklist is provided in Appendix H*	Review conducted			
	6.c						X	Revise the existing Environmental Information Form to increase project information pertaining to effects on surface waters	Revisions made			
	7.	General Plan Amendments		X				Make General Plan amendments to incorporate increased water quality protection. The City will follow the lead of Phase I permittees implementing similar amendments in order to maintain county-wide consistency	General Plan amended with additional questions regarding potential storm water impacts	Reduction of erosion and runoff from construction sites	City of Petaluma	Program Leader, General Plan Administration Dept.
	8.	Materials Review		X				Review and revise the Storm Water Pollution Prevention Record/Report and brochures. *Note: A copy of each is provided in Appendix J. Electronic copies of the brochures have been supplied to the City with the Resource Materials Binder*	Review and revisions completed	Appropriate Construction Practices	City of Petaluma	CD Dept.
	9.a	Inspector Training	X	X	X	X	X	Coordinate with Phase I and II MS4s to discuss training opportunities for construction site inspectors	Topic of coordinating inspector training brought up at storm water management meetings	Improved awareness of erosion control measures	Phase II MS4s	Program Leader
	9.b				X			If possible, inspectors to participate in joint training opportunities with other Phase II MS4s	Participation in training		Building and Public Works Inspectors	Program Leader, CD Dept.
	9.c				X			Train the Building and Public Works Inspectors to use the Storm Water Pollution Prevention Record/Report and brochures during future construction site inspections	Training conducted	Comprehension of new educational component of inspections	Building and Public Works Inspectors	CD Dept.

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			FY 03/04	FY 04/05	FY 05/06	FY 06/07	FY 07/08					
Construction Site Storm Water Runoff Control	10.a	Inspections			X			Use the Site Inspection Storm Water Pollution Prevention Record/Report to document the results of all construction site inspections. *Note: See SWMP text pg. 21 for a description of current construction site inspection procedures*	Site Inspection Record/Report used to document results	Ensure erosion controls are in place and that the erosion control measures documented in the site's SWPPP are being implemented	Contractors and Developers	Building and Public Works Inspectors
	10.b				X			Distribute Construction Activity BMP Brochures to contractors during construction site inspections as needed, and use the Site Inspection Record/Report to document which pamphlets and how many were distributed. *Note: See SWMP text pg. 21 for a description of the brochures and the Inspection Record/Report. A copy of each is also provided in Appendix J*	Distribution of Construction Activity BMP Brochures implemented			
	10.c				X	X	X	Spot inspect a few construction sites within 48 hours of a major storm event	Inspections completed and documented (goal to be developed for number of sites inspected in next permit term after data collected)			
	10.d				X	X	X	Summarize the results of the inspections conducted throughout the year in each Annual Report	Effectiveness Measure: A reduction in stop work orders and sites in non-compliance	Effectiveness of BMPs	SFRWQCB	Program Leader
		Public Input Procedures										
	11.a	Call-In Line			X			Establish a citizen call-in telephone line that citizens can use to notify the City of construction sites with poor housekeeping practices	Call-in line established	Public's help to identify erosion and runoff from construction sites	Public	Program Leader, CD Dept.
	11.b				X			Use the web-site to advertise the phone number and to educate the public regarding poor housekeeping practices	Outreach conducted			
	11.c				X			Establish a plan for responding to complaints	Response Plan developed		Contractors / City Inspectors	
	11.d				X	X	X	Document complaints and actions taken in response	Documentation completed			
Post-Construction Storm Water Management in New Development and Redevelopment		**Training Manual / Initial Training**										
	1.	SUSMP Workshop	X					City staff attended Santa Rosa Area SUSMP Workshop on October 9, 2003	Workshop attended	Initial Training regarding Post-Construction Storm Water Controls	CD Dept. Staff	CD Dept.
	2.a	Training Manual	X					Develop training manual using available educational materials, overview of the Phase II requirements, copies of Attachment 4 of the General Permit and the City of Santa Rosa's SUSMP, and applicable sections of this Plan	Training manual started	Initial Training on City's Program and Procedures	CD Dept.	Program Leader, CD Dept., Economic Development and Redevelopment
	2.b		X					Develop quiz based on training manual materials	Quiz established			
	2.c		X					Provide initial training by circulating the training manual and quiz to the appropriate staff	Manual circulated to appropriate staff			
	2.d		X	X	X	X	X	Add additional training materials and documents such as the ordinance and enforcement response plan to the manual upon adoption	Additional materials added as appropriate			
	2.e		X	X	X	X	X	Use the manual and quiz to train newly hired employees who will take part in the implementation of the City's program	Effectiveness Measure: Quizzes returned by new staff, 90% comprehension			

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Post-Construction Storm Water Management in New Development and Redevelopment		**Post Construction Storm Water Runoff Program Development**										
	3.a	Develop Ordinance	X					Review design standards and enforcement procedures contained in Attachment 4 of the General Permit and the City of Santa Rosa's SUSMP	Design Standards reviewed	Familiarity with design standards	CD Dept.	CD Dept., Program Leader
	3.b		X					Decide to incorporate design standards contained in Attachment 4 of the General Permit or to revise the standards to make appropriate for the City	Decision made	Post construction controls to improve storm water quality		
	3.c			X				If deemed necessary, develop design standards	Revisions made			
	3.d			X				Develop requirements for the long-term operation and maintenance of BMPs in new development and redevelopment	Post-Construction BMP Operation and Maintenance requirements developed			
	3.e				X			Submit draft design standards to SFRWQCB for review (if applicable)	Design standards submitted to SFRWQCB			
	3.f				X			Develop ordinance requiring the design standards	Ordinance developed			
	3.g				X			Adopt ordinance through appropriate City Council procedures	Ordinance adopted		City Council	
	3.h				X			Train appropriate staff on the ordinance	Training conducted		CD Dept.	
	3.I				X			Implement ordinance	Ordinance being applied and enforced		CD Dept., Developers, Engineers, Contractors	
	3.j						X	Develop evaluation criteria for determining effectiveness of the ordinance following implementation	Effectiveness Measure: Based on evaluation criteria, determine the effectiveness of ordinance and necessary amendments. *Note: Necessary amendments will be made during the second permit term*		CD Dept., Program Leader	
	4.a	Enforcement Response Plan		X				Identify the various anticipated violation scenarios	Violation scenarios identified	Establish authority and procedures to ensure compliance with ordinance	Appropriate City staff to be identified / Public	
	4.b			X				Identify the actions that the City will take for each of the identified violation scenarios	Violation response actions identified			
	4.c			X				Identify time frames for response actions	Time frames identified			
	4.d			X				Identify staff that will conduct response actions	Staff identified			
	4.e			X				Identify the scenarios in which enforcement will be escalated	Scenarios warranting escalated enforcement identified			
	4.f			X				Incorporate into an official Enforcement Response Plan	Official Enforcement Response Plan developed			
	4.g			X				Train appropriate staff on the Enforcement Response Plan, including project review and permitting processes	Training conducted			
	4.h				X	X	X	Begin implementing Enforcement Response Plan measures	Implementation commenced			
	5.a	Plan Review			X			Use the *Stormwater BMP Handbook for New Development and Redevelopment* and the *Start at the Source Design Manual* as references for revisions	References used in revision process	Compliance with design standards	Developers / City Plan Reviewers	
	5.b				X			Review and revise project review process using new post-construction design standards	Process reviewed and revised			
	5.c				X			Use adopted design standards for the review of new development and redevelopment plans	Review process implemented			

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Pollution Prevention/Good Housekeeping for Municipal Operations		**Develop Training Materials**										
	1.a	Training Manual	X					Develop a training manual using available educational materials, overview of the Phase II requirements, BMP Maintenance Fact Sheets, and applicable sections of the Draft O & M Plan	Training manual started	Initial Training on City's Program and Procedures	WR&C Dept. Personnel	Program Leader, Staff to be identified
	1.b		X					Develop quiz based on training manual materials	Quiz established			
	1.c		X					Provide initial training by circulating the training manual and quiz to the appropriate staff	Manual circulated to appropriate staff			
	1.d		X	X	X	X	X	Add additional training materials, forms, checklists, etc. to the manual upon completion	Additional materials added as appropriate			
	1.e		X	X	X	X	X	Use the manual and quiz to train newly hired employees who will take part in the implementation of the City's program	Effectiveness Measure: Quizzes returned by new staff, 90% comprehension			
		Operation and Maintenance Plan										
	2.	Storm Sewer System Maintenance	X	X	X	X	X	Implement the recommendations and requirements set forth in the City's Draft Operation and Maintenance Plan. *Note: See SWMP text pg. 24 for a detailed description of the O&M Plan. A copy of the O&M Plan is also included in Appendix K*	Implementation of Draft O&M Plan	Maintenance of storm sewer system	NA	WR&C Dept. Personnel
	3.	Street Sweeping	X	X	X	X	X			Improved street sweeping procedures, education program / debris	EWMI	EWMI
	4.	Creek and River Maintenance	X	X	X	X	X			Creek and river maintenance	NA	WR&C Dept., SCWA
	5.	Employee Training	X	X	X	X	X			Comprehension of appropriate maintenance procedures	WR&C Dept. Personnel	WR&C Dept.
	6.	Record Keeping	X	X	X	X	X			Development of baseline data	NA	To Be Identified
	7.	Effectiveness Measure	X	X	X	X	X	Track success of public education program regarding proper methods for disposing of leaves and yard debris using recommended tracking forms	Improvement in identified problems, as shown on tracking forms	Improved street sweeping efficiency	City of Petaluma	EWMI, Program Leader
		Filter Maintenance										
	8.a	Focus Project: Fuel Filter Maintenance				X		Develop a maintenance schedule for the existing Fossil Fuel filters located in downtown storm drains and catch basins	Maintenance schedule developed	Ensure functioning and benefit of Fossil Filters / Petroleum hydrocarbons	City of Petaluma	WR&C Dept./Contractor
	8.b					X		Begin maintenance of existing Fossil Fuel filters and keep records of activities	Maintenance conducted; records kept			
	8.c					X		Investigate feasibility of retrofitting other City maintained catch basins/storm drains with Fossil Filters or other method of storm water protection	Investigation conducted			
	8.d						X	If determined feasible, select areas to install filters in catch basins and storm drains	Retrofit conducted			

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Pollution Prevention/Good Housekeeping for Municipal Operations		**Landscape Maintenance**										
	9.a	Integrated Pest Management (IPM) Program					X	Review current IPM Program to evaluate consistency with goals to reduce nutrients. *Note: See SWMP text pg. 24 and Appendix L for a description of the current IPM program*	Review conducted	Nutrients and Pesticides	City of Petaluma	P&R Dept.
	9.b						X	If deemed necessary by the above BMP, recommend new procedures that will result in a reduction of nutrients into surface water	Implementation of new BMPs			
		Corporation Yards										
	10.a	Review NPDES Industrial Permits		X				Ensure that the City is currently under the General Industrial Permit and that the requirements are being met for corporation yards	Review conducted	Compliance with General Industrial Permit / Hazardous materials management	Municipal Facilities	Program Leader, WR&C Dept., PF&S Dept.
	10.b			X				If necessary, implement procedures to meet the General Industrial Permit requirements	Implementation of required measures conducted			
		Staff Coordination										
	11.	Quarterly SWMP Meetings	X	X	X	X	X	Quarterly meetings of the Program Leader and upper level staff who are involved in the implementation and record keeping for the SWMP	Quarterly meetings held	Facilitates communication between departments and feedback from various departments to the Program Leader	Program Leader and Upper Level Staff (as needed)	Program Leader