01052-05-004.11001

CITY OF EUREKA

PHASE II NPDES STORM WATER MANAGEMENT PLAN

Revised November 2005

Prepared for:

City of Eureka California
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EXECUTIVE SUMMARY

This Storm Water Management Plan (SWMP) has been developed to comply with the Federal Storm Water Phase II Final Rule (Phase II Rule), which requires operators of small municipal separate storm sewer systems (MS4s) to obtain a National Pollutant Discharge Elimination System (NPDES) permit. The Phase II Rule requires compliance for MS4s that serve areas that are designated by the State Water Resources Control Board or Regional Water Quality Control Boards in accordance with the designation criteria contained in the General Permit. The City of Eureka falls under this designation since its storm water system discharges into Elk River and Freshwater Creek, which are 303(d) listed water bodies and there are high population urban clusters. Other municipalities in Humboldt County including the City of Arcata, the City of Fortuna, and the McKinleyville Community Services District/Humboldt County are also required to comply with Phase II regulations.

The North Coast Regional Water Quality Control Board (Regional Water Board) is the regulatory agency having Phase II NPDES permit oversight authority for the City. The Final State General Storm Water Permit (General Permit) was adopted on April 30, 2003. In October 2003, the City submitted a Notice of Intent (NOI) form, a permit fee, and a SWMP to the Regional Water Board. The Regional Water Board reviewed the SWMP and issued comments in a letter dated January 25, 2005. This version of the SWMP has incorporated the Regional Water Board's comments.

The Public Works Department and Planning and Building Department have the main responsibilities for SWMP implementation. The Deputy Public Works Director, Bruce Young, has been designated as the Storm Water Program Leader. To achieve the tasks described in this SWMP, additional activities will need to be implemented by existing staff and/or contracted personnel.

The Regional Water Board requires that an Annual Report be submitted that summarizes the previous fiscal year's storm water management activities. The first report will likely be due on September 15, 2006, after the City has obtained official coverage under the Phase II program. Subsequent Annual Reports are due on 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 General Permit requires that all NOIs, plans, certifications, reports, and other information prepared be signed by the principal executive officer, a ranking elected official, or a duly authorized representative. For the City, the authorized representative will be the Public Works Director, Michael Knight.

1.0 REGULATORY BACKGROUND

The Federal Storm Water Phase II Rule (Phase II Rule) requires operators of small municipal separate storm sewer systems (MS4s) to obtain a NPDES storm water permit. The Phase II Rule is the follow-up to the EPA Phase I NPDES Program, promulgated in 1990 as part of the Clean Water Act. The North Coast Regional Water Quality Control Board (Regional Water Board) is the regulatory agency having Phase II NPDES permit oversight authority for the City. The Final State General Storm Water Permit (General Permit) was adopted on April 30, 2003.

This SWMP will serve as the City's permit, describing actions that include best management practices (BMPs), measurable goals, and timetables for what are defined as minimum control measures (MCMs). MCMs are storm water program areas that must be addressed by all regulated MS4s. The six MCMs required by the General Permit are:

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

2.0 GENERAL DESCRIPTION

The City is located on Humboldt Bay, in northern Humboldt County, 280 miles north of San Francisco, and approximately 100 miles south of the Oregon border, along Highway 101. Eureka is approximately 11,400 acres in size, with a year 2000 population of 26,128 residents. A location map of the City of Eureka is provided as Figure 1 in Appendix A. The City boundary, the drainage basins, storm sewer system and the storm water outfall locations are shown in Figure 2, Appendix A. Land use zoning and the location of the City's major facilities is shown on Figure 3, Appendix A.

The elevation of the City varies from 0-feet above Mean Sea Level (MSL) along Humboldt Bay to slightly over 200 feet in the southern foothills. The climate is moderate with temperatures ranging from the low 30's to the mid-80's. The mean annual temperature is 52 degrees. The average annual rainfall is 39.12 inches, with the majority of the rain falling from November through March.

The dominant physiographic features of the area are: Humboldt Bay on the west and north; several sloughs to the north and east (including Eureka Slough, Freshwater Slough, Ryan Slough, and Fay Slough); and Elk River and Martin Slough to the south. A narrow strip of the City Limits extending to the northeast along Highway 101 to the Indianola Cutoff, generally flows south to Eureka and Fay Sloughs. The southern part of the City, from Harris Street south, generally drains to the south and southwest to Martin Slough and eventually Elk River. The City is composed of fifteen separate drainage basins, as shown on Figure 2, Appendix A. The terrain within the drainage basin is fairly consistent, and comprised of gently sloping plains with slopes of approximately two percent, with steeper gulches to the south and east. The predominant soil type is Bayside Silty Clay Loam, which is a poorly drained, fine textured soil, developed in sedimentary alluvium from the Franciscan and Wildcat Formations.

The City is almost completely "built out" and the remaining undeveloped areas consist of the surrounding low lying agricultural and natural areas generally considered unsuitable for development. There is potential for some new development in the residential areas of Humboldt County, just east and south of Eureka's city limits. There is some potential that portions of this adjacent urbanized area will be annexed by the City at some point in the future. Additionally, there is a significant amount of redevelopment occurring, mainly along the waterfront. The central commercial district is located mainly along Humboldt Bay and the Highway 101 corridor, with residential and light commercial zones located in the central and eastern parts of the City. The Humboldt County lands surrounding the City limits are zoned as low density residential, agriculture, and timber. Figure 3 shows the land use patterns within the City as well as the location of the City's major facilities.

The City's storm drain system consists of gutter flow, cross street culverts, a small number of valley gutters, storm drain inlets and piping, and open channels. The storm drain piping consists primarily of reinforced concrete pipe (RCP) with diameters ranging from 8 to 42 inches. The City's storm water flows by gravity and is discharged at 17 points on Humboldt Bay and the sloughs surrounding the City. Much of the City's existing storm drainage network is old and undersized. During the rainy season, street flooding is a frequent problem. The drainage along State Highway 101, which traverses the City as Broadway, 4th Street, and 5th Street, is maintained by CalTrans. The remainder of the system is maintained by the City Public Works Department.

2.1 Watershed Description

The City lies within the Eureka Plain Hydrological Unit as described by the California Department of Water Resources. The Eureka Plain Unit is bounded by the Little Salmon Fault to the south, Humboldt and Arcata Bay to the west and northwest, and the Wildcat Series deposits to the east. The Wildcat Ridge rises to the east of the City and consists of a group of five formations ranging in age from Miocene to Pleistocene and consisting of sandstone, marine siltstone and claystone. The northeast boundary, shared with the Mad River Basin, is the northwest trending Freshwater Fault. The basin is composed of Quaternary alluvium deposits of the Hookton Formation underlain by non-marine Wildcat series deposits. Surface exposures of the Carlotta Formation are also observed north of Elk River.

The City itself is composed of fifteen separate drainage basins, which are shown on Figure 2, Appendix A, and are detailed below.

Drainage Basin A, the Elk River Slough, encompasses approximately 527 acres of residential land and low-lying fields and marshes. The eastern most portion of the basin is located outside of the City limits in the residential Pine Hill area of Humboldt County. The County portion of the basin drains to Martin Slough. The City of Eureka portion of the basin drains to the lowlands adjacent to Broadway (Highway 101) and flows into the CalTrans drainage system.

Drainage Basin B, McCullens Avenue, encompasses approximately 105 acres of land. The majority of the land is residential, with some commercial and light industrial lands on the western portion of the basin. This basin drains to Humboldt Bay.

Drainage Basin C, Truesdale Street, encompasses approximately 188 acres of residential and commercial land, including the Bay Shore Mall. This basin drains to Humboldt Bay, near the foot of Truesdale Street.

Drainage Basin D, Henderson Street, encompasses approximately 20 acres of commercial and light industrial land, of which 65 acres are low-lying areas, located on the west side of Broadway (Highway 101). This basin, for the most part, drains to Mauer Marsh, near the western foot of Henderson Street.

Drainage Basin E, Del Norte Street, encompasses approximately 210 acres of largely commercial land, of which 80 acres drains directly to Palco March, with the balance draining directly to Humboldt Bay.

Drainage Basin F, Fourteenth Street, encompasses approximately 640 acres of industrial, residential, and commercial land. The majority of the basin is residential, with the commercial and light industrial uses on the extreme westerly portion of the basin. This basin drains to Humboldt Bay at the foot of Fourteenth Street and at the foot of Washington Street.

Drainage Basin G, Commercial Street, encompasses approximately 60 acres of commercial/industrial land near the downtown area of the City. The basin drains to Humboldt Bay at the foot of Commercial Street.

Drainage Basin H, C & I Streets, encompasses approximately 325 acres of mostly residential and some commercial land. The basin drains to Humboldt Bay at the foot of C Street and at the foot of J Street.

Drainage Basin I, Waterfront Drive, encompasses approximately 110 acres of industrial and commercial land. The basin drains to Humboldt Bay through four separate outfalls on Waterfront Drive between L Street and the Waterfront Drive boat ramp near R Street.

Drainage Basin J, Second Street, encompasses approximately 81 acres of industrial and commercial land (of which about 28 acres is marsh or undeveloped land). The basin drains to Humboldt Bay through three separate outfalls (through two small ditches and a marsh between S and Y Streets).

Drainage Basin K, Cooper Gulch, encompasses approximately 470 acres of residential and commercial land surrounding Cooper Gulch. The basin drains to the Eureka via a drainage ditch on the south side of Highway 101.

Drainage Basin L, Second Slough, encompasses approximately 580 acres of mostly residential land surrounding Eureka Second Slough. Much of this basin is marsh land or otherwise undeveloped land (due to steep grades). The basin drains to Eureka Slough, via Second Slough, just upstream of the Highway 101 crossing.

Drainage Basin M, Martin Slough, encompasses approximately 3,300 acres of mostly residential land. Approximately 2,000 acres of this basin are outside the City limits. The basin drains to Martin Slough through various small gulches.

Drainage Basin N, Northeast Eureka, is a narrow strip of land encompasses approximately 527 acres of land paralleling Highway 101 northeast of the Eureka Slough. The majority of the land is low laying fields, mostly owned by the State of California for wildlife conservation. There is some commercial and light industrial land along Jacobs Avenue, at the Murray Field Airport, and at the Indianola Cutoff. The basin drains to the CalTrans drainage along Highway 101, which discharges to Fay Slough or Humboldt Bay.

Drainage Basin O, Southwest Eureka, is a narrow strip of land encompasses approximately 197 acres of low lying fields south of Elk River and west of Highway 101. The basin drains to Elk River through small drainage ditches.

2.2 Storm Sewer System

Much of the existing storm water drainage system is considered inadequate, being both old and undersized. The upper reaches depend on inadequate gutter flow and the lower reaches often have undersized pipes and poorly constructed drop inlets.

There are a number of gulches throughout the City that act as natural drainages. For the most part they are unimproved and no actual drainage easements exist. This generally does not cause a problem as many of them are relatively deep and have adequate capacity of the 100-year runoff event. However, a few of the gulches create problems, especially at the locations where storm drainage pipes enter the system, due to siltation at the inlets and outlets, which reduces pipe capacity and can lead to flooding. As the City developed, some gulches were filled. Pipes were often installed along the gulch routes, but often no drainage easements were obtained. As homes were built, the gulches became more restricted and filling became more of a problem. There are numerous locations with the City limits where drainage systems meander amongst houses. In some cases, narrow drainage easements exist, but replacement and/or maintenance can be almost impossible due to the lack of access.

Much of the storm drain piping system consists of RCP piping varying from 8 to 42 inches in diameter. The layout of the sewer mains is shown in Figure 2, Appendix A. The system is gravity flow, with 17 discharges to Humboldt Bay and the other surrounding sloughs, as shown on Figure 2. Some of the outlets are outfitted with tide gates and others are not. Many of the existing tide gates do not function.

2.3 Pollutants of Concern

The North Coast Basin Plan places the City within the Eureka Plains hydrologic sub-unit. The beneficial uses of the Eureka Plain unit, as defined by California's Porter-Cologne Water Quality Control Act and the North Coast Basin Plan, include: agricultural supply; industrial service supply; navigation; water contact recreation; non-contact water recreation; commercial and sport fishing; cold freshwater habitat; wildlife habitat; rare, threatened, or endangered species habitat; marine habitat; migration of aquatic organisms, spawning, reproduction and/or early development; shell fish harvesting; estuarine habitat; and aquaculture.

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 to create solutions.

The following two waterbodies adjacent to the City:

- Freshwater Creek, which flows into Freshwater Slough, and
- Elk River

were both listed on the 2002 Clean Water Act Section 303(d) list for sediment.

On the TMDL priority for both Freshwater Creek and Elk River, sedimentation was listed as "high". The potential sources of sediment for both Freshwater Creek and Elk River are listed as silviculture, harvesting/restoration/residue management, logging road construction/maintenance, removal of riparian vegetation, stream bank modification/destabilization, erosion/siltation, natural sources, and non-point sources. Of these identified potential sources, the ones that could potentially occur in the City are only non-point sources. Logging and silviculture practices and the removal of riparian vegetation and stream bank modifications do not occur within the City limits. The primary sources of non-point source sediment that the City should address are related to sediment collected on the streets and other paved surfaces, and sediment from new construction.

Because of the 303(d) listings, the City considers sediment to be the main pollutant of concern; however, in addition to sediment, the City's SWMP addresses other common non-point source pollutants, including hydrocarbons from parking lots and streets, nutrients from fertilizers and other sources, and pesticides, fertilizers and herbicides used by the City, homeowners and businesses throughout the City.

2.4 Target Audiences

The following table identifies the common sources of each priority pollutant identified in Section 2.3, as well as the target audiences and BMP examples addressing the pollutants.

TABLE 1 Pollutants of Concern for the City of Eureka			
Pollutant of Concern	**Common Pollutant Sources**	**Target Audiences**	**Examples of BMPs**
1) Sediment	• Construction Sites • Streets	• Construction Contractors • Public Works	• Educational pamphlet series • Erosion Control Ordinance Requirements
2) Nutrients	• Fertilizers • Pet Waste • Sanitary Sewer Overflows • Improper Restaurant Practices • Excessive Organic Debris	• Homeowners • Landscape Contractors • Pet owners • Public Works • Restaurants	• Pet Waste Signs • Educational Materials • Landscaping Education • Restaurant inspections • Street Sweeping
3) Hydrocarbons	• Parking Lots • Streets • Automotive Facilities • Illicit Discharges	• Automotive Facilities • Public Works • Homeowners	• Oil/Water Separators • Street Sweeping • Automotive Facility Inspections • Educational Materials
4) Pesticides / Herbicides	• Residential Use • Commercial Use	• Homeowners • Landscape Contractors • Public Works	• Landscaping Education • Integrated Management Plan

3.0 ADMINISTRATION, PLANNING AND FUNDING

The Public Works/Building Department has the main SWMP implementation responsibilities. Additional limited responsibility will fall to the Engineering Department, the City Manager, and the Mayor/City Council. To achieve the tasks described in the SWMP, additional activities will need to be implemented by existing staff and/or contracted personnel. Table 3, showing an opinion of probable costs for the implementation of the SWMP is contained in Appendix C, and a summary of the SWMP with BMPs and the personnel responsible is contained in Appendix B.

3.1 Opinion of Probable Costs and Funding

The planning and preparation stages of the NPDES Phase II program, including the development of the SWMP and NOI for the permit application package, has been included in the current budget. Table 3 in Appendix C contains an opinion of probable costs associated with the implementation of the SWMP and the Best Management Practices (BMPs) outlined in the following sections. Many of the BMPs outlined are already activities that the City performs and have budgeted for. There are new tasks that will require Funding, and the City needs to decide how to fund the remainder of the program during future years.

3.2 Public Works/Building Department

The Public Works/Building Department, which includes utilities, streets, government buildings, and park maintenance, will be the key implementer of the City's SWMP. This Department will be involved in the majority of the BMPs, including coordination with local community groups and governmental agencies, development and enforcement of ordinances, implementation of storm sewer system operational and construction related BMPs, as well as program evaluation and annual report development.

The Director of Public Works, Michael Knight, is ultimately responsible for the functions of the Public Works Department and will therefore be ultimately responsible for the implementation of this SWMP. The Deputy Public Works Director, Bruce Young, has been designated as the Storm Water Program Leader. Other key implementers within the Public Works Department will be a Staff Environmental position that the City intends to hire to help implement the SWMP.

The Building Department will also be a key in helping to implement the City's SWMP. Department personnel will continue to enforce existing policies, such as the California Environmental Quality Act (CEQA) requirements, construction permitting and inspection requirements. Department personnel will also be involved in the development and implementation of the City's construction storm water program including during the plan check phase and construction inspection. Bruce Young will be the primary person involved in implementation.

3.3 Engineering Department

The Engineering Department will also be involved in aspects of the Storm Water Management Plan. Brent Seimer is the City Engineer and will be responsible to the implementation of the tasks that fall to the Engineering Department, such as sewer main replacement/repairs, the Martin Slough Enhancement Plan, and updating the City's GIS of the storm sewer system. The Engineering Department will also work with the Public Works/Building Department to develop standard details and specifications for construction site BMPs.

3.4 City Manager

The City Manager will be involved in aspects of the SWMP, particularly those associated with the funding of the SWMP BMPs. David Tyson is the current City Manager, and he will be work with Public Works and Engineering to help determine budget needs for the SWMP implementation. He will also be involved in some of the Public Education & Outreach and Public Involvement BMPs including the publication of educational materials, and the advertising and the promotion of Community Spring Cleanup Days.

3.5 City Attorney

The City Attorney, Dave Tranberg, will be responsible for reviewing and commenting on the proposed storm water ordinance. He may also get involved in the review of any potential fees to be charged to home owners, restaurant, businesses or developers to assist in the funding of the SWMP implementation.

3.6 City Finance Department

The City Finance Department will also assist in reviewing the funding options and securing funding for the implementation of the SWMP. Carolynn Thomas, the Finance Director, will be responsible for assisting with these tasks.

3.7 Mayor/City Council

The Mayor and the City Council will also be involved in aspects of the SWMP implementation. They will be responsible for approving the City budget and the funding of the SWMP implementation. They also will be responsible for approving the new storm water ordinance. They will also be involved in the promotion of Community Spring Cleanup Days and other Public Involvement activities.

3.8 Agencies & Organizations

Local agencies and non-profit groups can also work with the City to implement many of the BMPs outlined in this SWMP. They can also contribute to many activities that ultimately reduce storm water pollution to Elk River, Freshwater Creek, Humboldt Bay and its many tributaries. The City is currently a member of the North Coast Storm Water Coalition and will be coordinating with the members during the SWMP implementation. Detailed descriptions of the existing programs that these agencies and organizations conduct within the City are provided in the following sections of this SWMP. The Coalition meets monthly to discuss the programs that they are working on. Members of the North Coast Storm Water Coalition and their current contact person include:

- The City of Eureka, Bruce Young, (707) 441-4255;
- The City of Arcata, Julie Neander, (707) 822-8184;
- The City of Fortuna, Hans Koster, (707) 725-1468;
- Humboldt County Division of Environmental Health, Louise Jeffrey, (707) 268-2225 & Anne Glubczynski, (707) 445-7491;
- Redwood Community Action Agency (RCAA), Nicole Murano, (707) 269-2067;
- California Coastal Commission, Vanessa Metz, (707) 445-7833
- Humboldt Baykeeper, Peter Nichols, (707) 268-0664

Humboldt State University and the College of the Redwoods have also been invited to be members of the Coalition, but have not been active members.

4.0 MINIMUM CONTROL MEASURES

The Phase II Rule defines a SWMP as a program consisting of six elements, or MCMs, that when implemented together, are expected to achieve significant reductions of pollutants discharged into receiving water bodies. The MCMs required by the Phase II Rule include:

1. Public Education & Outreach
2. Public Involvement/Participation
3. Illicit Discharge Detection & Elimination
4. Construction Site Runoff Control
5. Post Construction Storm Water Management
6. Pollution Prevention/Good Housekeeping Practices for Municipal Operations

In this section, the BMPs and the overall program associated with each MCM will be summarized. Table 2, Appendix B provides additional details regarding the implementation plan, measurable goals, a timeframe for implementation, and the person or agency responsible for participating in the implementation.

4.1 Public Education and Outreach

EPA Guidelines establish the following BMPs for Public Education and Outreach Minimum Control Measures:

- Distribute education materials on the impact of storm water discharges and steps that can be taken to reduce storm water pollution
- Brochures or fact sheets
- Alternative information sources such as web sites, bumper stickers, and refrigerator magnets
- A library of educational materials
- Volunteer citizen educators
- Event participation
- Educational Programs for children
- Storm drain stenciling
- Storm water hotlines

The City will (or is currently) working on BMPs in all of these areas. Descriptions of the Public Education and Outreach BMPs are provided in the following table and measurable goals, target audiences, and implementers are provided in Table 2, Appendix B.

Public Education & Outreach BMPs	
BMP	**Description**
North Coast Storm Water Coalition	The City is a member of the North Coast Storm Water Coalition and will work with the Cities of Arcata and Fortuna, Humboldt County, RCAA, Humboldt Baykeeper and the California Coastal Commission to develop and distribute public education and outreach material. The Coalition is currently working on developing storm water pollution prevention posters to be distributed to schools and the public. Six posters are currently being developed including posters on pet waste, leaking oil, hazardous material disposal, car washing, cigarette butts, and the proper application of fertilizers and pesticides. The Coalition has also established a web site, humboldtstormwater.com. The web site will include information for the public on various storm water education, volunteer opportunities, etc., as well as have the City of Eureka's storm water hotline number posted. Upon completion and distribution of the current posters, the Coalition will undertake addition public education and outreach programs that will benefit all members of the Coalition.

Public Education & Outreach BMPs	
BMP	**Description**
Reaches to Beaches	'Reaches to Beaches' is a hands-on watershed education program that takes place both inside and outside of the classroom. The main objective of 'Reaches to Beaches' is to encourage students to make the connection between the upland stream reaches and watershed and the downstream coastal beaches and receiving waters. Targeted mainly for high school classrooms, this semester long program engages students in watershed surveys (physical, biological and chemical), field trips (challenge course and boating day on Humboldt Bay), and the development of service-learning Stewardship Action Plans. The environmental education curriculum follows a semester long curriculum journal that was created by Natural Resources Services (NRS). The curriculum starts with a teambuilding unit, emphasizing the importance of teamwork when making decisions about natural resources, and then moves on to watershed-related issues, including watershed and riparian systems, macro-invertebrate surveys, and water quality testing. As a final project, students develop Stewardship Action Plans, which allow them to become stewards in their watersheds, and may be implemented by their classroom or filed with the service-learning department at their respective school sites. Projects may include: storm drain marking, trash pickup, trail maintenance, native tree planting, or water quality testing programs. This watershed education journal is available for interested teachers and has an accompanying curriculum outline. The City will work with RCAA on the implementation of Reaches to Beaches in the class rooms at local schools. RCAA utilizes staff and Americorps Volunteers to present the curriculum. The City will assist with coordination, production of educational materials and providing facilities for their use.

Public Education & Outreach BMPs	
BMP	**Description**
Educational Components of Existing Commercial / Industrial Inspections	There are a number of existing programs at the City and County that currently educate the public and businesses on methods to reduce impacts to storm water. These include: **City of Eureka Pre-Treatment Coordinator** The City has a Pre-Treatment Permitting Program for the industrial waste water dischargers to the City's Waste Water Treatment Plant. The Pre-treatment Coordinator conducts wastewater discharge inspection and education. During the inspections, the Pre-Treatment Coordinator checks for signs of illicit discharges and distributes educational materials to the permitted facility. This includes: restaurants, regarding good cleaning practices, such as cleaning of floormats, dumpster areas, spill cleanup, and disposal of washwater, grease, and oil; inspection of oil/water separators; inspection of car washes; and inspection of other industrial dischargers. **Humboldt County Division of Environmental Health, Certified Unified Program Agency** The HCDEH, CUPA maintains an inventory of the facilities within the City that handle hazardous materials, generate hazardous wastes, maintain underground or aboveground fuel storage tanks, treat hazardous wastes, or handle acutely hazardous materials. The CUPA inspects these sites for spill prevention plans, hazardous material business plans, and inspects the sites to help ensure hazardous materials are handled in such a way as to prevent discharges to the storm water system or receiving waters. **Humboldt County's Used Oil Program** The Humboldt County Division of Environmental Health administers the Used Oil Program for the County, as well as the Cities of Eureka, Arcata, and Fortuna. The Program has developed informational brochures including "Humboldt Bay Starts on Your Streets" which details activities that contribute to storm drain pollution. Their "Household Hazardous Waste" and "Smart Shopper" brochures also have sections on the proper disposal of hazardous waste and not disposing of them in the storm drains, as well as sections on impacts from automotive maintenance, car washing, home maintenance, and lawn & garden activities that can impact storm water runoff. They also produce a "Waste Reduction and Recycling Guide" in the Humboldt County phone book, that has a section on storm water runoff. The Program has education booths at various community events within the City. In 2004-05 they had booths at: • Redwood Acres Raceway; Target audience-Racecar Owners & Teams • Humboldt Bay Maritime Expo; Target Audience-Boaters & General Public • Annual Health Fair; Target Audience-General Public • Tri City Weekly Home Show; Target Audience-General Public • Farmer's Markets in Old Town & Henderson Center; Target Audience-General Public The program is State funded, and currently has a requirement to spend at least 10% of the funds on storm water related activities.

Public Education & Outreach BMPs	
BMP	**Description**
City of Eureka Pet Waste Sign Program	The City of Eureka has developed a sign and pet disposal kiosks that have been and can be placed at the City's Boardwalk and other parks and walking paths that encourage the public to pick up after their pets. The City has installed them at the Boardwalk and will identify and install a least one additional kiosk per year at appropriate locations.
Storm Drain Marking	The City has purchased stencils saying "No Dumping, Drains to Bay" for use in storm drain marking. The City currently works with RCAA and the County's Used Oil Program to put on Storm Drain Marking events. The City coordinates with the High School students in the Reaches to Beaches program and provides them with stencils and paint. They also work with the County Used Oil Program and provide stencils, paint and volunteers for Storm Drain Marking Events, which are held throughout the year, typically in concert with "Make A Difference Day" (fourth Saturday in October), and the National Day of Service. They also coordinate with the City's High Schools to put on Storm Drain Marking Days throughout the school year.
City Web Site	The City has an existing web site that will be updated to include a "Storm Water Division" section. This section will contain contact information for the Public to reach appropriate City personnel, the storm water hotline phone number, and the ability for the public to submit a complaint or information request and to track that request through the system until resolution is obtained.
Storm Water Hotline	The City has established a Storm Water Hotline run through the Public Works Department. The City staff will be available to answer questions, receive tips or field complaints. The Hot Line number is (707) 441-4192. The Hotline Number will be listed on the humboldtstormwater.com web site and the City's Web Site. It will also be include on Utility Bills, and on educational brochures developed by the City and the North Coast Storm Water Coalition.
Education/Outreach for Community Activities	The City will have a table at appropriate activities that are held through out the year at the Adorni Center. City staff and volunteers will distribute posters and brochures at appropriate events such as: • City's Birthday Party (April) • Blues By the Bay (July) • Paddle Fest (October) And at other appropriate events throughout the year.
Community Spring Cleanup Day	The City is working on establishing a Community Spring Cleanup Day. The City will work with Service Clubs and the schools within the City to advertise and obtain volunteers to clean the City parks, neighborhoods, waterfront, and streams. The City will advertise the Cleanup Day on the radio and through posters. The City will organize and coordinate the event and will provide volunteers with trash bags and will coordinate trash disposal and recycling. Members of the City Council as well as City staff will participate in the event.
Construction Pamphlets	The City will be developing a series of pamphlets describing storm water pollution prevention measures for specific types of construction industry activities and detailing the provisions of the City's "Storm Water Quality Management and Discharge Control Ordinance". The pamphlets will be distributed to construction contractors during pre-construction meetings and construction site inspections and made available at the City's Engineering and Building Department offices.

4.2 Public Involvement and Participation

The intent of the Public Involvement and Participation MCM is to foster active community support for the SWMP and storm water pollution prevention activities. Participation by the public fosters awareness and helps ensure that the SWMP has the greatest chance of success.

At a minimum the City must comply with State and local public notice requirements when implementing this MCM.

Several storm-water-related activities related to this MCM are currently implemented within the City. A description of these activities is provided in the following table.

Public Involvement & Participation BMPs	
BMP	**Description**
Humboldt Bay First Flush Study	The Humboldt Bay First Flush study is a volunteer water monitoring effort intended to characterize the runoff in different parts of the watershed and to identify sources of potential pollutants. Partners include the City of Arcata, Humboldt County, the Redwood Community Action Agency, and the Community Clean Water Institute. The program includes creek sampling, manhole sampling and laboratory analysis. In 2004, surface water samples were collected from two creeks in the City, Cooper Gulch at 14th Street, and Martin Slough at Fairway Drive. Samples were also collected from six manhole locations including Waterfront Drive at P Street, Waterfront Drive at L Street, Waterfront Drive at C Street, Waterfront Drive at Commercial Street, Truesdale & Christie, and McCullens Avenue. A Summary Report was also produced and is available at www.ccwi.org . The City will be providing annual advertising of the Humboldt Bay First Flush study in various media to encourage public participation. The City will also assist with laboratory analysis at their laboratory at the wastewater treatment plant. The City will also evaluate the first flush sampling results to develop future SWMP policy, including education outreach BMPs.
Reaches to Beaches	As detailed in the Public Education MCM section, 'Reaches to Beaches' is a hands-on watershed education program that takes place both inside and outside of the classroom. The main objective of 'Reaches to Beaches' is to encourage students to make the connection between the upland stream reaches and watershed and the downstream coastal beaches and receiving waters. The City will work with RCAA on the implementation of Reaches to Beaches in the class rooms at local schools. RCAA utilizes staff and Americorps Volunteers to present the curriculum. The City will assist with production of educational materials and providing facilities for their use.

Public Involvement & Participation BMPs	
BMP	**Description**
Community Spring Cleanup Day	The City is working on establishing a Community Spring Cleanup Day. The City will work with Service Clubs and the schools within the City to advertise and obtain volunteers to clean the City parks, neighborhoods, waterfront, and streams. The City will advertise the Cleanup Day on the radio and through posters. The City will organize and coordinate the event and will provide volunteers with trash bags and will coordinate trash disposal and recycling. Members of the City Council as well as City staff will participate in the event.
Storm Drain Marking	The City has purchased stencils saying "No Dumping, Drains to Bay" for use in storm drain marking. The City currently works with RCAA and the County's Used Oil Program to put on Storm Drain Marking events. The City coordinates with the High School students in the Reaches to Beaches program and provides them with stencils and paint. They also work with the County Used Oil Program and provide stencils, paint and volunteers for Storm Drain Marking Events, which are held throughout the year, typically in concert with "Make A Difference Day" (fourth Saturday in October), and the National Day of Service. They also coordinate with the City's High Schools to put on Storm Drain Marking Days throughout the school year.

4.3 Illicit Discharge Detection and Elimination

Federal regulations define an illicit discharge as "… any discharge to an MS4 that is not composed entirely of storm water …". There are some exceptions including discharge from NPDES permitted industrial sources and discharges from fire fighting activities. Illicit discharges are considered "illicit" because MS4s are not designed to accept, process, or discharge such non-storm water wastes. These illicit discharges include items such as sanitary wastewater, car wash wastewater, industrial wastewater, etc.

EPA Guidelines establish the following BMPs for Illicit Discharge Detection and Elimination Minimum Control Measures:

- Develop, implement and enforce a program to detect and eliminate illicit discharges
- Develop a storm sewer map showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharge from those outfalls
- To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions
- Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit
- Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste
- Address the following categories of non-storm water discharges or flows (i.e. authorized non-storm water discharges) only where they are identified as significant contributors of pollutants to the Small MS4:
    - Waterline flushing
    - Landscape irrigation
    - Diverted stream flows
    - Rising groundwaters

- Uncontaminated groundwater infiltration to the storm sewers
- Uncontaminated pumped groundwater
- Discharges from potable water sources
- Foundation drains
- Air conditioning condensate
- Irrigation water
- Springs
- Water from crawl spaces
- Footing drains
- Lawn watering
- Individual residential car washing
- Flows from riparian habitats and wetlands; and
- Dechlorinated swimming pool discharges

Several storm-water-related activities related to this MCM are currently, or will be implemented within the City. A description of these activities is provided in the following table.

Illicit Discharge Detection & Elimination BMPs	
BMP	**Description**
Illicit Discharge Detection	The City has a Pre-Treatment Permitting Program for the industrial waste water dischargers to the City's Waste Water Treatment Plant. The Pre-Treatment Coordinator conducts wastewater discharge inspection and education. All of the permitted facilities (currently approximately 50 facilities) have been thoroughly inspected to identify drains and all connections and piping for the waster water system. Many of the facilities have also been dye tested, where florescent dye is placed in the drains to ensure that the drains flow to the sanitary sewer system and do not outfall into the storm drain system or other waters of the U.S. Annual inspections are also performed at a minimum at each facility. During the annual inspection, the Pre-Treatment Coordinator checks for signs of illicit connections as well as good housekeeping and management practices to ensure wash down is not conducted adjacent to storm drains, oil/water separators are maintained in good working order, hazardous or other materials are not stored adjacent to storm drains, etc.
City Web Site	The City has an existing web site that will be updated to include a "Storm Water Division" section. This section will contain contact information for the Public to reach appropriate City personnel, the storm water hotline phone number, and the ability for the public to submit a complaint and to track that complaint through the system until resolution is obtained.

Illicit Discharge Detection & Elimination BMPs	
BMP	**Description**
Storm Water Hotline	During working hours, the public can call (707) 441-4192 to report an illicit discharge, and spill of hazardous materials or other problem with the storm drain system or other drainage structures. The staff member answering this line will contact the appropriate response personnel. If the spill is not located in a City of Eureka drainage structure, the caller will be referred to the proper local authority for response. The City will be developing a record-keeping system for tracking public calls and their responses during their current 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 City of Eureka crew to the site (or both), or other appropriate responses. The City will be coordinating with the Humboldt County Division of Environmental Health on complaint response, and will obtain recordkeeping information regarding public calls related to illicit discharges to channels within the City. The City will also track all complaints received by the public, and will maintain records of follow-up activities to show that spills are adequately addressed. The locations of the illicit discharges will be tracked and used to determine areas of concern to be targeted for additional outreach and more frequent monitoring. Finally, the City will be coordinating with the County and other members of the North Coast Storm Water Coalition on an internal spill response matrix and public education spill response brochure, ensuring that the appropriate City contact information is included on the outreach materials.
Storm Water GIS	The City has prepared a Geographic Information System for the City's storm water utility system. Included in the GIS are the storm water basins, storm water manholes, storm water outfalls, storm water mains, assessor's parcels, the City limits, streets, and orthophotographs of the City. The GIS is located on the internet at http://info.ci.eureka.ca.gov/GISMS/COEWEBGISindex.html . The system is still being developed and will be made available to the Public when it is finalized, allowing the Public to view and query the various entities in the City's storm water system. The names of the receiving water bodies remain to be added.

Illicit Discharge Detection & Elimination BMPs	
BMP	**Description**
Storm Water Quality Management and Discharge Control Ordinance	The City has prepared a Draft Storm Water Ordinance, which effectively prohibits non-storm water discharges into the MS4 and implements appropriate enforcement procedures and actions. It establishes the regulatory authority for the City to prohibit illicit discharges, illicit connections, prohibits waste disposal, establish BMPs for construction and industrial activities, protects watercourses, establishes requirements to remediate discharges and their impacts and establishes enforcement actions and fines to enforce violations of the ordinance. The Draft Ordinance will be reviewed by the City Manager and City Attorney and the final version presented to the City Council for adoption. Upon adoption of the storm water ordinance, training and outreach on it will include providing in-house training on the new requirements to all the Public Works maintenance workers. The City will also include information on the new ordinances in public service announcements to the City's local papers as well as in other media, including the Builder's Exchange and in storm water educational materials developed as part of the Public Outreach MCM.
Commercial / Industrial Inspections	**Humboldt County Division of Environmental Health, Certified Unified Program Agency** The HCDEH, CUPA maintains an inventory of the facilities within the City that handle hazardous materials, generate hazardous wastes, maintain underground or aboveground fuel storage tanks, treat hazardous wastes, or handle acutely hazardous materials. The CUPA inspects these sites for spill prevention plans, hazardous material business plans, storm water pollution prevention plans and inspects the sites to help ensure hazardous materials are handled in such a way as to prevent discharges to the storm water system or receiving waters.
Smoke Testing/Illicit Connection Detection and Elimination	The City has purchased equipment to conduct smoke testing on the City's storm drainage system. The smoke testing will help the City detect illicit connections to the storm drainage system, and through the use of the Storm Water Ordinance, eliminate the illicit connections. It will also allow the City to determine the location and extent of degraded piping or connections that allow groundwater to infiltrate into the system, and prepare a plan and budget for the replacement of these portions of the storm water system. The City will establish a plan and schedule for smoke testing the system. They will also establish a map for tracking the portions of the system that have been smoke tested.
Maintenance logs and visual observations	The City will be developing and using a storm system maintenance log to document the location and observations made during storm drain maintenance, including excessive debris, suspicious discharges, odors, dry-weather flow, structural problems, and others. The results will be evaluated to determine areas of concern to be targeted for outreach and more frequent monitoring / maintenance.

None of the non-storm water discharges contained in the permit have been identified as significant contributors of pollutants. The City is built-out and new water line installations are very infrequent and flushing of new mains a rare occurrence. The water mains are flushed on occasion, but not at a rate that has significant impacts on the receiving water bodies, and only by trained personnel. The wet climate in Eureka precludes the use of extensive landscape irrigation,

irrigation water or lawn watering. Stream flows within the City limits are extremely rarely, if ever, diverted. Potable water is supplied to the City by Humboldt Bay Municipal Water District and pumped groundwater discharge or discharges from potable water sources are not an issue. There are foundation drains, water from crawl space pumps, and footing drains at some homes within the City, however basements are very rare in the City, resulting in the foundation drains to be located at shallow depths, where large quantities of groundwater are not encountered. There are springs, riparian habitats and wetlands in some of the areas of the City; however, they discharge into existing sloughs and other water courses and as such are not a source of pollutants. Given the cool climate in Eureka, air conditioning condensate and swimming pool discharges are practically non-existent. Groundwater infiltration into the storm sewer system is likely the only discharge that contributes significant flow to the system; however it is unlikely that this is a significant contributor of pollutants, and the City is establishing a plan for reducing infiltration into the system. For these reasons, no specific plan will be developed by the City to address these flows, other than the maintenance plan for the storm sewer system to reduce groundwater infiltration.

4.4 Construction Site Storm Water Runoff Control

The Phase II Final Rule requires that a regulated MS4 develop, implement and enforce a program to reduce pollutants in storm water runoff to their MS4 from construction activities that result in land disturbance of greater than or equal to one acre. The minimum requirements for this MCM are:

- Have an ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law
- Have requirements for construction site operators to implement appropriate erosion and sediment control BMPs
- Have requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality
- Have procedures for site plan review of construction plans which incorporates consideration of potential water quality impacts
- Have procedures for receipt and consideration of information submitted by the public
- Have procedures for site inspection and enforcement of control measures.

Because of the importance of sediment reduction to the success of this program and the health of Humboldt Bay and its tributaries, including Elk River and Freshwater Creek, the City will be placing special emphasis on the BMPs in this MCM. The City's program consists of developing, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres and developing methods for tracking the permits and performing site inspections. It also includes education of the City Staff and well as construction contractors and developers on the ordinance and its requirements.

Construction Site Runoff Control BMPs	
BMP	**Description**
Storm Water Quality Management and Discharge Control Ordinance	The City has developed a Draft "Storm Water Quality Management and Discharge Control Ordinance", which includes a "Best Management Practices for Construction Activities" section requiring erosion and sediment control plans and implementation of Best Management Practices for sites disturbing greater than 1 acre of soil. The Ordinance includes the development of a Best Management Practices Manual by the City as well as requirements for construction site control measures, requirements for the approval of sites measures prior to the issuance of City permits, and provisions for the inspection and enforcement for these site control measures. The Ordinance requires that dischargers whose projects disturb 1 or more acres of soil, or whose projects disturb less than 1 acre but are part of a larger common plan of development that in total disturbs 1 or more acres, and who are required to obtain coverage under the NPDES General Permit for Discharges of Storm Water Associated with Construction Activities, are required to submit a copy of the Notice of Intent, and the Erosion and Sediment Control Plan to the City prior to the City issuing a Grading or Building Permit for the project. The ordinance further requires that the construction project implement BMPs for the site to prevent the entry of pollutants into the storm water drainage facilities, and that a copy of the Storm Water Pollution Prevention Plan, prepared as part of the NPDES General Permit, be made available upon request by City Inspectors. The Ordinance also contains a "Notice of Violation" section that establishes requirements and the authority for the City to require responsible persons to cease and desist and eliminate illicit discharges, abate storm water contamination and restore impacted property. It also establishes the regulatory authority for the levying of fines to cover administrative and remediation costs. The City will have the ordinance reviewed by the appropriate City staff, and City Attorney, and adopted by the City Council.
Best Management Practices Manual	The Storm Water Ordinance also requires the City to develop a "…Best Management Practices Manual for activities, operations, or facilities that may cause or contribute to pollution or contamination of the storm water drainage facilities or waters of the United States." The Ordinance includes provisions for revisions of the Manual as well as distribution to individuals engaged in construction or industrial activities. It also requires that "…any person engaged in activities or operations, or owning facilities or property which will or may result in pollutants entering storm water, the storm drain system, or waters of the U.S. shall implement Best Management Practices … to prevent and reduce such pollutants." The BMP Manual will be reviewed by appropriate City Staff and the final version presented to the City Council for adoption.

Construction Site Runoff Control BMPs	
BMP	**Description**
Storm Water Hotline	During working hours, the public can call (707) 441-4192 to report an illicit discharge associated with construction activities. The staff member answering this line will contact the appropriate response personnel. If the spill is not located in a City of Eureka drainage structure, the caller will be referred to the proper local authority for response. The City will be developing a record-keeping system for tracking public calls and their responses during their current 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 City of Eureka crew to the site (or both), or other appropriate responses.
Site Inspections	The City's Building/Public Works Department will build off of existing inspection protocols to develop specific construction site inspection procedures, including checklists, educational materials, scheduling for pre-storm and post-storm inspections and enforcement escalation processes. These new procedures will be used to inspect, document, and enforce 100 percent of construction sites within the City. The BMP Manual will also be distributed to the appropriate Building Inspectors for their use in the evaluation of site control BMPs. The Storm Water Ordinance establishes the City's "Authority to Inspect", not only construction sites, but "… whenever the Public Works Director has cause to believe that there exists, or potentially exists, in or upon any premises any condition which constitutes a violation of this chapter…".
Construction Permit Plan Review and Tracking	The City has established procedures to review construction plans and track construction permits, including the review of plans and issuance of the permits, monitoring active construction sites in the City, and scheduling site inspections. The City will also track the proportion of erosion control plans submitted that meet the new requirements. The City will evaluate the results and determine if additional education and outreach to developers and contractors is needed.
Contractor Education	Outreach to the development community will include the development of a flowchart, educational pamphlets and checklists describing the new requirements. The educational materials, checklist and the new ordinance will be distributed to 100 percent of developers and contractors during pre-design and pre-construction meetings. The developers and contractors will also be made aware of the Best Management Practices Manual, and copies will be made available to them at a cost if requested. The City will also include information on the new ordinances in public service announcements to the City's local papers as well as in other media, including the Builder's Exchange and in storm water educational materials developed as part of the Public Outreach MCM.

Construction Site Runoff Control BMPs	
BMP	**Description**
City Staff Education	Upon adoption of the storm water ordinance, training on the erosion control ordinance will include providing in-house training on the new requirements to all of the appropriate Public Works, Engineering and Building Department staff involved in plan review, inspection, and enforcement. Copies of the BMP Manual will also be made available to the appropriate staff for their use in the evaluation of construction plans and for site inspections. In addition to the in-house training, the City will coordinate with local agencies on potential joint training opportunities for all of the City's construction site inspectors by the end of the permit term. Upon receipt of training, City staff will begin enforcement of the ordinance, ensuring that 100 percent of applicable construction projects have approved erosion control plans.

4.5 Post-Construction Storm Water Management

The Phase II Rule requires that an operator of a small MS4 develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new developments and redevelopments that result in the land disturbance of greater than or equal to 1 acre. The minimum requirements are:

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

Note that the permit requires the small MS4 described in Supplemental Provision E to include a list of design standards provided with the General Permit. The City of Eureka is not on the Supplemental Provision E list.

Since the City of Eureka has effectively reached its full build-out capacity, large new developments that will appreciably affect the quantity and/or quality of storm water discharge to the storm water system is unlikely. Therefore the City will address the requirements of this MCM, but it will not be a major focus of the City's SWMP as the other MCMs will have more impact on addressing the impacts to storm water and the receiving water bodies.

Post-Construction Storm Water Control BMPs	
BMP	**Description**
Storm Water Quality Management and Discharge Control Ordinance	The City has developed a Draft "Storm Water Quality Management and Discharge Control Ordinance", which includes a "Best Management Practices for Construction Activities" section requiring implementation of Best Management Practices for sites disturbing greater than 1 acre of soil. The Ordinance includes the development of a Best Management Practices Manual by the City as well as requirements for BMP measures to be implemented on new or redevelopments, requirements for the approval of BMP measures prior to the issuance of City permits, and provisions for the inspection and enforcement for these site control measures. The Ordinance requires that "…any person engaged in activities or operations, or owning facilities or property which will or may result in pollutants entering storm water, the storm drain system, or waters of the U.S. shall implement Best Management Practices … to prevent and reduce such pollutants." These BMPs will be reviewed and approved by the City prior to the City issuing a Grading or Building Permit for the project. The Ordinance also contains a "Notice of Violation" section that establishes requirements and the authority for the City to require responsible persons to cease and desist and eliminate illicit discharges, abate storm water contamination and restore impacted property. It also establishes the regulatory authority for the levying of fines to cover administrative and remediation costs. The City will have the ordinance reviewed by the appropriate City staff, and City Attorney, and adopted by the City Council.
Best Management Practices Manual	The Storm Water Ordinance also requires the City to develop a "…Best Management Practices Manual for activities, operations, or facilities that may cause or contribute to pollution or contamination of the storm water drainage facilities or waters of the United States." The Ordinance includes provisions for revisions of the Manual as well as distribution to individuals engaged in construction or industrial activities. It requires that; "The Best Management Practices Manual shall include appropriate Best Management Practices for controlling the volume, rate, and potential pollutant load of storm water runoff from existing and new projects as may be appropriate to minimize the generation, transport, and discharge of pollutants." The City will provide copies of the BMP Manual to contractors and developers as well as City Staff to assist them in the design and installation of the required BMPs. The Draft BMP Manual will be reviewed by appropriate City staff and the final version presented to the City Council for adoption.

Post-Construction Storm Water Control BMPs	
BMP	**Description**
Operation and Maintenance of BMPs	The ordinance includes requirements for property owners of new developments to monitor and maintain source and treatment control BMPs at least once a year or as specified by the designer or manufacturer of the BMP. The Ordinance states that; "Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense." The City will modify the existing BMP inspection and tracking program to ensure compliance with this requirement. The City's Pre-Treatment Coordinator currently inspects BMPs installed on all permitted industrial facilities that discharge to the Waste Water Treatment Plant. Inspections occur at least once a year, and the Pre-Treatment Operator checks the condition and operation of the BMPs. This program will be expanded to include the tracking and inspection of BMPs installed at facilities that are not permitted through the City's Waste Discharge Permit. The City currently does not have any structural BMPs installed on City owned properties. If such structural BMPs are installed, the City will develop a BMP maintenance program for future post-construction BMPs on City owned properties, including a BMP inventory and schedules for inspection and maintenance.
Watercourse Protection	The Storm Water Ordinance also contains a "Water Course Protection" section that requires people owning property through which a water course passes to keep it; "… free from trash, debris, excessive vegetation, and other obstacles that would pollute, contaminate, or significantly retard the flow of water through the watercourse." It also requires that the owner not remove health vegetation, beyond that necessary for maintenance, "… in such a manner as to increase the vulnerability of the watercourse to erosion." It is unlikely that the City will actively inspect properties to ensure conformance with this section of the Ordinance, but will likely rely on public complaints to the Storm Water Hotline, and/or routine observations from City Staff during their performance of maintenance activities on the storm water system or during construction inspections to note non-conformance with this provision. The enforcement and inspection provisions of the Ordinance will provide the City the means for the enforcement of this section and the levying of fines for individuals who do not comply. Complaints to the Hot Line will be tracked along with all other calls received on the Hot Line. The complaints will be analyzed at regular intervals to determine if problem areas exist, and whether additional education or outreach should be provided to specific target audiences.

Post-Construction Storm Water Control BMPs	
BMP	**Description**
Contractor Education	Outreach to the development community will include the development of a flowchart, educational pamphlets and checklists describing the new post construction BMP requirements. The educational materials, checklist and the new ordinance will be distributed to 100 percent of developers and contractors during pre-design and pre-construction meetings. The developers and contractors will also be made aware of the Best Management Practices Manual, and copies will be made available to them at a cost if requested. The City will also include information on the new ordinances in public service announcements to the City's local papers as well as in other media, including the Builder's Exchange and in storm water educational materials developed as part of the Public Outreach MCM.
City Staff Education	Upon adoption of the storm water ordinance, training on the Storm Water Ordinance will include providing in-house training on the new requirements to all of the appropriate Public Works, Engineering and Building Department staff involved in plan review, inspection, and enforcement. Copies of the BMP Manual will also be made available to the appropriate staff for their use in the evaluation of construction plans and for site inspections. In addition to the in-house training, the City will coordinate with local agencies on potential joint training opportunities for all of the City's construction site inspectors by the end of the permit term. Upon receipt of training, City staff will begin enforcement of the ordinance, ensuring that 100 percent of applicable construction projects have approved erosion control plans.

4.6 Pollution Prevention / Good Housekeeping For Municipal Operations

The Pollution Prevention/Good Housekeeping MCM is aimed at the small MS4 operators and is intended to allow them to examine and subsequently alter their own actions to help ensure a reduction in the amount and type of pollutions that: (1) collects on streets, parking lots, open spaces, and storage and vehicle maintenance areas and is discharged into local waterways; and (2) results from actions such as environmentally damaging land development and flood management practices or poor maintenance of storm sewer systems.

The minimum requirements are:

- Permittee must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations
- Using training materials that are available from U.S. EPA, the State or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

The following table outlines the existing and proposed BMPs for this MCM.

Pollution Prevention / Good Housekeeping BMPs	
BMP	**Description**
Operation and Maintenance Plan	An Operation and Maintenance Plan will be prepared as a supplement to this SWMP. The Plan will focus on City Operations that can directly impact storm water quality and will address items such as: fueling and hydrocarbon storage practices; fleet maintenance procedures including oil and other fluid storage and disposal procedures; fleet maintenance scheduling; storage and disposal procedures of construction, street sweeping, and other materials which if contacted by storm water may contribute pollutants; fleet washing procedures; hazardous materials storage procedures; spill response procedures; street and parking lot sweeping procedures and schedules; fire hydrant flow testing, and water system flushing procedures; large-scale dewatering operation procedures; construction project sediment and erosion control procedures and requirements; storm water system maintenance procedures and scheduling, and other applicable procedures to reduce and prevent storm water pollution. Landscaping, fertilizing and herbicide procedures and recommendations will be address under a separate "Integrated Pesticide, Herbicide, and Fertilizer Management Plan" (see below). Upon completion and adoption of the Operation and Maintenance Manual by City Council, the Manual will be distributed to appropriate City personnel and training will be conducted on the applicable portions of the manual with applicable personnel at least annually.
Street Sweeping	The City conducts street sweeping daily, and each street is swept at least once each week. The City will be identifying areas where more frequent cleaning of streets is necessary. These areas will then be targeted for more frequent cleaning and educational outreach to applicable target audiences if the source of the pollutants can be identified.

Pollution Prevention / Good Housekeeping BMPs	
BMP	**Description**
Storm Drain Maintenance	The Public Works department inspects and cleans storm-drain pipes and inlet structures throughout the year. Due to limited personnel, the department is not able to inspect and clean each of the storm drain inlets annually. Rather, priority is given to known problem areas and industrial areas. Cleaning focuses on debris collected at drop inlets. The debris are cleared, frequently by hand, and placed in city trucks. Dewatering of this debris is usually not required, and the debris is disposed of at the City Garbage Transfer Station, either in the green waste section or with regular garbage, depending on its composition. Collection of sediment and other debris in the storm drain piping is generally not an issue, and the system is self flushing. If the pipes are required to be cleaned, this will be performed during the dry weather as much as possible. A vacuum truck will be used to collect the flushed debris, and the wastes will be dewatered at the City's Waste Water Treatment Plant and disposed of with other dewatered debris generated at the Plant. Sediment buildup at the outlet of some of the City's storm drainage system can be a problem, and this is removed by hand or low impact equipment during the dry weather months when ever possible. Core rolls, silt fences or other appropriate BMPs are used to help reduce impacts to receiving water bodies. The sediment and other debris are disposed of either at the City Garbage Transfer Station or the City's WWTP, depending on their composition and the dewatering required. Vegetated drainage courses in the City's prevue are maintained during the summer/fall months and are mowed and trimmed as required. Green waste generated in this process is recycled at the City Garbage Transfer Station. Maintenance is performed in such a manner as to remove only the required vegetation to allow adequate flow and prevent erosion of the banks of the drainage courses. The City will be developing and using a storm system maintenance log to document the location and observations made during storm drain maintenance, including excessive debris, suspicious discharges, odors, dry-weather flow, structural problems, and others. In house-training on use of the form will be provided to all Public Works maintenance workers. The maintenance logs will be periodically reviewed to determine areas of concern to be targeted for outreach and more frequent monitoring / maintenance.

Pollution Prevention / Good Housekeeping BMPs	
BMP	**Description**
Integrated Pesticide, Herbicide, and Fertilizer Management Plan	The City will review current landscape policies, including the development of an inventory of pesticides, herbicides, and fertilizers currently used. The current procedures will be evaluated and compared to alternative methods of pest control, and based on the evaluation, a meeting will be held with the City's Public Works personnel to discuss alternative methods. The goal of the program is to reduce the volume of pesticides and herbicides used. Upon review and evaluation of the current practices and selection of alternative methods, the City will develop an Integrated Pesticide, Herbicide, and Fertilizer Management Plan that will detail the types of each of these to be used, the application rates, application methods, handling and storage methods, etc. Upon completion of the Plan, applicable Public Works staff will be trained in the contents of the manual.
City Employee Training	The City will train appropriate personnel on the contents of the Storm Water Quality Management and Discharge Control Ordinance, the BMP Manual, the Operation and Maintenance Manual, and the Integrated Pesticide, Herbicide, and Fertilizer Management Plan. Upon adoption of the storm water ordinance, training on the erosion control ordinance will include providing in-house training on the new requirements to all of the appropriate Public Works, Engineering and Building Department staff and their supervisors involved in plan review, inspection, and enforcement. Copies of the BMP Manual will also be made available to the appropriate staff for their use in the evaluation of construction plans and for site inspections. This training will be provided to all new employees at the time of their hire. After the initial training, a refresher training of the contents of the Ordinance will be provided in the employee's annual Storm Water Training session. Upon adoption of the Operation and Maintenance Manual, all applicable Public Works employees involved in fleet maintenance or operation, construction operations, street or storm drain maintenance, and building and landscape maintenance as well as their supervisors will be provided with a training on the contents of the Manual. This training will also include the review of the appropriate portions of the BMP Manual. New employees will be provided with this training upon hire. All applicable Public Works employees will also be provided an annual storm water refresher training. All Public Works Employees and their supervisors involved in landscaping activities and/or the application of pesticides, herbicides, or fertilizer, will be provided with training on the Integrated Pesticide, Herbicide, and Fertilizer Management Plan after its adoption. New employees will also be trained on its contents. An annual refresher training will also be provided to all of these employees. Sign in sheets will be required at all trainings to track and document the training of City Employees. Training will be reviewed during the employees annual review and any missed trainings noted and required to be completed.

4.7 Monitoring and Evaluation

The Regional Water Board requires that an Annual Report be submitted that summarizes the previous fiscal year's storm water management activities and the results of those activities. The first report will likely be due on September 15, 2006, after the City has obtained official coverage under the Phase II program. Subsequent Annual Reports are due on 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 periodically document activities that took place during the fiscal year, regularly determine if measurable goals were achieved, and assess the success or failure of the selected BMPs included in the attached tables. If, upon evaluation of the SWMP, improved controls are identified as necessary, the City will revise their mix of BMPs to provide for a more effective program. The City will provide justification for such changes in the Annual Report or memorandums to the Regional Water Board.

The Annual Report will be prepared using summary tables based on the format of Table 2 of this SWMP. These summary tables would be accompanied by text for explanation of, and elaboration on, the activities conducted during the year, as needed.

5.0 SIGNATORY REQUIREMENT

"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."

_____ _____

Mike Knight — Date

Public Works Director, City of Eureka

6.0 ACRONYM LIST

Acronym	Definition
BMP	Best Management Practice
CEQA	California Environmental Quality Act
CMP	Corrugated metal pipe
CUPA	Certified Unified Program Agency
EPA	Environmental Protection Agency
General Permit	Final State General Storm Water Permit
HCDEH	Humboldt County Division of Environmental Health
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
MSL	Mean Sea Level
NOI	Notice of Intent
NRS	Natural Resources Service
NPDES	National Pollutant Discharge Elimination System
PVC	Poly-vinyl chloride
RCAA	Redwood Community Action Agency
RCP	Reinforced concrete pipe
Regional Water Board	North Coast Regional Water Quality Control Board
SWMP	Storm Water Management Plan
TMDL	Total Maximum Daily Load
WWTP	City of Eureka Waste Water Treatment Plant

Appendix A
Figures

Appendix B
Table 2 – Summary of SWMP

Appendix C
Opinion of Probable Cost