NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR STORM WATER DISCHARGES

STORM WATER MANAGEMENT PLAN PHASE II

PREPARED BY:
COUNTY OF SONOMA
SONOMA COUNTY WATER AGENCY

SUBMITTED TO:
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

October 2004

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CERTIFICATION
COUNTY OF SONOMA and
SONOMA COUNTY WATER AGENCY

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 or the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, 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.

COUNTY OF SONOMA

Chairman, Board of Supervisors

SONOMA COUNTY WATER AGENCY

Chairman, Board of Directors

ATTEST:

County Clerk and Ex-Officio Clerk
of the Board of Supervisors and Board of
Directors of the Sonoma County Water Agency

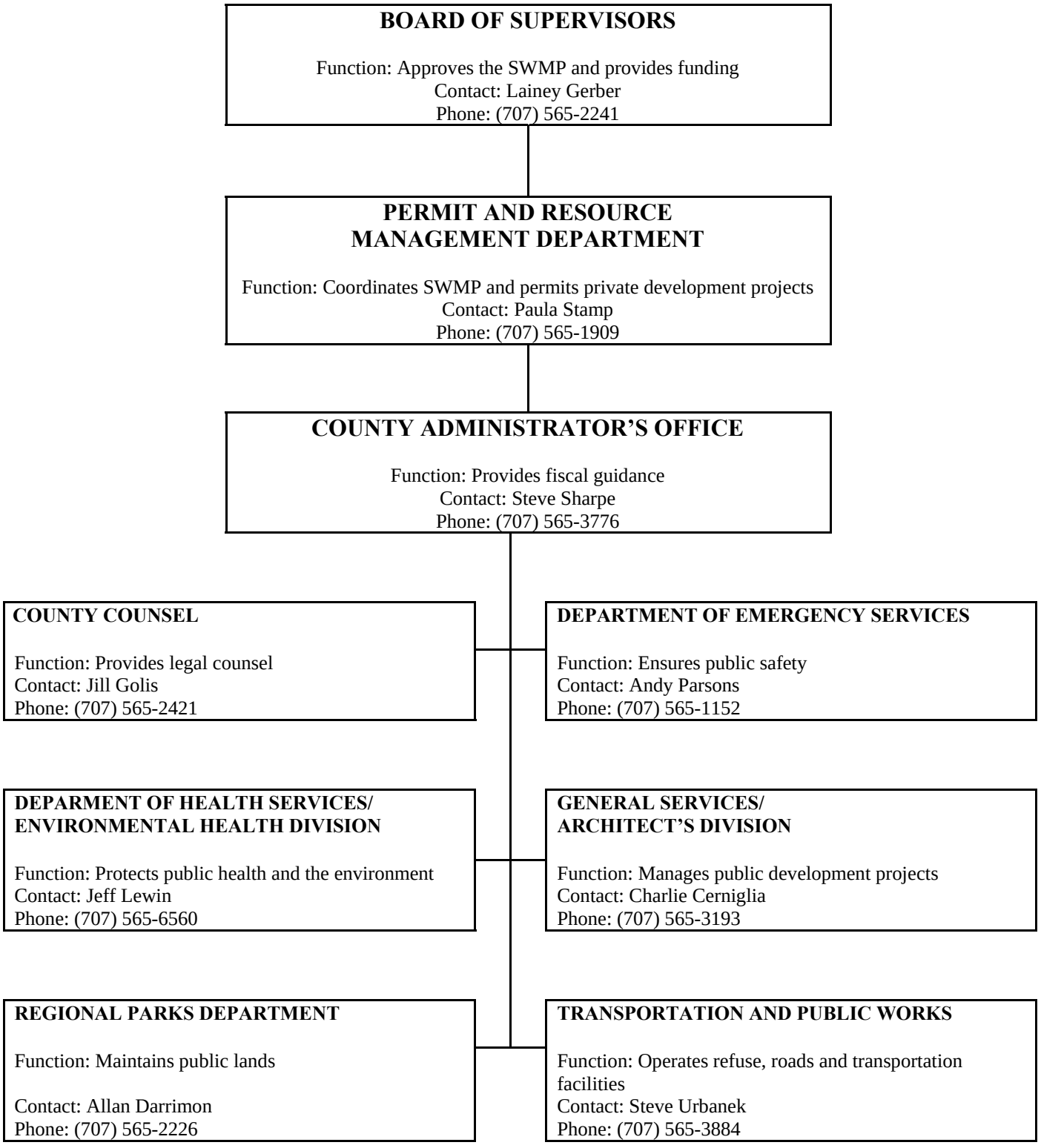
As authorized by the Sonoma County Board of Supervisors and the Sonoma County Water Agency Board of Directors by Resolution No. 04-1165 and required by 122.22 Code of Federal Regulations.

LIST OF ACRONYMS AND ABBREVIATIONS

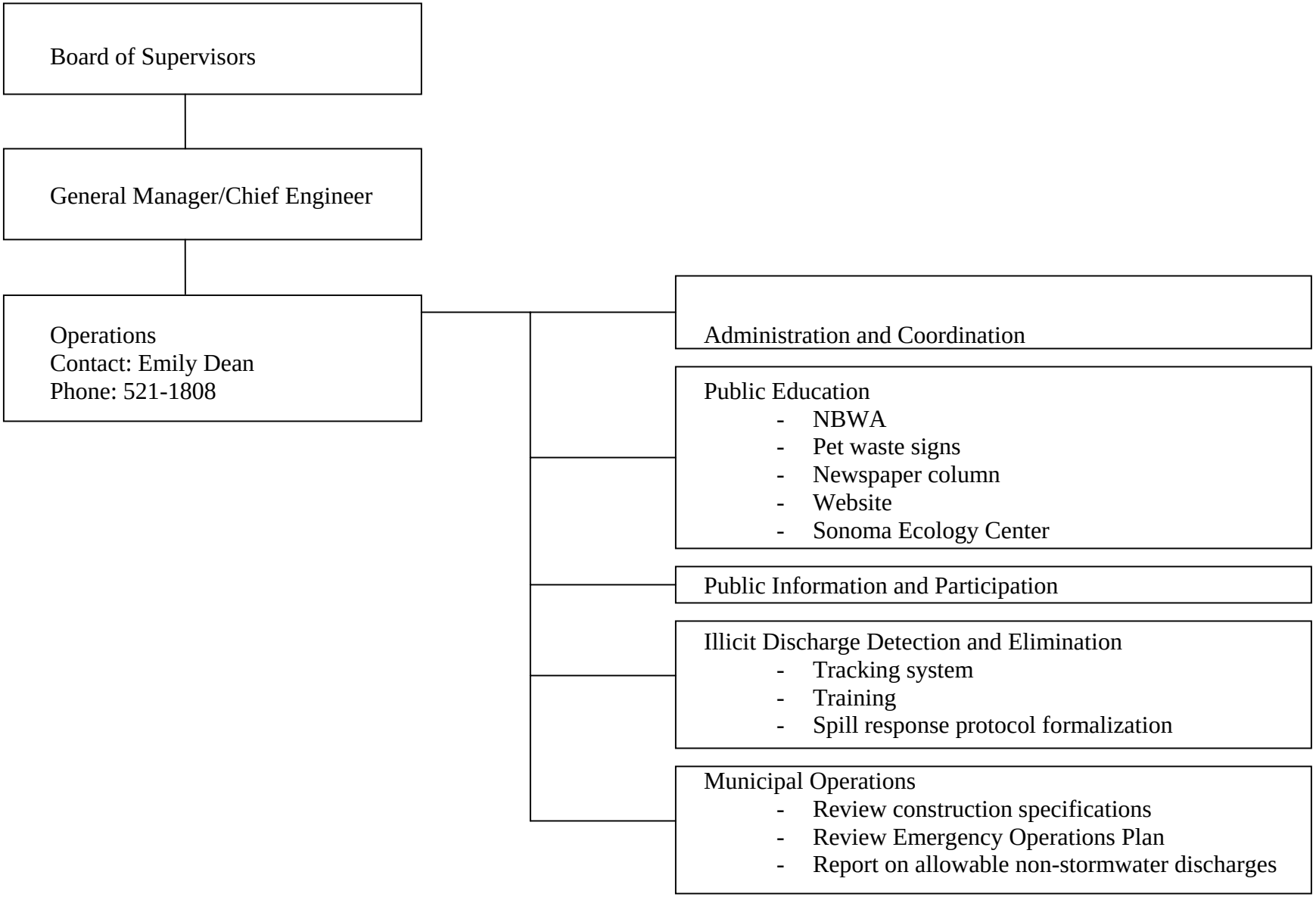
ACOE	United States Army Corps of Engineers
ASF	Automotive Service Facility
BMP	Best Management Practice
CalEPA	California Environmental Protection Agency
CAO	County Administrator's Office
CBC	California Building Code
CEQA	California Environmental Quality Act
County	County of Sonoma
CPESC	Certified Professionals in Erosion and Sediment Control
CUPA	Certified Unified Program Agency
CURFFL	California Uniform Retail Food Facilities Law
DES	Department of Emergency Services
DFG	California Department of Fish and Game
DI	Depth-integrated
EDC	Environmental Discovery Center
EH	Department of Health Services/Environmental Health Division
EPA	Unites States Environmental Protection Agency
HMBP	Hazardous Materials Business Plan
MS4 General Permit	General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewers
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
MS4	Municipal Separate Storm Sewer
MtBE	Methyl t-Butyl Ether
NBWA	North Bay Watershed Association
NMFS	National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System
NOI	Notice of Intent
NTU	Nephelometric Turbidity Units
PPP	Pollution Prevention Program
PRMD	Permit and Resource Management Department
RGO	Retail Gasoline Outlet
RMP	Regional Monitoring Program
RRWA	Russian River Watershed Association
RWB	California Regional Water Quality Control Board, San Francisco Bay Region
SAC	Supervised Adult Crews
SCC	Sonoma County Code
SCWMA	Sonoma County Waste Management Agency
SEC	Sonoma Ecology Center
SEMS	Standardized Emergency Management System
SEQAC	Sonoma Environmental Quality Assurance Committee
SFEI	San Francisco Estuary Institute
SSC	Suspended Sediment Concentration
State Board	California State Water Resources Control Board

SUSMP	Standard Urban Storm water Mitigation Plan
SWAMP	Surface Water Ambient Monitoring Program
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TPW	Department of Transportation and Public Works
USGS	United States Geological Survey
Water Agency	Sonoma County Water Agency
WEP	Water Education Program
WMA	Sonoma County Waste Management Agency

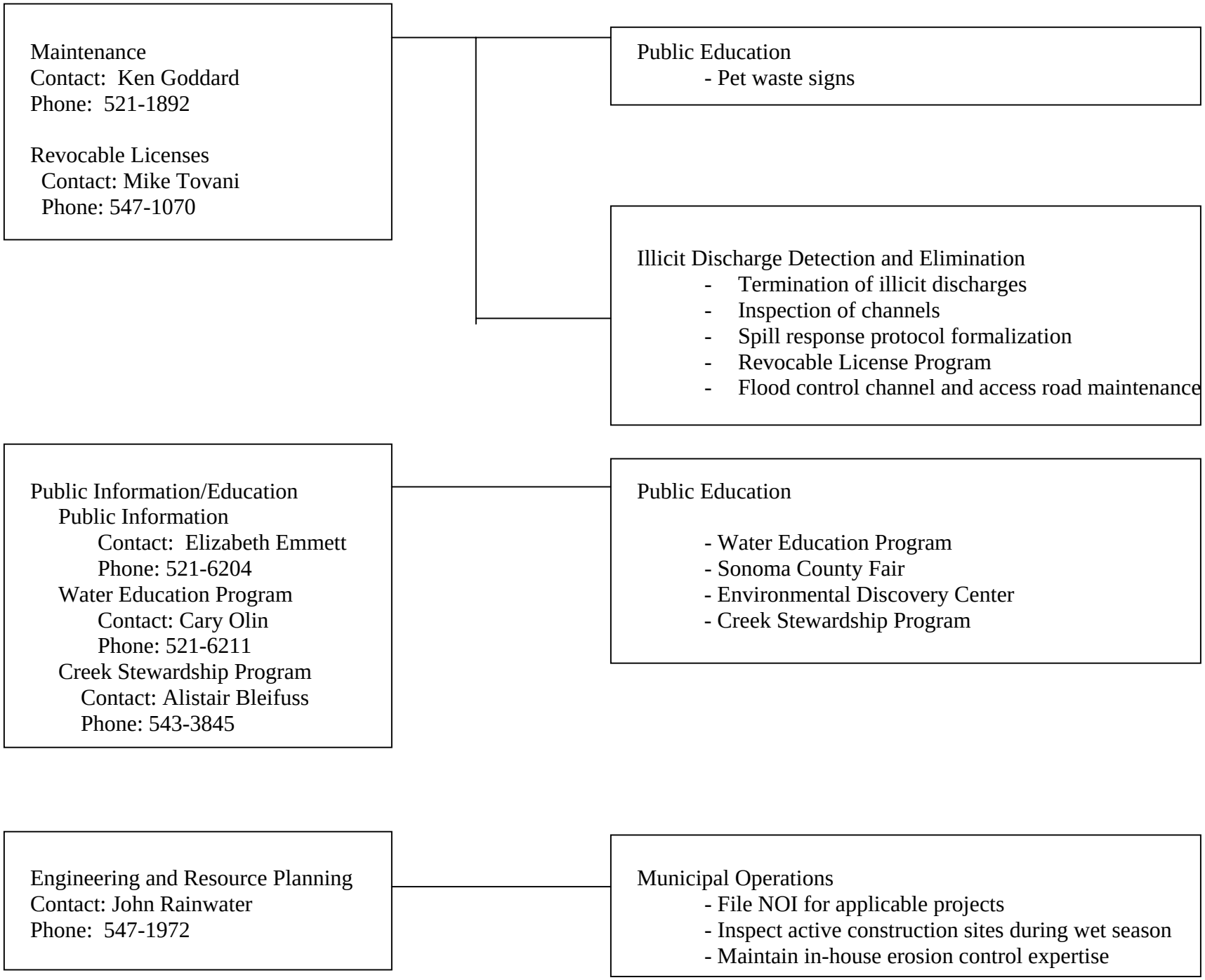
COUNTY OF SONOMA
ORGANIZATIONAL CHART FOR
STORM WATER MANAGEMENT PLANS



Sonoma County Water Agency
ORGANIZATIONAL CHART FOR STORM WATER MANAGEMENT PLAN



28 January, 2004


Maintenance
Contact: Ken Goddard
Phone: 521-1892
Revocable Licenses
Contact: Mike Tovani
Phone: 547-1070
Public Education
- Pet waste signs
Illicit Discharge Detection and Elimination
- Termination of illicit discharges
- Inspection of channels
- Spill response protocol formalization
- Revocable License Program
- Flood control channel and access road maintenance
Public Information/Education
Public Information
Contact: Elizabeth Emmett
Phone: 521-6204
Water Education Program
Contact: Cary Olin
Phone: 521-6211
Creek Stewardship Program
Contact: Alistair Bleifuss
Phone: 543-3845
Public Education
- Water Education Program
- Sonoma County Fair
- Environmental Discovery Center
- Creek Stewardship Program
Engineering and Resource Planning
Contact: John Rainwater
Phone: 547-1972
Municipal Operations
- File NOI for applicable projects
- Inspect active construction sites during wet season
- Maintain in-house erosion control expertise

County of Sonoma - August 2003

Items in SWMP that Fulfill Minimum Control Measures for Phase II NPDES Small MS4 State's General Permit

1. Public Education and Outreach - Intent: To gain an informed and knowledgeable community**.**	**Items in SWMP**
Distribute educational materials to the community, or conduct equivalent outreach activities about the impacts of storm water discharges on local water bodies and the steps that can be taken to reduce storm water pollution	1.2, 1.4, 1.6, 1.7, 1.8, 1.9, 1.10, 1.11
2. Public Involvement/Participation - Intent: To give the public opportunities to play an active role in the development and implementation of the SWMP.	
Comply with State and local public notice requirements when implementing a public involvement/participation program.	2.1, 2.2
3. Illicit Discharge Detection and Elimination - Intent: To have municipalities gain a thorough awareness of their systems in order to detect and eliminate illicit discharges from infiltration into the storm sewer system.	
Develop, implement, and enforce a program to detect and eliminate illicit discharges.	3.1, 3.2
Develop a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the US that receive discharges from those outfalls	3.7
To the extent allowable under State and local law, effectively prohibit through ordinance or other regulatory mechanism, non-storm water discharges into the MS4.	Pt. 1
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.	3.1, 3.2, 3.4, 3.5, 3.7
Inform public employees, businesses, and the general public of hazards that are generally associated with illegal discharges and improper disposal of waste.	3.1, 3.5, 3.6, 1.6, 1.7, 1.8, 1.11, 1.12
Address the categories of non-storm water discharges or flow listed under the Illicit Discharge Detection and Elimination Minimum Control Measure in the MS4 General Permit if the discharger identifies them as significant contributors of pollutants.	3.8
4. Construction Site Storm Water Runoff Control - Intent: To reduce pollutants in storm water runoff to storm sewer systems from construction sites.	
Develop, implement and enforce an ordinance, or other effective mechanism to require erosion and sediment controls at the construction sites, as well as sanctions to ensure compliance, to the extent allowable under state, or local law	4.3, 4.4, Pt.1
Develop and implement requirements for construction site operators to implement appropriate erosion and sediment control BMPs.	4.1, 4.2, 4.3
Develop and implement requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.	4.1
Develop and implement procedures for site plan review, which incorporate consideration of potential water quality impacts.	4.1
Implement procedures for receipt and consideration of information submitted by the public regarding storm water runoff impacts due to construction projects	4.4, 3.1, 3.2
Develop and implement procedures for site inspection and enforcement of control measures	4.3, 4.4
5. Post-Construction/Development/SUSMP - Intent: To reduce, long-term, the type and quantity of pollutants in storm water runoff, and the quantity of water delivered to water bodies during storms from new development and redevelopment sites post-construction.	
Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale.	5.2b, 5.4a, 5.4b, 5.4c
Develop and implement strategies which include a combination of structural and/or nonstructural BMPs appropriate for the community.	5.2b, 5.3b, 5.4a, 5.4c
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.	5.1a, 5.1b
Ensure adequate long-term operation and maintenance of BMPs.	5.2c
6. Municipal Operations - Intent: To improve or protect receiving water quality by altering municipal or facility operations.	
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.	6.1 6.2 6.3 6.5
Develop and implement employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water systems maintenance.	6.4 5.3a, 4.5, 3.6

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Program Management

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
2. Geographic and Land Use Description	x					a. Develop a land use map. Audience: public. Message: type of pollutants generated	Land use map developed	Permit and Resource Management Department
5.1.1 Administration		x				a. Provide introductory training to participating Department staff. Audience: County staff. Message: raise awareness of SWMP responsibilities	County staff trained. Survey partipants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Permit and Resource Management Department
		x				b. Make training materials readily available to participating department staff. Audience: County staff. Message: raise awareness of SWMP responsibilities	Training materials developed and made available.	Permit and Resource Management Department
5.1.2 Legal Authority	x					a. A statement will be included in the first Annual Report that the County's legal counsel has reviewed the County's legal authority to implement and enforce the permit requirements and certifies that applicable Federal, State and local statutes and codes appear to provide adequate authority to implement and enforce the permit requirements. Audience: public. Message: prevent pollutants from entering storm drain system.	Statement provided	County Counsel
	x					b. County's legal counsel may consult Regional Water Board counsel. Audience: public. Message: prevent pollutants from entering storm drain system.	Legal counsel contacted if necessary	County Counsel
6.1 Fiscal Resources	x					a. Request Board of Supervisors to increase permit fees to defray NPDES expenses for plan check inspection and SUSMP activities. Audience: public. Message: prevent pollutants from entering storm drain system.	Presentation given to Board of Supervisors	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 1. Public Education and Outreach

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
1.1 Storm Drain Labeling			x			a. Label 500 storm drain inlets in residential areas with the message "No Dumping, Drains to Creek" or equivalent. Audience: general public. Message: raise awareness of storm water issues	500 storm drains inlets labeled	Department of Transportation and Public Works
1.2 Ecology/Environmental Media/Newspaper Column		x				a. Contact Newspaper to propose an ecology and environmental column. Audience: Newspaper readers. Message: Awareness of storm water issues.	Newspaper contacted	Permit and Resource Management Department
		x				b. Identify additional County activities which provide public outreach about water quality to a diverse audience.	Two new activities identified	Permit and Resource Management Department
					x	c. Expand storm water education and outreach to television public service messages or other media. Audience: Public. Message: Awareness of storm water issues.	Media contacted	Permit and Resource Management Department
1.3 Website			x			a. Develop website with information on the County Storm Water Management Plan, illicit discharge, upcoming workshops/events, Frequently Asked Questions, and BMPs for businesses and residences. Audience: Public. Message: Awareness of storm water issues.	Website developed **EM** Number of website hits.	Permit and Resource Management Department
			x			b. Receive feedback on website and update. Audience: Public. Message: Awareness of storm water issues.	Evaluate annually and continue to update.	Permit and Resource Management Department
		x				c. Participate in the "Our Water Our World" integrated pest management website, brochure distribution and public workshop program through participating hardware stores. Audience: Public. Message: Awareness of storm water issues.	Website updated. Brochures distributed	Permit and Resource Management Department
1.4 Pet Waste Signs	x					a. Continue to provide pet waste signs at Regional Parks facilities. Audience: Pet owners. Message: Clean up after your pet.	Signs posted in new parks when they are developed. Existing signs maintained and replaced.	Regional Parks

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 1. Public Education and Outreach

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
1.6 Hazardous Waste Disposal	x					a. Publish and distribute Sonoma County Recycling Guide Audience: public POC: litter, chemicals	Recycling guides distributed	Sonoma County Waste Management Agency
	x					b. Operate Eco-Desk hotline Audience: public Message: reduce, reuse, recycle	Number of calls to hotline	Sonoma County Waste Management Agency
	x					c. Maintain Sonoma County Waste Management Agency Website. Audience: public Message: reduce, reuse, recycle	Number of website hits	Sonoma County Waste Management Agency
	x					d. Encourage oil and filter recycling via annual campaign. Audience: public POC: petroleum, hydrocarbons, oil/grease	Amount budgeted	Sonoma County Waste Management Agency
	x					e. Continue curbside oil and filter recycling campaign. Audience: public POC: petroleum, hydrocarbons, oil/grease	Amount collected.	Sonoma County Waste Management Agency
	x					f. Continue household toxic collection publicity. Audience: public POC: chemicals, nutrients	Amount budgeted	Sonoma County Waste Management Agency
	x					g. Continue to provide "No Toxics" garbage can stickers. Audience: public POC: chemicals	Stickers provided	Sonoma County Waste Management Agency
	x					h. Provide Integrated Pest Management workshop for County employees. Audience: County employees POC: pesticides, nutrients	Workshop attendees	Sonoma County Waste Management Agency
	x					i. Provide booth at Sonoma County Fair, Harvest Fair and other public events regarding Household Hazardous Waste Management. Audience: public POC: household hazardous waste	Events held.	Sonoma County Waste Management Agency
1.7 Illicit Discharge-Educational Materials Disseminated at Spill Sites			x			a. EH will conduct public outreach to educate the public on alternative options for the disposal of swimming pool water containing chlorine and biocides. Audience: Swimming pool owners. POC: Chlorine/biocides	Pool owners contacted	Department of Health Services/Environmental Health Division
	x					b. DES will continue to distribute educational materials during the course of normal inspection duties, as well as while investigating complaints and responding to releases of hazardous materials. Audience: spill site owners. POC: chemicals	Brochures distributed	Department of Emergency Services

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 1. Public Education and Outreach

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
1.8 Private Septic Systems			x			a. Develop and distribute storm water quality BMP information to non-standard system owners annually, and to others upon request. Audience: non-standard system owners. POC: nutrient, pathogen	Brochures distributed	Permit and Resource Management Department
	x					b. Summarize the status of the EPA grant program in Annual report. Audience: commercial/industrial system owners POC: nutrient, pathogen	Summarized annually	Permit and Resource Management Department
1.9 Building and Construction	x					a. Create a handout of Erosion and Sediment Control BMPs to be attached to all Type A Building Permits. Audience: construction site owners/operators. POC: sediment	Materials developed and attached to building permits	Permit and Resource Management Department
			x			b. Develop educational material, focused on construction site storm water pollution prevention, for the building and construction industry. Audience: construction site owners/operators. POC: sediment	Materials developed	Permit and Resource Management Department
				x		c. Display educational material in the Permit and Resource Management Department building lobby. Audience: construction site owners/operators. POC: sediment	Materials displayed	Permit and Resource Management Department
1.10 Spring Lake Environmental Discovery Center	x					a. Continue to operate and manage Spring Lake Park Environmental Discovery Center. Audience: park visitors. POC: sediment, nutrient, pathogens	EDC continues	Regional Parks Department
	x					b. Continue to seek sponsorship for operation of the Environmental Discovery Center. Audience: park visitors. POC: sediment, nutrient, pathogens	Potential sponsors contacted	Regional Parks Department
	x					c. Continue to contribute funding to the Environmental Discovery Center to promote public education of storm water pollution prevention. Audience: park visitors. POC: sediment, nutrient, pathogen	Funding provided	Regional Parks Department
			x			d. Increase the school field trip programs for storm water pollution prevention from 80% to 100% of enrollment capacity. Audience: park visitors. POC: sediment, nutrient, pathogens	**EM** Field trip programs at 100% enrollment capacity.	Regional Parks Department
		x				e. Continue to evaluate teachers on effectiveness of Storm Water Pollution Prevention Program and compile feedback from evaluations. Audience: teachers. Message: Storm water awareness.	**EM** Teacher evaluations compiled to show effectiveness	Regional Parks Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 1. Public Education and Outreach

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
1.10 Spring Lake Environmental Discovery Center (Continued)		x				f. Create and distribute educational activity/information journals for students to take home. Audience: students and their parents. Message Storm water awareness.	Books distributed.	Regional Parks Department
1.11 Industrial/Commercial Facility Public Education and Outreach	x					a. EH staff will create an inventory in the EH database of all retail food facilities in the unincorporated area of the MS4 General Permit boundary for distribution of the Guidelines. This inventory will include all retail food facilities, defined as follows: Prepare food or drinks, Restaurants, Markets, Bars with food preparation, Bakeries, Bed and Breakfast establishments. Audience: restaurants. POC: sediment, nutrient, pathogen, petroleum hydrocarbons, oil/grease, metals.	Inventory complete	Department of Health Services/Environmental Health Division
		x				b. EH will revise the Phase I Santa Rosa Storm Water Area "Food Facility Storm Water Pollution Prevention Guidelines" to reflect County storm water system and agency contacts for the SFBRWQCB. Audience: restaurant owners Message: reduce pollutants	Guideline revision complete	Department of Health Services/Environmental Health Division
		x				c. EH staff will distribute the Guide to retail food facilities within the unincorporated area of the MS4 General Permit boundary twice during the 5-year permit term. There will be a minimum of one year between the first distribution and the second distribution. Distribution of the Food Facility Guideline will begin with the first compliance inspection. Audience: restaurant owners Message: raise awareness of storm water quality issues	Guideline distributed to retail food facilities at time of inspection	Department of Health Services/Environmental Health Division
	x					d. DES staff will start to create an inventory in the DES database of all automotive repair facilities in the unincorporated area of the MS4 General Permit boundary for distribution of the Guide. Audience: N/A POC: petroleum hydrocarbons, oil/grease, metals.	Database developed	Department of Emergency Services

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 1. Public Education and Outreach

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
1.11 Industrial/Commercial Facility Public Education and Outreach (Continued)		x				e. DES staff will begin to develop a Guide for use in the San Francisco Bay basin. Audience: business owners Message: operate businesses to minimize storm water pollution	Guide completed.	Department of Emergency Services
		x				f. DES staff will distribute the Guide to all Retail Gasoline Outlets (RGOs) and Automotive Service Facilities (ASFs) within the City of Sonoma and the unincorporated areas of the MS4 permit boundary once during the 5-year term. Audience: business owners Message: operate businesses to minimize storm water pollution	Guidelines distributed to RGOs and ASFs.	Department of Emergency Services
1.12 Citizen Baseline Information on Storm Water		x				a. Review other agencies methods to gather baseline information. Audience: Public Message: coordination on storm water outreach	Methods reviewed	Permit and Resource Management Department
		x				b. Explore the feasibility of partnering with other agencies, including SCWA, to gather baseline information about citizens knowledge of storm water issues. Audience: Public Message: coordination on storm water outreach	Partnerships established.	Permit and Resource Management Department
			x			c. Establish, or partner with other agencies to establish, baseline information about citizens storm water awareness. Audience: Public. Message: coordination on storm water outreach	Baseline report completed.	Permit and Resource Management Department
1.13 Regional and Statewide Stormwater Associations	x					a. Continue to participate in NBWA activities. Audience: Public. Message: Awareness of storm water issues.	Meetings attended.	Permit and Resource Management Department
		x				b. Report Mercury Pollution Prevention Plan activities in Annual Report. Audience: Public. Message: Awareness of storm water issues.	Annual reporting completed according to implementation plan.	Permit and Resource Management Department
	x					c. Support NBWA expansion into leadership on additional regional stormwater activities. Audience: Public. Message: Awareness of storm water issues.	Support provided	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 1. Public Education and Outreach

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
1.13 Regional and Statewide Stormwater Associations (continued)	x					d. Continue to participate in BASMAA activities. Audience: Public. Message: Awareness of storm water issues.	Meetings attended.	Permit and Resource Management Department
	x					e. Continue to participate in CASQA activities. Audience: Public. Message: Awareness of storm water issues.	Meetings attended.	Permit and Resource Management Department
	x					f. Continue to participate in North Bay Phase II coordination group, until a more permanent association is formed. Audience: County staff. Message: Awareness of storm water issues.	Meetings attended.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 2. Public Involvement/Participation

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
2.1 Public Notification	x					a. Prepare and present Phase II Storm Water program to the County of Sonoma Board of Supervisors upon the completion of each year's Annual Report. Audience: general public, Board of Supervisors. Message: public comment requested.	Annual Report certified by Board of Supervisors	Board of Supervisors
		x				b. Notify the public of the Board of Supervisors' meeting to consider approving the revised SWMP. Audience: general public. Message: raise public awareness of SWMP	Notice posted three days prior to meeting	Permit and Resource Management Department
		x				c. If certified by the Board of Supervisors, post the SWMP on the County website for a similar time frame as the SWRCB's 60-day public notification period and run a public notice in the newspaper. Audience: general public. Message: raise public awareness of SWMP	Public notice posted on website and published in newspaper.	Permit and Resource Management Department
			x			d. Determine possible additional public participation projects. Audience: general public. Message: raise awareness of storm water issues	Public participation projects identified	Permit and Resource Management Department
			x			e. Coordinate with the Water Agency, Petaluma and Sonoma to increase citizen participation in Coast and Creek Cleanup Day and other creek and river cleanup activities. Audience: public. Message: Storm water awareness.	Number of bags of trash collected	Permit and Resource Management Department
2.2 Standard Urban Storm Water Mitigation Plan		x				a. Include the public in the development of SUSMP guidance documents. Audience: general public. Message: public involvement request.	Number of public meetings	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 3. Illicit Discharge Detection and Elimination

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
3.1 Industrial/Commercial Inspections, Spill Response, Investigation and Public Reporting	x					a. DES to enhance RGO inspections to include storm water BMP's. Sites out of compliance receive a correction notice and follow-up inspection. Audience: RGO operators. POC: sediment, nutrients, pathogens, petroleum hydrocarbons, oil/grease, metals	Storm water BMPs inspected. **EM** At least 80% of sites in compliance following second inspection.	Department of Emergency Services
		x				b. DES to enhance ASF inspections to include storm water BMP's. Sites out of compliance receive a correction notice and follow-up inspection. Audience: ASF operators. POC: sediment, nutrients, pathogens, petroleum hydrocarbons, oil/grease, metals	Storm water BMPs inspected. **EM** At least 80% of sites in compliance following second inspection.	Department of Emergency Services
	x					c. Inspect retail food facilities within the unincorporated area of the permit boundary twice during the 5-year permit term. There will be a minimum of one year between the first compliance inspection and the second compliance inspection. Follow-up inspections will be scheduled for facilities in non-compliance based on the nature of the storm water problems noted at the time of the inspection. Audience: Food facility operators. POC: sediment, nutrients, pathogens, petroleum hydrocarbons, oil/grease, metals	Storm water BMPs inspected. **EM** Determine the % in full compliance no later than June 30 2006. Majority in full compliance by June 30 2008	Department of Health Services/Environmental Health Division
		x				d. EH will put its spill response procedures in written form. Audience: food facility operators POC: nutrients, oil/grease, petroleum hydrocarbons, metals	Written spill response procedures complete	Department of Health Services/Environmental Health Division
	x					e. EH will report the total number of spills reported along with the number of spills that were investigated according to EH's spill response procedures in the Annual Report. Audience: County staff POC: nutrients, oil/grease, petroleum hydrocarbons, metals	**EM** At least 90% of spills investigated according to spill response plan.	Department of Health Services/Environmental Health Division

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 3. Illicit Discharge Detection and Elimination

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
3.1 Industrial/Commercial Inspections, Spill Response Investigation and Public Reporting continued	x					f. PRMD's goal is to make referrals within one business day to the Cities of Petaluma or Sonoma for follow -up action when the sewage problem occurs on a property within the city limits from a failed septic system or from some other source, such as gray water or a trailer. Audience: County staff POC: pathogens	**EM** At least 80% of referrals made within one business day.	Permit and Resource Management Department
		x				g. PRMD to coordinate with DES, EH and TPW to prepare a draft of written spill response policies and procedures currently in use addressing all types of illicit discharges, including public reporting. Audience: County staff POC: sediment, nutrients, pathogens, petroleum hydrocarbons, oil/grease, metals	Procedure developed and implemented.	Permit and Resource Management Department
3.2 Standardized Enforcement Procedures	x					a. Report the number of enforcement actions in the Annual Report. Audience: County staff. POC: nutrient, pathogen	Annual reporting completed according to implementation plan.	Permit and Resource Management Department Department of Health Services/Environmental Health Division Department of Emergency Services Department of Transportation and Public Works
			x			b. County agencies will develop enforcement response plans for all types of illicit discharges under its jurisdiction including a time frame for each escalation. Audience: County staff Message: reduce pollutants in storm water	Written enforcement response plan procedures complete and implemented.	Permit and Resource Management Department Department of Emergency Services Department of Transportation and Public Works
			x			c. EH will prepare written enforcement response plan procedures for all types of illicit discharges under its jurisdiction including a time frame for each escalation. Audience: County staff Message: reduce pollutants in storm water	Written enforcement response plan procedures complete and implemented.	Department of Health Services/Environmental Health Division

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 3. Illicit Discharge Detection and Elimination

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
3.3 Record Keeping and Documentation	x					a. TPW, DES and PRMD will report the total number of illicit discharges discovered and reported, the total number of illicit discharges that were investigated pursuant to response plan procedures, and the number of illicit discharges that were corrected as a result of each escalation step in the enforcement response plan in the Annual Report. Audience: ASF, RGO, septic system owners. POC: all.	Annual reporting completed according to implementation plan. **EM** Illicit discharges investigated according to written response plan. 80% by 05/06, 90% by 06/07 and after.	Department of Transportation and Public Works Department of Emergency Services Permit and Resource Management Department
	x					b. EH will report the total number of illicit discharges discovered and reported, the total number (out of the total) of illicit discharges that were investigated pursuant to the EH response plan procedures, and the number of illicit discharges that were corrected as a result of each escalation step in the EH enforcement response plan. Audience: food facility owners. POC: nutrient, pathogen, oil and grease.	Annual reporting completed according to implementation plan. **EM** Illicit discharges investigated according to written response plan. 80% by 05/06, 90% by 06/07 and after.	Department of Health Services/Environmental Health Division
3.4 Illicit Connection Investigation	x					a. County agencies will investigate complaints of illicit connections and pursue enforcement action or refer to the appropriate agency for follow-up. Audience: residences, businesses. POC: all	Number of enforcement actions/referrals made	Department of Transportation and Public Works Department of Emergency Services Permit and Resource Management Department
	x					b. Investigate complaints of illicit connections at retail food facilities and public swimming pools in the unincorporated area of the permit boundary and pursue enforcement action or refer to the appropriate agency for follow-up. Audience: retail food facilities and public swimming pools. POC: all.	Number of enforcement/referrals made. **EM** 100% of spills investigated according to Spill Response Plan.	Department of Health Services/Environmental Health Division

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 3. Illicit Discharge Detection and Elimination

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
3.5 Disposal of Used Oil and Toxic Materials	x					a. County agencies will implement their programs for disposal of used oil and toxic materials. Audience: public POC: oil/grease, petroleum hydrocarbons	Used oil and household toxics collected.	Department of Transportation and Public Works Department of Emergency Services
	x					b. TPW will submit the amount of household hazardous waste collected countywide in the Annual Report. Audience: residents. POC: petroleum hydrocarbons	Reported in the Annual Report	Department of Transportation and Public Works
3.6 Training of Targeted Employees	x					a. Continue to train staff who are responsible for identification, investigation, termination, clean up and reporting of illicit discharges and connections, including training on written enforcement response plan when completed. Audience: County staff POC: all	At least one staff training held annually. Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Department of Transportation and Public Works Department of Emergency Services Permit and Resource Management Department
	x					b. Train staff annually who are responsible for identification, investigation, abatement and reporting of illicit discharges and connections at retail food facilities and public swimming pools in the unincorporated area of the permit boundary. Audience: County staff. POC: all.	At least one staff training held annually.Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Department of Health Services/Environmental Health Division
		x				c. Train staff on the modified enforcement response plan procedures. Audience: County staff. POC: all.	At least one staff training held annually. Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Department of Health Services/Environmental Health Division
	x					d. EH inspectors will participate in monthly interagency coordination meetings. Audience: County staff Message: coordination on storm water outreach	Monthly coordination meetings held. Coordination topics summarized.	Department of Health Services/Environmental Health Division

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 3. Illicit Discharge Detection and Elimination

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
3.7 Drainage System Mapping				x		a. TPW to identify and map outfalls in rural areas, piped and open channel, within the MS4 general permit boundary. Audience: County Staff POC: All	Rural outfall map completed.	Department of Transportation and Public Works
					x	b. TPW to identify and map commercial and industrial area outfalls. Audience: County Staff POC: All	Commercial and industrial outfall map completed	Department of Transportation and Public Works
					x	c. TPW to identify and map the remaining commercial and industrial area system components, including inlets, pipes and manholes, and Regional Parks to identify Regional Parks facility outfalls and map in cooperation with TPW. Audience: County Staff POC: All	Commercial and industrial system and Regional Parks outfall map completed	Department of Transportation and Public Works Regional Parks
						d. TPW to identify and map the residential area system next permit term. Audience: County Staff POC: All	Residential system map completed.	Department of Transportation and Public Works

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 4. Construction Site Storm Water Runoff Control

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
4.1 Private Development Projects	x					a. Continue to require Erosion Control Plans for grading permitted projects. Audience: development community POC: sediment	Erosion Control Plans required for all grading permits	Permit and Resource Management Department
	x					b. Develop standard Erosion Prevention and Sediment Control Notes to be included on all plan sets requiring Grading Permits. Audience: Development community POC: sediment, construction waste	Erosion and Sediment Control Notes completed and included on plan sets.	Permit and Resource Management Department
		x				c. Develop written procedures for reviewing site plans. Audience: County staff POC: sediment	Written procedures completed and implemented.	Permit and Resource Management Department
		x				d. Develop a checklist to aid staff review of site plans. Audience: County staff POC: sediment	Checklist completed and implemented	Permit and Resource Management Department
4.2 Private Construction on Public Land (Encroachment Permits)			x			a. Review/revise Encroachment Permit issuance process, and identify process improvements. Audience: County staff POC: sediment, oil/grease, petroleum hydrocarbons	Encroachment Permit issuance process revised.	Permit and Resource Management Department
				x		b. Develop Erosion and Sediment Control conditions for Encroachment Permits disturbing one or more acres of land. Audience: development community POC: sediment, oil/grease, petroleum hydrocarbons	Written permit conditions developed and implemented.	Permit and Resource Management Department
				x		c. Inspect Erosion and Sediment Control measures for all Encroachment Permits. Audience: contractors, developers, engineers. POC: sediment	Encroachment Permits inspected.	Permit and Resource Management Department
				x		d. Report total number of sites inspected out of the total number of permits, how many are repeat inspections, and how many sites are in complete compliance at first inspection in the Annual Report. Audience: County staff POC: sediment, oil/grease, petroleum hydrocarbons	Annual reporting completed according to implementation plan.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 4. Construction Site Storm Water Runoff Control

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
4.3 Procedures for Inspection of Sites Requiring Erosion Control Plans	x					a. Hold pre-construction meetings with grading personnel on "significant projects" when possible. Once per project. Audience: contractors, developers, engineers Message: raise awareness of water quality issues	**EM** Pre-construction meeting held with 90% of "significant projects".	Permit and Resource Management Department
	x					b. Conduct BMP verification inspection, subsequent to the pre-construction meeting, at "significant projects" when possible. Once per project. Audience: contractors, developers, engineers POC: sediment	**EM** BMP inspections conducted on 90% of "significant projects".	Permit and Resource Management Department
	x					c. Inspect Grading Permit activities on "sensitive sites" for erosion control plan compliance prior to the rainy season. Audience: development community POC: sediment	**EM** 90% of "sensitive sites" inspected prior to rainy season.	Permit and Resource Management Department
	x					d. Conduct final grading inspections, for Grading Permits. Audience: contractors, developers, engineers POC: sediment	Final grading inspection conducted on 90% of completed grading permits.	Permit and Resource Management Department
	x					e. Report number of construction inspections conducted in Annual Report. Audience: public POC: sediment	Report number of sites inspected, number of repeat inspections, number of sites in full compliance at first inspection in Annual Report. **EM** 25% of construction sites inspected in full compliance at first inspection by Year 2; 40% by Year 3; 55% by Year 4; 70% by Year 5.	Permit and Resource Management Department
	x					f. Develop an Erosion and Sediment Control checklist for inspection staff. Audience: County staff POC: sediment, construction waste	Erosion and Sediment Control checklist complete	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 4. Construction Site Storm Water Runoff Control

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
4.3 Procedures for Inspection of Sites Requiring Erosion Control Plans (Continued)			x			g. Distribute educational material during site inspections. See 1.9(b). Audience: contractors, developers, engineers POC: sediment, construction waste	Materials distributed.	Permit and Resource Management Department
	x					h. Propose an increase in permit fees to help fund PRMD's Storm Water Quality Program. Audience: Board of Supervisors. Message: raise awareness of SWMP responsibilities.	Proposal developed.	Permit and Resource Management Department
	x					i. Submit proposed fee increase to the Board of Supervisors for their consideration. Audience: Board of Supervisors. Message: raise awareness of SWMP responsibilities	Proposal presented to Board of Supervisors.	Permit and Resource Management Department
		x				j. If approved by the Board of Supervisors, recruit a new inspector to review construction sites for effective BMPs. Audience: County staff. POC: sediment, nutrients, pathogens	Inspector hired.	Permit and Resource Management Department
		x				k. Inspect active construction sites disturbing one or more acres of land before the rainy season through a phased approach, increasing annually (beginning in Year 2 of the permit term) until 90% of construction sites are inspected before the rainy season during Year 5 of the permit term.. Audience: contractors, developers, engineers,. POC: sediment, nutrients, pathogens	**EM** Inspect construction sites before the rainy season: 25% during Year 2; 50% during Year 3; 70% during Year 4; 90% during Year 5.	Permit and Resource Management Department
				x		l. Inspect selected construction sites disturbing one or more acres within two business days of each major storm event (>1 inch) when they are at least two weeks apart, to verify BMP effectiveness. Audience: contractors, developers, engineers. POC: sediment, nutrients, pathogens	**EM 2**0% increase in compliance following major storm event by Year 5.	Permit and Resource Management Department
4.4 Procedures for Enforcement of Non-Compliant Construction Sites	x					a. Continue enforcement protocol for sites with permits. Audience: County staff POC: sediment, pathogens, construction debris	Enforcement protocol implemented on 90% of cases.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 4. Construction Site Storm Water Runoff Control

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
4.4 Procedures for Enforcement of Non-Compliant Construction Sites (Continued)	x					b. Develop enforcement notifications to be sent to non-compliant construction sites. Audience: contractors, developers, engineers POC: sediment, pathogens, construction debris	Enforcement notifications created and implemented. **EM** 80% of construction sites in compliance at first inspection by June 2007.	Permit and Resource Management Department
	x					c. Propose to Board of Supervisors to amend the Sonoma County Code, for substantial increases in the civil penalties regarding storm water quality violations, including construction site violations. As part of the proposed amendment, review the legal authority for right-of-entry for inspectors. Audience: Board of Supervisors POC: sediment, pathogens, construction debris	Amendment to the County Code proposed.	Permit and Resource Management Department
	x					d. Report information on the non-compliant sites to the RWB in the Annual Report. Audience: public POC: sediment, pathogens, construction debris	Provide in Annual Report.	Permit and Resource Management Department
		x				e. Create a policy and procedure for grading violations and other construction site storm water violations. Audience: development community POC: sediment, pathogens, construction debris	Written policy and procedure developed and implemented.	Permit and Resource Management Department
			x			f. Develop enforcement response plan for construction sites, including a time frame for each escalation.	Written enforcement response plan procedures completed and implemented.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 4. Construction Site Storm Water Runoff Control

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
4.5 Training of Targeted Staff	x					a. Provide annual training to inspectors, engineers, engineering technicians, environmental health specialists and other employees whose jobs include land development permitting. Audience: County staff Message: raise awareness of water quality issues	Training provided. Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Permit and Resource Management Department
	x					b. Provide time, as appropriate, at staff meetings and Code Corners, to discuss current Erosion Prevention and Sediment Control practices. Audience: County staff Message: raise awareness of water quality issues	Discussions held.	Permit and Resource Management Department
	x					c. Provide formal training to the supervisors and senior staff in the Engineering Division, Well and Septic Division, Building Division and Code Enforcement Division. Audience: County staff Message: raise awareness of water quality issues	Training provided. Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Permit and Resource Management Department
	x					d. Invite Regional Water Board staff to ride along with inspectors. Audience: County staff Message: promote interaction among County and RWB staff	One ride-along per year	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 5. Post-Construction / Development (SUSMP)

Activity/Best Management Practices from Table 6 in Chapter 5	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
5.1 Legal Authority	x					a. Determine if legal authority exists to implement SUSMP. Audience: developers. engineers, contractors Message: reduction of pollutants from land development	Ordinance amended if needed.	Permit and Resource Management Department County Counsel
	x					b. If legal authority does not exist, establish legal authority. Summarize in Annual report. Audience: developers. engineers, contractors Message: reduction of pollutants from land development	Legal authority established	Permit and Resource Management Department County Counsel
	x					c. Review General Plan for conformance to water quality and watershed protection principles and policies. Summarize in Annual report. Audience: N/A Message: reduction of pollutants from land development	Review complete	Permit and Resource Management Department
	x					d. Review applicable codes for conformance with SUSMP requirements. Summarize in Annual Report. Audience: County staff. Message: reduction of pollutants from land development.	Review Complete	Permit and Resource Management Department
	x					e. Revise the environmental review process as needed to evaluate water quality impacts of storm water runoff from new development and redevelopment projects. Summarize in Annual report. Audience: N/A Message: reduction of pollutants from land development	Environmental review process revised if needed	Permit and Resource Management Department
5.2 Guidance Documentation	x					a. Update special provisions/general specifications for County contracts. Audience: construction contractors Message: reduction of pollutants from land development	Special provisions updated if needed	Regional Parks General Services Department of Transportation and Public Works
		x				b. Develop SUSMP site design guidelines or requirements for developers (source controls). Audience: developers, engineers, contractors Message: reduction of pollutants from land development	Guidance document completed.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 5. Post-Construction / Development (SUSMP)

Activity/Best Management Practices from Table 6 in Chapter 5	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
5.2 Guidance Documentation continued		x				c. Develop guidance on long term funding, inspection and reporting procedures for BMP maintenance where SUSMP BMPs are implemented. Audience: developers, engineers, contractors Message: reduction of pollutants from land development	Guidance document completed.	Permit and Resource Management Department Department of Transportation and Public Works
		x				d. Implement long-term inspection and maintenance program.	Program implemented.	Permit and Resource Management Department
5.3 Training		x				a. Provide training to staff. Summarize in Annual report. Audience: County staff Message: reduce run off and pollutants from land development	Training provided. Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Permit and Resource Management Department
		x				b. Provide workshop to the development community on planning procedures, policies, design guidelines and BMPs for storm water pollution prevention. Audience: development community Message: reduce run off and pollutants from land development	Workshop provided. Survey participants before each training. **EM** Survey staff to ensure concepts and procedures are clear.	Permit and Resource Management Department
5.4 Project Approval Process		x				a. Implement SUSMP measures on applicable County capital improvement projects within Urban Service Boundary within Permit Boundary which have not yet begun the environmental review process. Audience: County designers Message: reduce run off and pollutants from land development	Number of County projects that incorporate SUSMP BMPs.	Regional Parks General Services Department of Transportation and Public Works
	x					b. Encourage applicants to implement SUSMP measures on projects. Audience: developers, engineers, contractors Message: reduce run off and pollutants from land development	Number of private projects that incorporate SUSMP BMPs.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 5. Post-Construction / Development (SUSMP)

Activity/Best Management Practices from Table 6 in Chapter 5	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
5.4 Project Approval Process (Continued)		x				c. Implement SUSMP measures on applicable projects within Urban Service Boundary within Permit Boundary. Audience: developers, engineers, contractors Message: reduce run off and pollutants from land development	Number of applicable projects that incorporate SUSMP BMPs and the total number of sites with BMPs implemented.	Permit and Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 6. Municipal Operations

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
6.1 Public Construction Activities Management								
6.1.1 Contract Documents	x					a. Continue to reference appropriate BMPs in construction documents for public construction projects. Audience: construction contractors POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	Review annually to ensure contracts include the most recent BMP's.	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
		x				b. Review and update Construction Standard Documents to ensure they include the most recent BMPs. Audience: construction contractors POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	Standards reviewed. BMPs included in contracts.	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
		x				c. Require all public construction projects to implement appropriate storm water BMPs. Audience: construction contractors POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	All public construction sites implement storm water BMPs	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
6.1.2 Compliance With State General Construction Permit	x					a. Continue to comply with the State General Construction Permit requirements. Audience: construction contractors POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	Number of NOIs	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
6.1.3 Inspection	x					a. Continue to inspect public construction sites during construction activities. Audience: construction contractors POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	All sites have erosion and sediment control inspection **EM** 80% of sites in compliance at first inspection by May 2006	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works Permit Resource Management Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 6. Municipal Operations

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
6.1.4 Enforcement	x					a. Continue to enforce construction documents containing the most recent BMPs, including the provisions set forth regarding failure to carry out orders given or to perform the provisions of the contract. Audience: construction contractors Audience: construction contractors POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	Construction documents enforced	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
6.1.5 Training of Targeted Staff	x					a. Continue to provide training to all applicable staff involved in public construction projects. Audience: County staff POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	**EM** All participants understand the process and requirements. Survey participants before each training.	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
	x					b. Provide annual training to key personnel to enhance construction BMP knowledge. Audience: County staff POC: sediment, chemicals, petroleum hydrocarbons, oil/grease	**EM** All participants understand the process and requirements. Survey participants before each training.	General Services Department/Architect's Division Regional Parks Department Department of Transportation and Public Works
6.2 Landscape and Recreational Facilities Management								
6.2.1 Management of Pesticides, Fertilizer and Native Vegetation	x					a. Continue to implement chemical use, storage, disposal, and reduction practices. Audience: County maintenance staff POC: pesticides	Practices implemented	Regional Parks Department
	x					b. Continue to follow the current practices regarding retention and planting of native vegetation and water conservation. Audience: County maintenance staff POC: pesticides	Practices implemented	Regional Parks Department
					x	c. Develop a database for maintaining staff training and certification associated with pesticide and fertilizer management. Audience: County maintenance staff POC: pesticides	Database developed	Regional Parks Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 6. Municipal Operations

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
					x	d. Develop written guidelines for pesticide and fertilizer management. Audience: County maintenance staff POC: pesticides and fertilizers	Guidelines developed.	Regional Parks Department
6.2.2 Landscape Waste Disposal	x					a. Continue to implement the current practices regarding proper disposal of landscape waste. Audience: County maintenance staff Message: decomposing vegetation can pollute waterways	Landscape waste disposed of properly	Regional Parks Department
					x	b. Develop written guidelines to address landscape waste disposal. Audience: County staff POC: pesticides, nutrients	Guidelines developed	Regional Parks Department
6.3 Storm Drain System Operation and Maintenance								
6.3.1 Clean and Inspect Storm Drain Pipes and Inlet Structures	x					a. Continue annual inspection of problem inlets and clean as necessary. Audience: County maintenance staff POC: sediment	Problem inlets inspected	Department of Transportation and Public Works Regional Parks Department
			x			b. Develop a written program to pro-actively clean closed pipe drainage systems. Audience: County maintenance staff POC: sediment	Program developed	Department of Transportation and Public Works
					x	c. TPW will begin implementation with annual inspection of 20% of closed drainage systems within El Verano and Boyes Hot Springs areas. Systems will be cleaned as necessary to prevent pollutants from entering receiving waters. Audience: County maintenance staff POC: sediment, trash	Closed drainage systems within El Verano and Boyes Hot Springs area inspected annually.	Department of Transportation and Public Works
6.3.2 Open Channel or Roadside Ditch Inspection and Maintenance	x					a. Continue to inspect roadside ditches on an annual basis and remove trash and debris as necessary to prevent or minimize flooding and erosion. Audience: County maintenance staff POC: sediment, trash	Amount of debris collected	Department of Transportation and Public Works Regional Parks Department
6.3.3 Storm Drain Labeling		x				a. Develop storm drain labeling program. Audience: public POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	Program developed	Department of Transportation and Public Works Regional Parks Department

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 6. Municipal Operations

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
6.33 Storm Drain Labeling (Continued)		x				b. TPW to require new storm drain inlet labeling for subdivisions in all urban areas during installation. Audience: public Message: only rain in the storm drain	All new subdivisions have storm drains labeled	Department of Transportation and Public Works
6.4 Street and Road Maintenance								
6.4.1 Street Sweeping Frequency	x					a. Continue sweeping intersections and various other paved facilities upon request. Audience: County maintenance staff POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	Intersections and Regional Parks facilities swept	Department of Transportation and Public Works Regional Parks Department
	x					b. TPW to implement the current street sweeping plan described in Section 6.4.1. Audience: County maintenance staff POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	Sweeping plan implemented	Department of Transportation and Public Works
					x	c. TPW to sweep residential areas within permit boundary that drain to closed pipe systems once before each rainy season. Audience: County maintenance staff POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	Residential areas swept	Department of Transportation and Public Works
6.4.2 Materials Management	x					a. Continue to implement current good housekeeping practices regarding materials management. Audience: County maintenance staff POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	Practices implemented	Department of Transportation and Public Works
6.4.3 Training of Targeted Staff	x					a. Regional Parks to continue meetings to discuss streets and road maintenance activities throughout the permit period. Audience: County maintenance staff POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	**EM S**urvey staff to ensure concepts and procedures are clear after each training and annually. Survey participants before each training	Regional Parks Department
	x					b. TPW to continue biweekly road-crew tailgate meetings to discuss streets and road maintenance activities throughout the permit period. Audience: County maintenance staff POC: sediment, nutrients, petroleum hydrocarbons, oil/grease	Meetings held	Department of Transportation and Public Works

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 6. Municipal Operations

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
6.4.3 Training of Targeted Staff (Continued)	x					c. TPW to review current streets and road maintenance practices, including BMPs related to materials management. Audience: County maintenance staff POC: sediment, petroleum hydrocarbons, oil/grease	Review completed	Department of Transportation and Public Works
		x				d. TPW to complete draft routine road maintenance standards manual that addresses water quality and fish protection, while providing for public safety. This is a collaborative effort with other counties. Audience: County maintenance staff POC: sediment, petroleum hydrocarbons, oil/grease	Draft manual completed	Department of Transportation and Public Works
		x				e. Analyze draft manual for fiscal impacts and return to Board of Supervisors for policy direction. This step is anticipated in 2004. Audience: Board of Supervisors POC: sediment, petroleum hydrocarbons, oil/grease	Manual presented to Board of Supervisors	Department of Transportation and Public Works Regional Parks Department
6.5 Parking Facilities Management								
6.5.2 Parking Lot Spill Clean-up	x					a. Continue to clean up and dispose of spills in paved parking areas within County jurisdiction in accordance with the most current BMPs. Audience: County maintenance staff POC: sediment, petroleum hydrocarbons, oil/grease	Parking areas cleaned.	Department of Transportation and Public Works Regional Parks Department
6.5.3 County Maintenance Facilities					x	a. Develop and implement Storm Water Pollution Prevention Plans or similar pollution prevention practices for County maintenance facilities.	Pollution prevention practices implemented.	Regional Parks Department
6.6 Emergency Procedures	x					a. Continue to follow Area, Emergency Operations and Spill Plans. Audience: County staff Message: prevent spills from entering waterways	Plans followed	Department of Emergency Services
	x					b. Review and update Area Plan. Audience: County staff Message: prevent spills from entering waterways	Plan updated	Department of Emergency Services

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 6. Municipal Operations

Activity/Best Management Practices	Begin Implementation Fiscal Year 03-04	04-05	05-06	06-07	07-08	Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
6.6 Emergency Procedures (Continued)			x			c. Review and update Emergency Operations Plan. Audience: County staff Message: prevent spills from entering waterways	Plan updated	Department of Emergency Services
	x					d. Review and update Spill Plan. Audience: County staff Message: prevent spills from entering waterways	Plan updated	Department of Emergency Services
	x					e. Include information about Plan updates in Annual Reports. Audience: County staff Message: prevent spills from entering waterways	Summarize in the Annual Report	Department of Emergency Services
	x					f. Continue to work with other agencies and County departments in planning for and responding to emergencies involving releases or threatened releases of hazardous materials throughout the permit term. Audience: County staff POC: hazardous materials	Number of meetings	Department of Emergency Services

At A Glance - Phase II San Francisco Bay Region - County of Sonoma
Minimum Control Measure 7. Other County Programs

Activity/Best Management Practices	Begin Implementation Fiscal Year					Implementation Plan	Quantifiable Target/Evaluation Tool	Implementer(s)
	03-04	04-05	05-06	06-07	07-08			
7.1 Landscape and Agricultural Industries	x					a. Summarize the activities of the pesticide use program in the Annual Report.	Provide in Annual Report	Permit and Resource Management Department
7.2 Vineyard Planting/Replanting Compliance	x					a. Summarize the plan review activities of the vineyard planting/replanting program in the Annual Report.	Provide in Annual Report	Permit and Resource Management Department

Water Agency
Stormwater Management Plan At-A-Glance

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Pub Ed	**1**	Telephone survey	**x**					Include results of baseline survey in first annual report	Results included	General stormwater knowledge	General Public	Public Informatin/ Education Department
	2				**x**			Repeat established survey annually	Include results of survey and comparison to baseline in annual report	General stormwater knowledge	General Public	Public Informatin/ Education Department
	3		**x**					Include questions from RRWA survey in next annual report	Results included	General stormwater knowledge	General Public	Operations
	4		**x**					Include schedule for survey implementation in next annual report	Schedule included	General stormwater knowledge	General Public	Operations
	5	North Bay Watershed Association Activities	**x**					Continue membership in NBWA	Membership continued	Region-wide projects for various pollutants	Agency Staff	Operations
	6		**x**					Water Agency representative will attend at least one water quality subcommittee meeting per year	one meeting attended	Region-wide projects for various pollutants	Agency Staff	Operations
	7	North Bay Watershed Association Mercury Pollution Prevention Plan	**x**					Mail surveys to dental offices to gather information about the increases in mercury amalgam recycling, purchasing of pretreatment equipment and other BMPs.	Surveys mailed	Mercury	Dentists, general public	Operations

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Pub Ed (con't)	**8**	North Bay Watershed Association Flourescent bulbs		**x**				Devlop program scope	Program scope developed	Mercury	General Public	Operations
	9	Noth Bay Watershed Association Stormwater Programs		**x**				Support future stormwater pollution prevention outreach programs on a regional scope	Programs supported	Region-wide projects for various pollutants	General Public	Operations
	10	Water Education Program	**x**					Summarize usage of Water Education Program	Summary completed	Non-stormwater discharges	Students	Public Information/Education Department
	11		**x**					Summarize message from Water Education Calendar as it related to stormwater.	Summary completed	Non-stormwater discharges	Students	Public Information/ Education Department
	12	Pet Waste Signs	**x**					Encourage installation of pet waste signs along channels with new public access	Increase in pet waste signage at entrances to channels	Pathogens/ Nutrients	Pet Owners who use the Agency Channels	Operations/ Maintenance
	13	Newspaper Column		**x**				Develop proposal for Ecology/Environmental Issues column by December 2004	Proposal Developed	Various	General Public	Operations/ County of Sonoma/ City of Santa Rosa
	14				**x**			Contact Press Democrat by June 2005, to propose idea	Contracted Press Democrat.	Various	General Public	Operations/ County of Sonoma/ City of Santa Rosa

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Pub Ed (con't)	**15**	Website		**x**				Develop and post a stormwater webpage on the Water Agency's website	Content posted	Various	General Public	Operations/ Public Education
	16		**x**					Summarize changes to the website, number of hits, and feedback from users in annual reports	Changes, hits, and feedback summarized.	Various	General Public	Opeartions
	17							Report on number of hits to website, and stormwater section (if possible)	Number of hits to website.	Various	General Public	Operations
	18	Public Events	**x**					Provide literature and water conservation devices at County Fair annually	Attended fair and provided literature and water conservation devices	Non-stormwater discharges and Water Conservation	General Public	Public Information/Education Department
	19	Hazardous Waste Disposal	**x**					Summarize outreach on hazardous waste disposal provided by Sonoma County Waste Management Agency	Hazardous waste disposal activiites summarized.	Dispose of hazardous waste properly	General Public	Sonoma County Waste Management Agency
	20	Employee Education	**x**					Quarterly column in employee newsletter re: stormwater and pollution prevention issues	Column completed.	Various	Agency employees	Operations
	21			**x**				One column will be developed specifically about the Phase II program	Column completed.	Various	Agency employees	Operations
	22		**x**					Conduct introduction to Phase II permit for select employees	Introductory meeting completed	Phase II compliance	Agency employees	Operations
	23			**x**				Conduct voluntary survey of employees through employee newsletter	Suvery completed and summary of results included in annual report	General stormwater knowledge	Agency employees	Operations

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Pub Ed (con't)	**24**	Employee Education (con't)					**x**	Conduct voluntary survey of employees through employee newsletter	Suvery completed and summary of results included in annual report with comparison to baseline	General stormwater knowledge	Agency employees	Operations
	25	Sonoma Ecology Center	**?**					Evaluate sponsorship of upcoming projects (date depends on projects undertaken by SEC)	Projects evaluated	Watershed-wide projects for various pollutants	General Public	Operations
	26	Spring Lake Environmental Discovery Center	**x**					Financial support through at least 2003-2004	Finacial support provided	Various, including: "Down the drain: A raindrop's journey from cloud to creek."	General Public	Operations
	27		**x**					Continue to actively participate in the EDC advisory board	Participated in Board	Various, including: "Down the drain: A raindrop's journey from cloud to creek."	General Public	Public Affairs
	28		**x**					Summarize activities of EDC in annual report	Activities summarized	Various, including: "Down the drain: A raindrop's journey from cloud to creek."	General Public	Operations

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
PIP	**29**	Public review of Storm Water Management Plan	**x**					Notice posted outside Sonoma County Board of Supervisors meeting room three days in advance of hearing	Notice posted.	Help control the discharge of pollutants into the flood control channels	General Public	Operations
	30		**x**					Hold public hearing to adopt or modify SWMP and for annual reports.	SWMP adopted; annual reports approved.	Help control the discharge of pollutants into the flood control channels	General Public	Operations
	31	Coordination with other programs	**x**					Meet at least annually with Sonoma County, City, and Petaluma.	Met annually	Consistent/ coordinated messages	Other Phase Iis	Operations

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Illicit Discharge Detection	**32**	Maintain /Improve current illicit discharge detection and elimination program			**x**			A tracking system for illicit discharges will be developed	Tracking system developed	Illicit discharges	Agency staff	Operations
	33		**x**					Methods used to advertise spill response number will be included in annual report	Methods listed	Illicit discharges	General Public	Operations
	34				**x**			Reported spills and response will be listed in each annual report	Respond to spills according to Spill Response Plan	Illicit discharges	Agency staff	Operations
	35	Illicit Discharge training	**x**					Water Agency staff will train Water Agency receptionists on proper contact information	Recptionist trained.	Illicit discharges	Agency Staff	Operations
	36			**x**				Water Agency staff will review and update training for spill response and illicit discharge response personnel	Training reviewed	Illicit discharges	Agency Staff	Operations
	37			**x**				Spill response protocol will be formalized within the Water Agency for spills in the County, Petaluma, and Sonoma, and will be included in the first annual report	Protocol formalized	Illicit discharges	Agency staff	Operations
	38			**x**				Investigate legal authority of Petaluma and Sonoma	Authority Investigated	Illicit discharges		
	39	Storm Sewer Map	**?**					Update as necessary	Updates completed as necessary.	Illicit discharges	Agency staff	Drafting

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Illicit Discharge Detection (con't)	**40**	Escalating enforcement on illicit discharges		**x**				Formalize response plan	response plan formalized	Illicit discharges	Agency Staff	Maintenance
	41	Implement current escalating enforcement policy			**x**			Implement response plan	response plan implemented	Illicit discharges	General Public	Maintenance
	42	Review enforcement BMP for effectiveness	**x**	**x**	**x**	**x**	**x**	Review conformance with response plan, suggest improvements.	Review completed and results included in annual report.	Illicit discharges	Agency Staff	Operations
	43	Flood control channel inspection	**x**					Continue to inpsect flood control channels annually	Annual inspection completed	Illicit discharges		Maintenance
	44	Inform public of hazards associated with illegal discharges and improper disposal of waste		**x**				Include information on consequences of illegal discharges on website	Information included on website	Illicit discharges	General Public	Public Information/Education Department
	45	Potable water discharges	**x**					Notify Regional Board of upcoming dechlorinated potable water discharges	Notification completed	Chlorine	Agency staff	Operations

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Construc-tion	**46**	Continue to implement Revocable License Program	**x**					Continue to issue and track revocable licenses	Revocable licenses issued and tracked.	Construction-related pollutants		Maintenance
	47		**x**					Inspect projects subject to revocable licenses	Inspection of 90% of projects which obtain a RL	Construction-related pollutants		Maintenance
	48			**x**				Consider inclusion of RL program in Enforcement Response Plan	Inclusion considered	Consistent enforcement	Agency Staff	Operations

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Post Construct-ion	**49**	Implement local SUSMP on Water Agency Projects		**x**				Implement SUSMP requirements on Water Agency projects, where applicable	SUSMP requirements implemented	Peak flows, runoff-related pollutants	Agency Staff	Engineering and Resource Planning

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Municipal	**50**	Flood control construction activities		**x**				Review Special Provisions and General Specifications for existing BMPs.	Review completed.	Construction-related pollutants		Operations
	51		**x**					File NOI for all projects greater than 1 acre	NOI filed for all applicable projects	Construction- related pollutants		Engineering and Resource Planning
	52		**x**					Inspect active construction sites during wet season	Frequency to be determined by potential for erosion. At least one inspection per site per season.	Sediment		Engineering and Resource Planning
	53		**x**					Use construction bonds as enforcement mechanisms as necessary.				Engineering and Resource Planning
	54				**x**			Assess current education and training practices for inspectors.	Training assessed	Sediment		
	55		**x**					Maintain in-house erosion-control expertise.	Maintain CPESC on staff.	Sediment		Engineering and Resource Planning
	56	Flood control channel inspection and maintenance	**x**					Continue with low-impact herbicide management	Use herbicide only on roads and tree stumps.	Pesticides/ Herbicides		Maintenance
	57		**x**					Continue with low-impact herbicide management	Use only herbicide nontoxic for aquatic life, e.g. Rodeo	Pesticides/ Herbicides		Maintenance

		Activity/Best Management Practice	03-04	04-05	06-07	07-08	08-09	Implementation Plan	Quantifiable Target (QT)	Message or Pollutant	Audience	Implementer
Municipal (con't)	**58**	Flood control channel inspection and maintenance (con't)	**x**					Limit equipment and material storage in Water Agency's right-of-way	Include prohibition in all revocable licenses	Construction related pollutants		Maintenance
	59		**x**					Continue to provide trash cleanup in Water Agency channels	Record and report tons of trash removed annually	Trash		Maintenance
	60	Access Road Maintenance	**x**					Maintain barriers at entrances to channel access roads	Barriers maintained			Maintenance
	61	Emergency Procedures		**x**				Review and update as necessary Emergency Operations Plan.	Review completed. Update, if necessary, completed.			Operations

PART I

PROGRAM MANAGEMENT

PREPARED BY:
COUNTY OF SONOMA
SONOMA COUNTY WATER AGENCY

October 2004

1. BACKGROUND

This Storm Water Management Plan (SWMP) has been prepared as required by the Phase II Storm Water Regulations promulgated by the Environmental Protection Agency (EPA) on December 8, 1999, to satisfy the requirements of Clean Water Act §402(p). The SWMP has been prepared to comply with the State Water Resources Control Board Water Quality Order No. 2003-0005-DWQ, Waste Discharge Requirements for Small Municipal Separate Storm Sewer Systems (MS4 General Permit).

Part I contains a description of the context in which this SWMP will be implemented, including the land uses, pollutant of concern, and administrative structure of each co-permittee. Parts II and III contain individual SWMPs for the County of Sonoma (County) and the Sonoma County Water Agency (Water Agency). Each is divided into sections corresponding to the six Minimum Control Measures (MCM). Most Best Management Practices (BMPs) listed for each MCM contain measurable goals. Measurable goals include a description of the activity, implementation schedule and quantifiable target. The measurable goals will be used to evaluate progress of SWMP implementation.

A table summarizing implementation of these Measurable Goals, "At A Glance" table, is included at the beginning of the SWMP.

2. GEOGRAPHIC AND LAND USE DESCRIPTION

This SWMP defines the Permit Boundary as the urbanized areas and urban clusters of Sonoma County within the San Francisco Bay Regional Water Quality Control Board (RWB) jurisdiction (see Figure 1 at end of Part IV). The permit boundary includes approximately 31.5 square miles of land and 40,000 people. The RWB has jurisdiction over areas of Sonoma County that drain to San Pablo Bay. The County owns drainage systems in all unincorporated areas within this boundary, though outreach resources will be focused first on Urban Areas. The Water Agency is responsible under this SWMP only for fee-owned flood control channels within the Permit Boundary (see Figure 2). These fee-owned channels correspond to approximately 65 acres of land. The Water Agency's flood control channels are the receiving waters of storm water discharges from the cities of Petaluma and Sonoma and from Sonoma County. The two major drainages within the Permit Boundary are the Petaluma River and Sonoma Creek, respectively (Water Agency Zones 2A and 3A respectively). Additional information regarding Zones 2A and 3A is included in Section 5 (Administration and Planning) below.

The headwaters of Sonoma Creek originate in Sugarloaf Ridge State Park, approximately 10 miles east of central Santa Rosa. Sonoma Creek flows southeast for 23 miles, passing through the City of Sonoma before reaching San Pablo Bay. Major tributaries include Calabazas Creek, Carriger Creek, Agua Caliente Creek, Nathanson Creek, Fryer Creek, Rodgers Creek, Dowdall Creek, and Fowler Creek. Within this watershed, the Water Agency owns only two channels, which are tributary to Sonoma Creek: Fryer Channel, which lies within the City of Sonoma, and Happy Court Conduit, in Boyes Hot Springs. The total length of these Water Agency-owned channels is approximately one mile.

The Petaluma River originates in an area south of Cotati, between Highway 101 and Stony Point Road. It flows southeast for approximately 40 miles, passing through the City of Petaluma, until it reaches San Pablo Bay. Major tributaries include Lichau Creek, Willow Brook Creek, Lynch Creek, Washington Creek, Adobe Creek, Schultz Slough, and San Antonio Creek. The Water Agency owns approximately 5 miles of constructed channels on the Petaluma River and its tributaries. These are located within the City of Petaluma.

Land use within these watersheds is primarily agricultural. Residential and commercial areas are concentrated around the cities of Petaluma and Sonoma and along the Highway 12 corridor between the cities of Santa Rosa and Sonoma.

Measurable Goals/Implementation Schedule

a. Develop a land use map/June 30, 2004.

3. POLLUTANTS OF CONCERN

This SWMP focuses on the pollutants of concern that have been identified by the EPA as causing impairment of waters within the permit boundary. The most recent list of impaired waters approved by the EPA is the 2002 California 303(d) list of impaired water bodies. It lists Sonoma Creek as impaired for nutrients, pathogens, and sediment. The list states that these impairments are caused by agriculture, construction, land development, and urban runoff. The Petaluma River is also listed for diazinon, nickel, nutrients, pathogens, and sediment resulting from agriculture, construction, land development, and urban runoff. Nickel is listed only within the 1.1 miles of the river that are tidally influenced. Because nickel is not listed within the Permit Boundary, it is not considered a pollutant of concern for the purposes of this plan. The listing for Diazinon was extended to include the Petaluma River within the permit boundary with the 2002 listing update. Because the 303(d) priority for Diazinon is low, and because new federal and state regulations of Diazinon use are in effect, no measurable goals to address Diazinon have been included in the SWMP at this time, other than those for general Integrated Pest Management education and household hazardous waste collection. According to the 2002-2003 work plan for the San Francisco Bay Region Surface Water Ambient Monitoring Program (SWAMP), San Antonio, Adobe, and Ellis Creeks are the most highly impacted tributaries in the Petaluma River watershed. This is due to the influences of agricultural uses and high levels of grazing, most of which occurs in the watershed outside the permit boundary. The SWMP is prioritized to address sediments, nutrients, and pathogens within the permit boundary

No new impairments are included for Sonoma Creek as part of the 2002 303(d) list update. If and when new impairments are included on a 303(d) list approved by the EPA, they will be incorporated into this SWMP as pollutants of concern, as appropriate.

Best Management Practices (BMPs) contained in this SWMP are aimed at reducing the discharge of the pollutants of concern.

4. MEMORANDUM OF UNDERSTANDING

The County and the Water Agency have authority to enter into interagency agreements pursuant to California Government Code Section 6502 and Section 3 of the Agency Act. The co-permittees will enter into a cooperative agreement that will outline the roles and responsibilities of each entity within six months after the SWMP is approved by the State Water Resources Control Board.

5. ADMINISTRATION AND PLANNING

5.1 COUNTY OF SONOMA

5.1.1 ADMINISTRATION

Several departments within the County have roles within this SWMP. These departments are: County Administrator's Office (CAO), County Counsel, Department of Emergency Services (DES), General Services/Architect's Division (Architect's Division), Department of Health Services/Environmental Health Division (EH), Permit and Resource Management Department (PRMD), Regional Parks, and Department of Transportation and Public Works (TPW). Permit compliance will be overseen by a storm water coordinator within PRMD.

The County will provide introductory training to participating Departments' staff during the fall and winter of 2004. The training will include an overview of Phase II requirements, summary of applicable measurable goals, guidance on achieving measurable goals and Annual Report preparation responsibilities. An evaluation of presented topics will be conducted. As introductory trainings are completed and further trainings are conducted, the County may accumulate information to develop a training manual for staff participating in the SWMP. See Sections 3.6, 4.6, 6.1.5 & 6.4.3 of Part II for further information on staff training.

Measurable Goals/Implementation Schedule.

a. Provide introductory training to participating department staff/fall and winter of 2004.
b. Make training materials readily available to participating department staff/June 30, 2005.

5.1.2 LEGAL AUTHORITY

The County's legal authority required to implement and enforce the municipal SWMP is provided in the federal Clean Water Act, California Water Code, Fish and Game Code, Health and Safety Code, Penal Code and the Sonoma County Code (SCC). The California Environmental Quality Act and Subdivision Map Act provide municipalities legal authority to conditionally approve development projects. The County has adopted local ordinances to supplement Federal and State legal authority to fulfill the National Pollutant Discharge Elimination System (NPDES) the storm water discharge requirements and to implement this SWMP. These local ordinances are codified in the SCC, and many of the provisions of the ordinances relating to storm water are codified in

Chapter 11 (Drainage and Storm Water Management) of the Sonoma County Code. A copy of Chapter 11 is set forth below:

CHAPTER 11

DRAINAGE AND STORM WATER MANAGEMENT[1]

Article I. Drainage Facilities.

Article II. Copeland Creek Drainage Plan.

Article III. Storm Water Quality.

[1] As to changes in cable television facilities required by construction of drains, etc., see § 8-7 of this code. As to rivers and streams, see Ch. 23.

Article I. Drainage Facilities[2]

Sec. 11-1. Findings and purpose.

The Board of Supervisors finds and declares that the free flow of flood waters through the various waters and channels throughout the county is essential to the protection of persons and property throughout the county, and any construction, deposit of material or other act or thing constructed, deposited or done with any channel or waterway within the county resulting in the obstruction or diminution of free flow of flood waters in such channel or waterway is detrimental and dangerous to the public health, safety and welfare of the citizens of the county. (Ord. No. 4803 § 1, 1994: Ord. No. 1108 § 15.)

Sec. 11-2. Permit for certain acts - Required.

No person, municipality or public district shall commit or cause to be committed any of the acts hereinafter described, unless a written permit has first been obtained from the enforcing officer:

(a) Impair or impede or obstruct the natural flow of storm waters or other water running in a defined channel, natural or man-made, or cause or permit the obstruction of any such channel.

(b) Deposit any material in such channel.

(c) Alter the surface of land so as to reduce the capacity of such channel.

(d) Construct, alter or repair any storm water drainage structure, facility or channel without first obtaining a permit therefor, as provided by this article.

(e) Commit any act, within any easement dedicated for drainage purposes, that will impair the use of such easement for such purpose.

(f) Place any material along the sides of any defined channel or so close to the side of such channel as to cause such material to be carried away by flood waters passing through such channel.

(g) Construct any structure within one hundred feet of the top of any embankment, natural or man-made which defines a channel, except structures constructed on a lot in a subdivision where the flood hazard has been found to be remote in the review by the county water agency.

(h) Deposit any material as aforesaid, which contains paper, bottles, cans, lumber, garbage, organic matter or other material which will not readily become an integral part of the channel side.

[2] For state law as to local flood control, see Wat. C. § 8000 et seq. As to flood control by counties, see Wat. C. § 8100 et seq. As to watershed protection and flood prevention generally, see Wat. C. § 12850 et seq.

(i) Deposit car bodies or any unsightly material on the top of sides of any embankment, natural or man-made, which defines a channel. (Ord. Nos. 1108 § 1, 1300 § 1.)

Sec. 11-2.1. Drainage design requirements.

All drainage structures and facilities shall be designed and constructed according to the Sonoma County water agency's flood control design criteria, latest edition or subsequent amendments thereto. (Ord. No. 4981 § 5, 1996.)

Sec. 11-3. Same - Application.

The enforcing officer shall prescribe and provide a standard form of application for permit as required by this article and such application when duly executed and signed by the enforcing officer shall become the permit. The application shall state the property owner's name together with such details as in the opinion of the enforcing officer are necessary to establish the purpose of the act or work to be performed, the location, dimensions, estimated total cost and the dates for commencement and for completion of the work; except, that the enforcing officer may at his discretion establish the date of completion. The application shall be executed by the property owner or his duly authorized agent and filed with the enforcing officer. The application shall provide the enforcing officer with such information as he shall request or demand in order that all engineering and other technical information may be available as necessary to locate, delineate, illustrate, identify, justify and substantiate the proposed work or act, and the right and necessity of the applicant to perform the act or work. The enforcing officer may require the applicant to submit all investigations and technical reports as the enforcing officer deems necessary and proper. The application shall provide the written consent and waiver of liability given by any and all persons, or public agencies having jurisdiction, who of themselves or their property would be affected in any manner by the acts or work to be performed. (Ord. No. 1108 § 5.)

Sec. 11-4. Same - Fees.

Fees for the performance of work under permits issued pursuant to the provisions of this article shall be those recommended by the enforcing officer and established and adopted by the board of supervisors from time to time by resolution. Before a permit is issued the applicant shall deposit with the enforcing officer for payment to the treasurer of the county of Sonoma a sufficient sum to cover the fee for issuance of the permit, in accordance with the schedule established and adopted by the board of supervisors. (Ord. No. 4803 § 1, 1994: Ord. No. 1108 § 6.)

Sec. 11-5. Same - Issuance; effect.

The written permits required by this article shall be issued by the enforcing officer or his lawful appointee for any lawful use subject to conditions set forth in this article and as required by law. The issuance of a permit shall in no manner whatsoever imply or impugn a responsibility or liability on the part of the county, or its employees, for injuries or damage resulting from any act or condition regulated by this article. (Ord. No. 4803, § 1, 1994: Ord. No. 1108 § 4.)

Sec. 11-6. Same - Conditions; term and renewal.

In issuing the permit required by this article, the enforcing officer may prescribe conditions reasonably necessary to safeguard the performance of the work and other properties which may be affected. Such permits may be issued for any term up to one (1) year and may be renewed if good cause is shown therefor. (Ord. No. 1108 § 5.)

Sec. 11-7. Same - Transferability.

No permit issued under this article may be transferred or assigned in any manner whatsoever, voluntarily or by operation of law, without the express consent of the board of supervisors. (Ord. No. 1108 § 9.)

Sec. 11-8. Same - Security deposit.

Any permit issued pursuant to this article may be issued on the condition that it is not valid until the permittee has entered into a written contract with the county to perform the work in accordance with the terms of the permit and posted security in an amount satisfactory to the enforcing officer for the faithful performance of the work, which security shall not exceed one hundred percent (100%) of the cost of the work to be performed or its removal or reconstruction in the event of default on the part of permittee. (Ord. No. 1108 § 8.)

Sec. 11-9. Performance of work; inspections.

The enforcing officer may inspect or cause to be inspected any work done pursuant to a permit issued under the provisions of the article and no permittee shall be deemed to have complied with this article until a final inspection of the work has been made by the enforcing officer or his representative and a report made in writing that the work has been completed in accordance with the permit. Unsatisfactory work shall be corrected or reconstructed by the permittee and should the enforcing officer deem that delay in pursuit of completion of the work is due to lack of diligence or willful act on the part of the permittee, the enforcing officer may apply to the board of supervisors for permission to contract with any licensed general contractor for the construction and completion of the work in conformance with the permit or for the removal of work or structures which are nonconforming to the permit and the cost thereof may be charged to the permittee upon order of the Board of Supervisors. (Ord. No. 1108 § 7.)

Sec. 11-10. Abatement of violations.

(a) Notice of Violation. In the event of a violation of this article and in addition to other penalties herein provided, the enforcing officer may serve a written notice upon the owner of the property on which the violation occurred by personal service or by registered mail addressed to the owner as his address appears on the assessment roll of the County. The notice shall state the nature of the violation, that the owner is required to abate the condition constituting the violation within ten (10) days after the notice is received, and that if the owner fails to abate the condition within such period, the condition may be abated by the enforcing officer and the owner shall be liable for the cost thereof. Each day that such condition constituting the violation continues after notice to the owner of the property to abate the same shall be a separate violation, regardless of whether the condition was originally caused by owner or others.

(b) Abatement by County. If the condition is not abated by the owner in accordance with such notice, the enforcing officer may abate the condition and shall charge the owner for the cost thereof. If this charge is not paid within sixty (60) days, the amount of such charge plus accumulated interest at the rate of six percent (6%) per annum from the date of the charge shall be added to the next regular tax bill sent to the owner and shall be collected in the manner fixed by law for the collection of taxes or in the alternative recovery therefor may be had through civil action.

(c) Emergency Abatement. If the enforcing officer finds that a violation has created an emergency condition endangering the public health or safety, he may abate the condition in accordance with subsection (b) hereof without giving the notice required by subsection

(d) Civil Remedies. Any structure, fill, dam, deposit of earth or other material or alteration of the surface of land constructed, installed, deposited or maintained contrary to the provisions of this article shall be and the same is hereby declared to be a public nuisance, and the county counsel shall, upon order of the board of supervisors, immediately commence action or proceedings for the abatement and removal and enjoinment thereof in the manner provided by law, and shall take such other steps and shall apply to such courts as may have jurisdiction to grant such relief as will abate or remove such structure, fill, dam, deposit of earth or other material or alteration of the surface of land or other condition existing because of violation of any provision hereof, and restrain and enjoin any person from constructing, installing or maintaining any such structure, fill, dam, deposit of earth or other material or alteration of the surface of land or any other condition existing due to any violation of this article. (Ord. Nos. 1108 § 2, 1300 § 2.)

Sec. 11-11. Appeals.

Any person aggrieved by the refusal of a permit or by the terms of a permit required by this article may appeal to the board of supervisors. Any such appeal shall be in writing filed with the clerk of the board of supervisors within fifteen days after the refusal of a permit or the issuance of a permit, the terms of which are unsatisfactory to the permittee. An appeal shall set forth the grounds therefor, the work proposed to be done, the method of accomplishing same, together with sufficient factual, engineering and technical data to set forth the basis and the reasons for the appeal. At its first regular meeting after the filing of any appeal, the board of supervisors shall set the same for hearing not less than ten (10) days nor more than twenty (20) days after the date of such meeting and shall cause written notice of the time and place thereof to be given to all parties concerned.

If, after the hearing on any appeal, the board of supervisors finds all of the following to be true, the permit shall be granted:

(a) That the applicant will be substantially damaged by the refusal to grant the permit.

(b) That no other reasonable method of obtaining the desired results is available except as proposed by the applicant.

(c) That the granting of the permit will not be materially detrimental to the public interest, safety, health and welfare or injurious to other property. (Ord. No. 1108 § 10.)

Sec. 11-12. Certain dams exempt.

Dams constructed for the purpose of impounding water when designed or approved by an agency of the federal government or of the state, or when subject to review and approval by the state department of water resources, pursuant to Part I of Division 3 of the State Water Code, shall be exempt from the provisions of this article. (Ord. No. 1108 § 1.)

Sec. 11-13. Emergency work.

This article shall not prevent any person from performing emergency maintenance or work within, upon, over, under or through any watercourse, channel, ditch, conduit or natural drainage way as may be necessary and proper for the preservation of life or property when an urgent necessity therefor arises. The person performing such emergency work shall apply for a written permit therefor within ten (10) calendar days after the beginning of such work. (Ord. No. 1108 § 3.)

Sec. 11-14. Applicability of article - To conditions due to natural causes.

Nothing contained in this article shall be deemed to apply to the obstruction, stoppage or diminution of capacity of any channel or waterway due to natural causes. (Ord. No. 1108 § 13.)

Sec. 11-15. Same - To preexisting conditions, etc.

It is the intent of this article that it be prospective in operation only and the provisions hereof shall not apply to structures or conditions in existence prior to the effective date of the ordinance from which this article derives.[3] (Ord. No. 1108 § 14.)

[3] Editor's note. - The ordinance from which this article derives was passed and adopted October 14, 1968, and became effective thirty days thereafter.

Sec. 11-16. Administration of article.

The director of the permit and resources management department is charged with the responsibility for the administration of the provisions of this article. (Ord. No. 4803 § 1, 1994: Ord. Nos. 1108 § 11, 2105 § 5, 2470.)

Article II. Copeland Creek Drainage Plan.

Sec. 11-17. Findings.

The Board of Supervisors do find and determine as follows:

(a) That the subdivision and development of property within the Copeland Creek drainage plan area will require construction of the facilities prescribed in such plan.

(b) That the costs described in the Copeland Creek drainage plan are reasonable estimates of the costs of constructing the facilities described in such plan.

(c) That the fees described in section 11-20 are fairly and uniformly apportioned on all land within the area of the Copeland Creek drainage plan on a per acreage basis.

(d) That the drainage facilities described within the Copeland Creek drainage plan are in addition to existing local drainage facilities serving the area at the time of adoption of the Copeland Creek drainage plan. (Ord. No. 1065 § 3.)

Sec. 11-18. Purpose of article.

It is the purpose of this article to require the payment of a fee as a condition of approval of any final subdivision map or as a condition of any permit for the construction and development of any property within the area described in the Copeland Creek drainage plan. Such fees are for the purpose of defraying the actual or estimated cost of constructing planned drainage facilities for the removal of surface and storm waters from the drainage area included within the Copeland Creek drainage plan. (Ord. No. 1065 § 1.)

Sec. 11-19. Plan generally.

Reference is hereby made to the Copeland Creek drainage plan which was approved by the city council of the City of Rohnert Park pursuant to Resolution No. 67-64, adopted by such city council on August 7, 1967, and approved by concurrent resolution No. 20275-DR 20279, adopted August 14, 1967, by the Board of Supervisors of Sonoma County and the board of directors of the Sonoma County flood control and water conservation district, which plan contains an estimate of the total cost of constructing the drainage facilities required by the plan, and a map of the drainage area showing its boundaries and the location of planned drainage facilities. Copies of the Copeland Creek drainage plan shall at all times be on file and available for public inspection in the office of the clerk of the Board of Supervisors at the County Administration Center, 575 Administration Dr, 100A, Santa Rosa, California. (Ord. No. 1065 § 2.)

Sec. 11-20. Fees to be paid as condition to subdivision, etc., of land - established.[4]

There is hereby established a fee of six hundred thirty dollars per acre, which shall be paid as a condition of the subdivision or development of any land within the Copeland Creek drainage plan as provided by this article. An equivalent portion of the fee shall be paid when applied to any fraction of an acre of land. (Ord. Nos. 1065 § 4, 1682.)

[4] As to subdivisions generally, see ch. 25 of this code.

Sec. 11-21. Same - Computation and payment generally.

Payment of the fees prescribed in section 11-20 shall be made a condition of the approval of any final subdivision map as defined in the Subdivision Map Act. Computation of the fee shall be based upon the total acreage within the exterior boundaries of the land described in the final subdivision map.

Payment of the fee prescribed in section 11-20 shall also be made a condition to the issuance of any building permits for the development of any land within the area of the Copeland Creek drainage plan against which such fee has not already been paid. For the purpose of this article, development of the land is defined as any construction or improvement thereon which requires a building permit under the terms of chapter 7. Computation of the fee shall be based upon the amount of land to be utilized by the development or the planned future extension thereof. Any dispute as to the amount of land to be utilized in connection with the development shall be resolved by the county building inspector, whose decision is subject to review by the Board of Supervisors. (Ord. No. 1065 § 5.)

Sec. 11-22. Same - To be paid only once; records.

Only one fee or portion thereof as required by this article shall be paid as to any acre of land or portion thereof. Accurate records shall be kept concerning the collection of fees under this article, and such records shall set forth the amount of fees paid as to each parcel of land to which such fees apply. (Ord. No. 1065 § 8.)

Sec. 11-23. Drainage facilities fund - established, etc.

There is hereby established the Copeland Creek drainage facilities fund. All fees collected pursuant to the terms and provisions of this article shall be deposited in such fund, and all moneys in such fund shall be expended solely for the construction or reimbursement for construction of local drainage facilities within the area of the Copeland Creek drainage plan. (Ord. No. 1065 § 6.)

Sec. 11-24. Same - In lieu of payments.

Cash or other consideration in lieu of the payment of fees prescribed in section 11-20 may be accepted and deposited in the Copeland Creek drainage facilities fund. Any consideration received and so deposited other than cash shall be credited on the basis of its fair market value. (Ord. No. 1065 § 7.)

Article III. Storm water Quality.

Sec. 11-25. Purpose and intent of article.

(a) The purpose of this article is to protect and enhance the water quality of the county's watercourses pursuant to, and consistent with, the Federal Clean Water Act and amendments thereto and to assure compliance with the conditions set forth by the National Pollutant Discharge Elimination System (NPDES) as requirements of storm water discharge permits.

(b) It is the intent of the Board of Supervisors in enacting this article to protect the health, safety and general welfare of the county's citizens by:

(1) Controlling the discharge to the County's storm water system from spills and the dumping or disposal of materials other than storm water.

(2) Reducing pollutants in storm water discharges to the maximum extent practicable. (Ord. No. 4981 § 6, 1996.)

Sec. 11-26. Definitions.

The following words and phrases when used in this article shall have the meaning as defined herein. Words and phrases used in this article and not otherwise defined shall be interpreted as defined in the regulations of the U.S. Environmental Protection Agency to implement the provisions of the Federal Clean Water Act and as defined by the State Water Resources Control Board to implement the Porter-Cologne Act in the State Water Code.

(a) "Administrative authority" means the County department(s) or other agency (ies) approved by the board of supervisors to administer and enforce any portion of the provisions of this article. County departments which may be so designated include, but are not limited to, the permit and resource management department, transportation and public works department, department of health services, department of emergency services or the agricultural commissioner.

(b) "Discharge" means the flow of water and or other materials to the storm water system from any distinguishable or identifiable source, other than from a vessel or other floating craft.

(c) "Prohibited discharge" means any polluted discharge or any discharge to the county's storm water system that is not composed entirely of storm water, except discharges pursuant to a NPDES permit, discharges resulting from emergency fire fighting activities and discharges further exempted at Section 11-29(b)(2).

(d) "Pollutant" means any material other than water.

(e) "Pollutant" loading means the aggregate quantity of all pollutants.

(f) "Polluted discharges" means those discharges whose pollutant load is such as to detract from or place limits on any actual or potential beneficial use of the receiving waters.

(g) "Unpolluted discharges" means those discharges whose pollutant load does not detract from, or place limits on any actual or potential beneficial use of the receiving water.

(h) "Storm water" means storm water runoff, snowmelt runoff and surface water runoff and drainage

(i) "Authorized county employee(s)" means those individuals designated by the administrative authority to act as his or her designees.

(j) "Best Management Practices" or "BMPs" means schedules of activities, prohibitions or practices, general good housekeeping practices, pollution prevention practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants directly or indirectly to watercourses, water bodies, and wetlands. BMPs also include treatment requirements, operating procedures, design specifications, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal or drainage from raw material storage.

(k) Storm water system means those facilities by which storm water may be collected and conveyed to any stream, watercourse, other body of water or wetlands, publicly or privately owned which are not part of a publicly owned treatment works ("POTW") as that term is defined in 40 CFR Section 122.2.

(l) "County's storm water system" means those publicly owned or maintained storm water facilities that are situated within the county.

(m) "Non-storm water discharge" means any discharge that is not entirely composed of storm water or any release of pollutants that potentially or actually discharges to the county's storm water system.

(n) "Premises" means any building, lot, parcel, real estate, or land or portion of land whether improved or unimproved including adjacent sidewalks and parking strips.

(o) "Commercial facility" means any nonresidential premises or any premises used as a site of commercial activity.

(p) "Significant noncompliance" means non-compliance with any provision of this article that either:

(1) Poses or threatens to pose a significant danger to the environment or public health;

(2) Has not been abated in a reasonable period to time; or

(3) Has recurred. (Ord. No. 4981 § 6, 1996.)

Sec. 11-27. Administrative authorities.

Except as otherwise provided in this code, the provisions of this article shall be administered by the administrative authority. (Ord. No. 4981 § 6, 1996.)

Sec. 11-28. Construction and application.

This article shall be construed in a manner which is consistent with the requirements of the Federal Clean Water Act and acts amendatory thereof, any applicable implementing regulations thereto and any NPDES permit for storm water discharges from the Santa Rosa area issued by the State Water Resources Control Board or the North Coast Regional Water Quality Control Board and any amendment, revision or re-issuance of the permit. (Ord. No. 4981 § 6, 1996.)

Sec. 11-29. Discharge of non-storm water.

(a) The release of non-storm water discharges to the county's storm water system is prohibited.

(b) The following discharges are exempt from the prohibition set forth in subsection (a) of this section:

(1) Any discharge in compliance with a National Pollutant Discharge Elimination System (NPDES) permit issued to the discharger and administered by the state of California under the authority of the United States Environmental Protection Agency.

(2) Discharges from the following activities will not be considered a prohibited discharge to the county's storm water system when properly managed: flushing of potable water from potable water lines and other discharges from potable water sources, landscape irrigation and lawn watering, irrigation water, diverted stream flows, rising groundwaters, uncontaminated groundwater infiltration to storm drains, uncontaminated pumped groundwater, foundation and footing drains, water from crawlspace pumps, air conditioning condensation, springs, runoff from individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges or flows from emergency fire fighting, any other flows necessary for implementing BMPs directed or approved by the administrative authority. (Ord. No. 4981 § 6, 1996.)

Sec. 11-30. Discharge in violation of NPDES permit.

Any discharge that would result in, or contribute to a violation of any NPDES permit for storm water discharges from the Santa Rosa area and any amendment, revision or re-issuance of such permit, either separately considered or when combined with other discharges, is prohibited. Liability for any such discharge shall be the responsibility of the person(s) causing or responsible for the discharge, and such persons shall defend, indemnify and hold harmless the county, its officers, agents, and employees in any administrative or judicial enforcement action relating to such discharge. (Ord. No. 4981 § 6, 1996.)

Sec. 11-31. Unlawful discharge and unlawful connections.

(a) It is unlawful to establish, use, maintain or continue unauthorized drainage connections to the county's storm water system.

(b) It is unlawful to establish, use, maintain or continue drainage connections to the county's storm water system which are or may be a source of prohibited discharges.

(c) It is unlawful to commence or continue any unauthorized and/or prohibited discharges to the county's storm water system. (Ord. No. 4981 § 6, 1996.)

Sec. 11-32. Reduction of pollutants in storm water.

(a) Activities Resulting in Discharge of Pollutants. Any person engaging in activities which may result in pollutants entering the county's storm water system shall undertake all practicable measures to reduce and/or eliminate such pollutants. All activities that do actually, or may potentially, result in the deposit of pollutants in or on the county's storm water system, in any tributary of this system, and all land which drains to either this system or any of its tributaries shall be construed as activities which may result in pollutants entering the county's storm water system. Examples of such activities include, but are not limited to, ownership and use of premises which may be a source of pollutants such as parking lots, gasoline stations, industrial facilities, business enterprises and dwelling units.

(b) Pollutants and Littering. No person shall throw, deposit, leave, keep or permit to be thrown, deposited, placed, left or maintained, any refuse, household hazardous wastes or other hazardous waste, garbage, debris, or other wastes, or other discarded or abandoned objects or articles in or upon any storm water system or upon any public or private plot of land in the applicable area so that the same might become a pollutant, except in lawfully established waste disposal facilities.

(c) Sidewalks. The occupant or tenant, or in the absence of occupant or tenant, the owner or proprietor of any real property in the county in front of which there is a paved sidewalk shall maintain that portion of the sidewalk in front of the property free of dirt or litter to the maximum extent practicable. Sweepings from the sidewalk shall not be swept or otherwise made or allowed to go into the gutter or roadway or any element of any drainage system, but shall be disposed of in receptacles maintained as required for the disposal of solid waste.

(d) Construction Activities. Any construction contractor performing work in the applicable area shall implement appropriate best management practices to prevent the discharge of construction wastes or debris or contaminants from the construction materials, tools, and equipment from entering the storm water system.

(e) Bodies of Water. No person shall throw or deposit litter in any fountain, pool, lake, stream, river or any other body of water in a park or elsewhere within the applicable area.

(f) Standard for Parking Lots, Paved Areas, and Related Storm water Systems. Persons owning, operating, or maintaining a paved parking lot, the paved areas of a gas station, a paved private street, road, or driveway and related storm water systems shall clean those structures as frequently and thoroughly as practicable in a manner that does not result in discharge of pollutants to the storm water system.

(g) Notification of Intent and Compliance with General Permits. Each industrial discharger, discharger associated with construction activity or other discharger described in any general storm water permit addressing such discharges as may be adopted by the United States Environmental Protection Agency, the State Water Resources Control Board, or the California Regional Water Quality Control Board, North Coast Region, shall provide the notice of intent, comply with, and undertake all other activities required by any general storm water permit applicable to such dischargers, and shall provide a copy of the notice of intent and of each annual report pursuant to any general storm water permit to the administrative authority, and shall pay

any associated monitoring and enforcement fees to the county that may be set by the Board of Supervisors. Each discharger identified in an individual NPDES permit relating to storm water discharges shall comply with and undertake all activities required by such permit.

(h) Compliance with Best Management Practices. Where best management practice guidelines or requirements have been adopted or published by the Environmental Protection Agency, any state of California agency, any San Francisco Bay area agency, or the county, for any activity, operation or facility which may cause or contribute to prohibited discharges, every person undertaking such activity or operation or owning or operating such commercial facility shall comply with such guideline or requirement.

(i) Storm water Pollution Prevention Plan. The administrative authority may require any business in the applicable area that engages in activities which may result in prohibited discharges to develop and implement a storm water pollution prevention plan, which must include an employee training program. Business activities which may require a storm water pollution prevention plan include, but are not limited to, maintenance, storage, manufacturing, assembly, equipment operations, vehicle loading or fueling, or cleanup procedures which are carried out partially or wholly out of doors.

(j) Coordination with Hazardous Materials Release Response Plans and Inventory. Any business subject to the Hazardous Materials Release Response and Inventory Plan, Division 20, Chapter 6.95 of the California Health and Safety Code (commencing with Section 25500), shall include in that plan provision(s) for compliance with this article, including the prohibitions on non-storm water discharges and the requirement to reduce the release of pollutants to the maximum extent practicable. (Ord. No. 4981 § 6, 1996.)

Sec. 11-33. Enforcement.

(a) Inspections. Routine or area inspections by the county shall be based upon such reasonable selection process as may be deemed necessary to carry out the objectives of this article, including, but not limited to, random sampling and/or sampling in areas where there is evidence of storm water contamination, discharge of non-storm water to the storm water system, or similar activities. Such inspections may also be done in conjunction with routine inspections conducted by other public agencies such as the Environmental Health Division of the Department of Health Services and/or the Hazardous Materials Division of the Department of Emergency Services.

(b) Authority to Sample and Establish Sampling Devices. With the consent of the owner or the occupant of property or pursuant to a search or inspection warrant, any authorized county employee may take such samples and meter such discharges as the administrative authority deems necessary to determine whether a non-storm water discharge has taken place or is taking place and to determine the magnitude of such discharges. Such county employee may establish on any property such devices as are necessary to conduct sampling or metering operations. During all inspections as provided herein, the administrative authority may take any samples deemed necessary to aid in the pursuit of the inquiry or in the recordation of the activities on-site.

(c) Training of Employees - Notification of Spills. The owner of a commercial facility or the persons responsible for emergency response for a commercial facility have the responsibility to train facility personnel and maintain notification procedures to assure:

(1) Immediate notification is provided to the county administrative authority of any suspected, confirmed or unconfirmed release of material, pollutants or waste creating a risk of discharge into the county storm water drain system.

(2) Immediate notification is given to the "911" emergency response system if said discharge poses an immediate threat to the public health or safety and/or the environment.

(3) Written notification is provided to the county administrative authority within five working days.

(i) Training of personnel shall assure that all BMPs are being fully and correctly implemented and that all releases of any non-storm water discharge or of any pollutant that threatens to enter the county's storm water system are immediately recognized and that appropriate response is taken in the event of such release

(ii) As soon as any person in charge of a commercial facility or who is responsible for emergency response for a commercial facility has knowledge of, or reasonably could be expected to have knowledge of, any suspected, confirmed or unconfirmed release of a non-storm water discharge entering, or of any pollutant that is threatening to enter, the county storm water system from such facility, such person shall take all necessary steps to ensure the early discovery and containment and clean up such release and shall immediately notify the county administrative authority. In addition, written notification shall be given to the county administrative authority within five working days. This written notification shall contain as a minimum a narrative describing the circumstances resulting in the release, or threatened release, the efforts taken to clean up the release and the measures being taken to prevent reoccurrence. This notification requirement is in addition to, and not in lieu of, other required notifications.

(d) Requirement to Test or Monitor. Any authorized county employee may require that any person engaged in any activity or owning or operating any commercial facility which may cause or contribute to illicit discharges, undertake such monitoring activities and/or analysis and furnish such reports as the authorized employee may specify. The burden, including costs, of these activities, analysis and reports shall bear a reasonable relationship to the need for the monitoring and/or analysis and reports and the benefits to be obtained. The recipient of such a requirement shall undertake and provide the monitoring, analysis and reports required.

(e) Order to Cease and Desist. When the county administrative authority finds that the discharge from a commercial facility is taking place, or is threatening to take place, in violation of the prohibitions of this article or any other discharge control requirements, the county administrative authority may issue a written order to cease and desist and may direct the discharge to:

(1) Comply forthwith with the order and to cease those operations which result or threaten to result in discharges which violate any prohibition or limit of this article until such time as the administrative authority states in writing that he or she is satisfied that BMPs which will remove the threat are in place;

(2) Comply with the order in accordance with a time schedule set by the administrative authority; or

(3) In the event of a threatened violation take appropriate remedial or preventative action.

(f) Require that the Discharger Submit a Schedule of Remedial or Preventative Action. When the administrative authority finds that the discharge from a commercial facility is taking place, or is threatening to take place, in violation of the code requirements, the administrative authority may issue an order to cease and desist and may direct the discharger to submit for her or his approval a detailed time schedule of specific actions the discharger shall take to correct or prevent the violation of such prohibitions and requirements.

(g) Predischarge Facility. When source reduction BMPs are, in the opinion of the administrative authority, inadequate to prevent actual or potential prohibited discharges from a commercial facility to the county's storm water system, the administrative authority may require that the owner of the commercial facility shall provide, at the owner's expense, such predischarge facilities as may been deemed necessary to reduce the pollutant load at a point prior to discharge from said facility or to any element of the county's storm water system. The administrative authority may further require that the owner of the commercial facility, at the owner's expense, provide a

monitoring access hole so that the pollutant loading may be periodically measured. Examples of predischarge facilities are oil/grease interceptors and sand/silt interceptors.

Plans, specifications, and other pertinent factors related to the aforementioned predischarge facilities shall be submitted to the county for approval by the administrative authority. Construction of the proposed facilities shall not commence until the administrative authority's approval is obtained in writing and use of the facilities shall not commence until the completed facilities are approved in writing by the administrative authority. Such facilities, once approved, shall be continuously maintained in satisfactory operating condition to the satisfaction of the administrative authority. (Ord. No. 4981 § 6, 1996.)

Sec. 11-34. Violations constituting misdemeanors.

The violation of any provision of this article, or the failure to comply with any of the mandatory requirements of this article shall constitute a misdemeanor. (Ord. No. 4981 § 6, 1996.)

Sec. 11-35. Violation - Additional actions and remedies

(a) Any non-storm water discharger found to be in significant non-compliance as defined in Section 11-26 in any calendar year may have its name published in the largest daily newspaper published in the Santa Rosa area.

(b) Any person who violates any order issued by the administrative authority for violation of the provisions of this article regulating or prohibiting discharge of non-storm water and which causes, or threatens to cause, non-storm waters to enter the county's storm water system may be liable civilly in a sum not to exceed the amount that the county may be fined by the State Water Resources Control Board or the amount of any civil liability imposed on the county for noncompliance with the municipal storm water discharge permit for the Santa Rosa area. (Ord. No. 4981 § 6, 1996.)

Sec. 11-36. Violation - Emergency abatement.

If the administrative authority determines that a violation of this article has created an emergency condition which seriously endangers the public health or safety, the administrative authority may abate the condition. The cost of said abatement shall be charged to the discharger and the county may at its option recover the same in a civil action. Such charge shall be in addition to any penalty for a violation of the article under Section 11-34 or 11-35(b) of this article. (Ord. No. 4981 § 6, 1996.)

Sec. 11-37. Fine for falsification of data.

Any person who submits a report required by this article, which he or she knows, or should have reason to know, contains falsified data shall be subject to a fine not to exceed the amount that the county may be fined by the State Water Resources Control Board or the amount of any civil liability imposed on the county for noncompliance with the municipal storm water discharge permit for the Santa Rosa area. (Ord. No. 4981 § 6, 1996.)

Sec. 11-38. Continuing violation.

Every day or any portion thereof any violation of this article continues shall constitute a separate offense. (Ord. No. 4981 § 6, 1996.)

Sec. 11-39. Concealment.

Concealing, aiding or abetting a violation of any provision of this article shall constitute a violation of such provision. (Ord. No. 4981 § 6, 1996.)

Sec. 11-40. Acts potentially resulting in violation of Federal Clean Water Act and/or Porter-Cologne Act.

Any person who violates any provision of this article or who violates any cease and desist order or prohibition may also be in violation of the Federal Clean Water Act and/or the Porter-Cologne Act and may be subject to the sanction of those acts including civil and criminal penalties. Any enforcement actions authorized under this article may also include notice to the violator of such potential liability. (Ord. No. 4981 § 6, 1996.)

Sec. 11-41. Violations deemed a public nuisance.

In addition to the penalties provided in this article, the county board of supervisors finds and determines that any condition caused or permitted to exist in violation of any of the provisions of this article is a threat to the public health, safety and welfare, is declared to be a nuisance and may be abated as such. (Ord. No. 4981 § 6, 1996.)

Sec. 11-42. Civil actions.

In addition to any other remedies provided in this article, any violation of this article may be enforced by civil action brought by the county. In any such action, the county may seek, as appropriate, any or all of the following:

(a) A temporary restraining order, preliminary and permanent injunction;

(b) Reimbursement for the costs of any investigation, inspection or monitoring survey which led to the establishment of the violation, and for the reasonable costs of preparing and bringing administrative action under this article;

(c) Costs incurred in removing, correcting, or terminating the adverse effect resulting from the violation;

(d) Compensatory damages for loss or destruction of water quality, wildlife, fish and aquatic life.

Costs and damages recovered under this section shall be paid to the county and shall be used exclusively for costs associated with monitoring and establishing storm water discharge pollution control system(s) and implementing or enforcing the provisions of this article. (Ord. No. 4981 § 6, 1996.)

Sec. 11-43. Remedies not exclusive.

The remedies identified in this article are in addition to and do not supersede or limit any and all other remedies, civil or criminal. The remedies provided in this article shall be cumulative and not exclusive. (Ord. No. 4981 § 6, 1996.)

Sec. 11-44. Dispute - Request for ruling.

If any discharger disputes an interpretation or application of this article, the discharger may request in writing a ruling by the administrative authority on the matter. The administrative authority will set forth his or her determination(s) in writing. (Ord. No. 4981 § 6, 1996.)

Sec. 11-45. Appeals.

If the discharger is dissatisfied with the determinations made by the administrative authority under Section 11-44, the discharger may, within thirty (30) days after the receipt of the ruling by the administrative authority, appeal the ruling to the board of supervisors by filing a written notice of appeal with the clerk of the board. The notice shall state each basis and the grounds for the appeal. The board of supervisors shall make a final determination of the issue(s) so submitted. (Ord. No. 4981 § 6, 1996.)

Sec. 11-46. Applicable area.

The provisions of this article shall apply to discharges, pollution sources and facilities located within the boundaries of the Santa Rosa municipal NPDES permit, as said boundaries are approved by the North Coast Regional Water Quality Control Board. Where said boundaries are established on or along a publicly-maintained drainage channel or publicly- maintained road right-of-way, said boundary shall include all of such facilities within public ownership and/or maintenance. (Ord. No. 4981 § 6, 1996.)

The following provisions of the Sonoma County Code integrate drainage and storm water management with building and grading permits:

§7.5 (c) Building and grading permits must be cleared as to zoning considerations in Chapter 26 and drainage, flood control and storm water requirements in Chapter 11. Building permits for projects regulated by the Uniform Fire Code and Sonoma County fire safe standards may be subject to review and approval by appropriate fire service agencies. Where county road encroachment is necessary, a permit for same shall be first secured. A water and/or sewer clearance is first required in areas serviced by special districts and cities before building permits can be issued. (Ord. 4981 Section I)

§7.5 (g) In any unincorporated portion of Sonoma County where storm water discharges are subject to the requirements of one or more NPDES permits, as referenced in Chapter 11, any construction site for which building permits are approved pursuant to Chapter 7 must be developed and used pursuant to any applicable requirements of said NPDES permit (s). Failure to adhere to applicable NPDES permit requirements at any time will be deemed to be a violation of this section and may subject the permittee to the penalties established by this Chapter. Permittees may meet this requirement by filing with the Regional Water Quality Control Board the appropriate Notice of Intent to comply with the State General Construction Activity Storm Water Permit or by obtaining approval of an individual NPDES permit from the Regional Water Quality Control Board. (Ord. 4981 Section II)

The following provisions of the Sonoma County Code address erosion control measures for cut and fill slopes:

§7-13 Appendix Chapter 33, Section 3316 of the California Building Code is amended to read as follows:

SECTION 3316 – Erosion Control

§3316.1 Slopes. The faces of cut and fill slopes shall be prepared and maintained to control against erosion. This control may consist of effective planting, or other means considered by current engineering practice to be Best Management Practices (BMPs). Erosion control measures shall be in place and maintained from October 15 to April 15. No construction, grading, cutting or filling shall be undertaken between October 15 and April 15 except in accordance with an erosion control plan approved by the chief building official. Where cut slopes are not subject to erosion due to the erosion resistant character of the materials, such protection may be omitted.

§3316.2 Other Devices. Where necessary, check dams, cribbing, riprap, siltation fences, straw wattles or any other devices or methods shall be used to control erosion and provide safety.

§3316.3 Erosion Control Measures During Construction. The proposed measures to protect against erosion during the construction process shall be shown on the plans. The details, location and description of said measures shall also be included on the plans. The proposed measures must be installed prior to the start of construction, and must be maintained to accommodate any changes in site conditions until project completion.

§3316.4 Erosion Control Measures Post Construction. The proposed permanent erosion control measures shall be shown on the plans, which shall also include the details, location, and description of said measures. The permanent measures shall be installed in accordance with an erosion control plan approved by the chief building official. Planting completed during the summer must be monitored and maintained until well-established or until the rainy season whichever comes first.

The following provisions of the Sonoma County Code address erosion control measures For subdivisions:

§25-44 (q) Erosion control measures shall be provided in order to prevent sedimentation of surface water bodies and polluted discharges to the storm water system, in accordance with the provisions of Chapter 11, Article lll of the Sonoma County Code and in accordance with the following standards:

(1) Minimize soil exposure during the rainy season by proper timing of grading and construction.

(2) Vegetate, mulch and screen disturbed areas to protect them from winter rains.

(3) Retain natural vegetation whenever feasible on subdivision sites and drainage channels

(4) Prepare unpaved drainage channels to handle concentrated or increased runoff by using vegetation, screening, riprap, paving or other lining materials.

(5) Trap sediment-laden runoff in basin to allow soil particles to settle out.

(6) Inspect sites as frequently as needed to ensure control measures are working properly and problems are corrected.

(7) All subdivisions where storm water discharges are subject to the requirements of one or more National Pollutant Discharge Elimination System (NPDES) permits, as referenced in Chapter 11, shall be developed and used pursuant to any applicable requirements of such NPDES permit(s).

Chapter I of the County Code includes provisions for enforcement of Chapters 7, 11, 25 and other code sections related to storm water quality. The County currently has the legal authority to effectively reduce pollutants in storm water discharge to the Maximum Extent Practicable (MEP) within its jurisdiction. This means that the County code and other federal and state laws provides the legal authority to ensure that non-storm water discharges are kept from entering waterways. For example, when grading activities are conducted without the necessary erosion and sediment control measures installed, the ordinances cited above allow enforcement measures to be pursued to remedy the situation. In addition to the responsibilities under Phase II General Permit in the Sonoma-Petaluma Area, the County is also a co-permittee under the Phase II NPDES regulations in the Santa Rosa area. A separate SWMP and permit are being implemented in these areas. Many of the activities are identical in both SWMP's and many of the activities are conducted countywide, including areas outside either Permit Boundary. Although there is much variation in form between the two SWMP's the programs and objectives are meant to achieve the same results countywide.

State Legal Authority

In addition to the local enforcement authority granted by the local ordinance, the following codes may be used by the County to protect water quality. Sections from the California Fish and Game, Health and Safety, Water and Penal Code are summarized below.

FISH AND GAME CODE

§5650 (a) Except as provided in subdivision (b), it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this state any of the following:

(1) Any petroleum, acid, coal, or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum. Or carbonaceous material or substance.

(2) Any refuse, liquid, or solid, from any refinery, gas house, tannery, distillery, chemical works, mill, or factory of any kind.

(3) Any sawdust, shavings, slabs, or edgings.

(4) Any factory refuse, lime, or slag.

(5) Any cocculus indicus.

(6) Any substance or material deleterious to fish, plant life, or bird life.

§5652 It is unlawful to deposit, permit to pass into, or place where it can pass into the waters of the state, or to abandon, dispose of, or throw away, within 150 feet of the high water mark of the waters of the state, any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

HEALTH AND SAFETY CODE

§25190 Violators guilty of misdemeanor; subsequent violations.

Except as otherwise provided in Sections 25189.5, 25189.6, 25189.7, and 25191, any person who violates any provision of this chapter, or any permit, rule, regulation, standard, or requirement issued or adopted pursuant to this chapter, is, upon conviction, guilty of a misdemeanor.

§25507(a) The handler or any employee, authorized representative, agent, or designee of a handler shall, upon discovery, immediately report any release or threatened release of a hazardous material to an appropriate agency.

§25215.2(a) No person shall dispose, or attempt to dispose, of a lead acid battery at a solid waste facility or on or in any land, surface waters, watercourses or marine waters. (Reference 25190).

§25217.1 No person shall dispose, of or attempt to dispose, of liquid latex paint in the land, or into the waters of the state.

§117555 Every person who places, deposits, or dumps sewage or causes such is guilty of a misdemeanor.

PENAL CODE

§374.2(a) It is unlawful to discharge or cause to be discharged any substance capable of causing substantial damage or harm to the operation of a public sanitary sewer facility, or to discharge a commercial quantity or any other substance in a manhole, clean out or other sanitary sewer facility without having proper authorization.

§374.8(b) It is unlawful to knowingly dispose of any hazardous substance into or upon any road, street, highway, alley, railroad right-of-way, or the land of another without the permission of the owner.

WATER CODE

§13376 Discharging or causing to be discharged pollutants to a waterway of the state.

The existing legal authority identified above provides a solid base for permit enforcement. However, the County anticipates performing a review of its codes to ensure adequate authority exists to implement and enforce post-development construction control measures and enhanced enforcement capabilities described in Part II, Chapter 4 Construction Site Storm Water Runoff Control.

In addition, the County's legal counsel will consult the RWB's legal counsel to the extent there are other specific identified needs for any further county code revisions in connection with the general permit.

Measurable Goals/Implementation Schedule

a. A statement will be included in the first Annual Report that the County's legal counsel has reviewed the County's legal authority to implement and enforce the permit requirements and certifies that applicable Federal, State and local statutes and codes appear to provide adequate legal authority to implement and enforce the permit requirements/June 30, 2004.
b. County's legal counsel may consult Regional Water Board counsel/June 30, 2004.

5.2 SONOMA COUNTY WATER AGENCY

5.2.1 ADMINISTRATION

Organizational Overview

The Sonoma County Flood Control and Water Conservation Act of 1949 established the Water Agency as a Flood Control and Water Conservation District. The Water Agency was originally authorized to provide water supply and flood control services (See West's Water Code Appendix Chapter 53, hereafter "The Agency Act").

In 1958, the Water Agency proposed the formation of eight geographic flood control zones, each encompassing a major watershed. The areas addressed by this Storm Water Management Plan (SWMP) are located within Flood Control Zone 2A, the Petaluma Creek Watershed; and Zone 3A, Valley of the Moon Watershed. The flood control channels owned and operated by the Water Agency, which are covered by this SWMP are located within the City of Petaluma (Zone 2A) and in and around the City of Sonoma (Zone 3A), (see Figure 2 at end of Part IV).

Since its formation in 1949, the Water Agency has added a number of different functions, each with its own independent authority, responsibilities and budgets. The Water Agency has constructed and currently operates and maintains a water transmission system, which provides water primarily to eight cities and water districts: the Cities of Santa Rosa, Rohnert Park, Sonoma, Cotati and Petaluma. The North Marin, Forestville and Valley of the Moon Water Districts are referred to as the "water contractors". Transmission system costs are paid by the water contractors under the Eleventh Amended Agreement for Water Supply and the water contractors' funds may only be spent on purposes related to construction, operation and maintenance of the transmission system. Since 1995, the Water Agency has also been responsible for managing sanitation facilities in five Water Agency zones and, by contract, for five sanitation districts. Sanitation funds may not be spent on non-sanitation facility activities and sanitation facility customers may only be charged the costs of providing sanitation services. (See, inter alia, Article XIII D, California Constitution (Proposition 218).)

The Water Agency is subject to the Phase II Storm Water Regulations as an owner and operator of portions of the Municipal Storm Sewer System (MS4) within the urbanized areas defined by the 2000 census which drain to San Pablo Bay, including the cities of Sonoma and Petaluma, and the county areas surrounding those cities.

Permit Boundary

All Water Agency-owned flood control channels within the San Francisco Bay Region are within the urbanized areas, as shown on Figure 2. The areas that the Water Agency is responsible for under this permit are hereby defined as the boundary of the Water Agency-owned flood control channels, as shown on Figure 2. There are approximately 6 linear miles (65 acres) of constructed channels subject to this permit. These channels include:

1. Corona Creek, from the Northwestern Pacific Railroad tracks to the confluence with the Petaluma River
2. Capri Creek, from McDowell Boulevard to the confluence with the Petaluma River
3. Lynch Creek, from the Highway 101 to the confluence with the Petaluma River
4. Washington Creek, from Maria Drive to the confluence with the Petaluma River
5. McDowell Creek, from Caufield Lane to the confluence with the Petaluma River
6. Adobe Creek, from Sartori Avenue to Highway 116
7. Petaluma River, from Old Redwood Highway to Benson Way
8. Fryer Channel, from the North end of 4th Street West to Leveroni Road
9. Happy Court Conduit, from the corner of Greger Street and Orchard

The Water Agency Operations and Maintenance Building is located in the North Coast Region, and not in the San Francisco Bay Region. This SWMP incorporates appropriate activities and BMPs for activities related to the Water Agency’s flood control and general fund activities. As previously stated, the Water Agency is not authorized to spend water transmission or sanitation funds on storm water management and thus such activities, although described generally in this document for information purposes, are not part of the SWMP.

Water Agency flood control activities within the urbanized areas of the North Coast Region (areas of Sonoma County which drain to the Russian River) are regulated by a Phase I Storm Water Permit originally issued by the North Coast Regional Water Quality Control Board in 1997, and renewed in June 2003. A separate SWMP has been prepared in conjunction with the Phase I Permit.

Storm Water Program Administration
The SWMP will be implemented by personnel within several different departments within the Water Agency, as depicted in the Storm Water Program Organization Chart. The Water Agency's program is coordinated by the storm water coordinator with the Operations and Permit Compliance section. The storm water coordinator is responsible for writing and updating the SWMP, ensuring that other departments are aware of their responsibilities under the SWMP, and implementing portions of the Public Education, Public Involvement and Participation, Illicit Discharge Detection and Elimination Program, and Municipal Operations Minimum Control Measures (MCM). The Maintenance Division is primarily responsible for MCMs related to maintenance activities on the flood control channels. The Public Information/Education Division is responsible for Public Information MCMs. The Engineering/Planning Division is responsible for Municipal Operations MCMs related to construction activities.

5.2.2 LEGAL AUTHORITY

This Section identifies the Water Agency's legal authority to effectively prohibit non-storm water discharges into the Water Agency's flood control channels for each of the Minimum Control Measures.

Public Education and Outreach
Much of the Water Agency's public education and outreach program is funded by the Water Agency's water contractors under the Eleventh Amended Agreement for Water Supply.

The Water Agency has the legal authority to determine what types of outreach it will pursue but cannot use water contractor funds for purposes beyond the scope of the Eleventh Amended Agreement for Water Supply. Therefore, the public outreach materials must be related to the Eleventh Amended Agreement for Water Supply.

Water contractor and public participation in the Water Agency's public outreach efforts is purely voluntary. The Water Agency can offer the materials or a program to its water contractors, or to the public, but the Water Agency does not have the legal authority to *force* a water contractor to participate in the public outreach effort, and similarly, cannot mandate changes in people's behavior as a result of its public outreach efforts.

Public Involvement/Participation
The Water Agency has the legal authority to inform and involve its employees and the public in the development and revision of its SWMP.

Illicit Discharge Detection and Elimination
As part of the Water Agency's authority to operate and maintain its flood control channels, the Water Agency has the authority to inspect its flood control channels.

Existing Federal, State, City, and County laws that prohibit dumping and polluting waterways apply within Water Agency-owned channels. The Water Agency does not have police powers and relies on the police powers of the County and other regulatory agencies. Although it has not happened to date, if these enforcement authorities did not resolve a problem to the Water Agency's satisfaction, the Water Agency could initiate civil litigation against a party responsible for polluting a Water Agency owned or controlled channel (Agency Act Section 3b).

Construction Site Storm Water Runoff Control

The Water Agency controls the limited amount of private construction that occurs within Water Agency owned land or Water Agency rights-of-way through its Revocable License program. These licenses limit activities the licensee is permitted to undertake on Water Agency controlled land and list provisions with which the licensee must comply. If a licensee does not comply with the provisions in the Revocable License, the Water Agency may revoke the license. In addition, the Water Agency will not authorize the release of a deposit held by the City or County until the job on Water Agency property is completed to the Water Agency's satisfaction.

In instances where a project includes entry into a Water Agency-owned channel, the licensee is also required to obtain permits from other permitting agencies which may include the County, the United States Army Corps of Engineers (ACOE), the California Department of Fish and Game (DFG) and the California Regional Water Quality Control Board (RWB). Each of these agencies also has legal authority to take enforcement actions against a non-compliant licensee.

In most cases, these agencies have statutory authority that provides significantly greater remedies and penalties than those available to the Water Agency.

If either of the above two means of enforcement do not resolve a problem satisfactorily, the Water Agency has the authority to enforce license terms through civil litigation (Agency Act Section 3 b).

Post-Construction Storm Water Management in New Development and Re-Development

Post-construction storm water management in new development and re-development is principally directed to private construction projects on private land; because the cities and the County, not the Water Agency, regulate land use under California planning and zoning law, the Water Agency does not have the legal authority to enforce post-construction storm water management requirements on new development or redevelopment projects.

Pollution Prevention/Good Housekeeping for Municipal Operations

The Water Agency is authorized by the Agency Act to enact policies and programs governing its operations including construction, flood control road maintenance, and emergency procedures.

The Water Agency operates five special districts, under contract, but each special district has its own legal authority. Legal authority within this section for municipal operations

is provided for activities funded through the flood control zones and general fund, but not for sanitation and transmission system activities.

Monitoring and Program Evaluation
The Water Agency has the authority to monitor its own waterways and must comply with all State and Federal laws. Some regulatory agencies, such as DFG and the National Marine Fisheries Service (NMFS), also must approve some monitoring activities.

6. FISCAL RESOURCES

6.1 COUNTY OF SONOMA

Activities regulated by the MS4 General Permit fall within the unincorporated areas of the Phase II boundary. The primary source of funding for these activities is discretionary revenues within the County's General Fund. For costs related to plan check, inspection, and SUSMP activities, staff will be requesting that the Board of Supervisors increase fees collected by PRMD to help defray these expenses. As with other cities and counties, Sonoma County is investigating how to secure new sources of revenue to pay for this mandate.

The County currently tracks the fiscal resources expended for its Phase I Permit and accounts for such expenditures in each Annual Report. A similar process will be implemented for Phase II, including actual expenditures for the prior fiscal years, estimated expenditures for the upcoming fiscal year, and a description of the funding sources to meet the estimated expenditures for the upcoming fiscal year.

Measurable Goals/Implementation Schedule

a. Request Board of Supervisors to increase permit fees to defray NPDES expenses for plan check inspection and SUSMP activities/June 30, 2004.

6.2 SONOMA COUNTY WATER AGENCY

The Water Agency's activities regulated by the MS4 General Permit are related to operation of its flood control facilities. The Agency's flood control activities are accounted in six separate special revenue flood control zone funds – Zones 1A, 2A, 3A, 5A, 7A, and 8A. Only the activities of Zone 2A, the Petaluma Creek Watershed, and Zone 3A, Valley of the Moon Watershed, are covered by this SWMP. The primary source of funding for Zones 2A and 3A are a share of the Proposition 13 – 1% property tax.

Additionally, voters within Zone 2A approved a ballot measure in 1996 authorizing the levying of a benefit assessment tax on each parcel within the Zone for a period of 10 years. This funding source for Zone 2A will expire in 2006. If the Water Agency's Board of Directors decides to place a renewal of the benefit assessment tax on the ballot, under Proposition 218, it must be approved by two-thirds of the voters to become effective.

Approximately one third of the financing of Zone 2A flood control activities is funded by the benefit assessment. Zone 3A does not assess a benefit for the construction, operation, or maintenance of flood control facilities.

General Funds are not used to fund flood control activities within either zone, although they are used to fund administrative activities associated with permit compliance.

Budgets for these various flood control zones are prepared each year by Water Agency staff and submitted to the Water Agency's Board of Directors for approval.

6.3 CO-PERMITTEE FISCAL CONCERNS

The co-permittees have a concern regarding the impracticability of program implementation due to unexpected adverse fiscal events beyond the control of the permittees. Following is a summary of this concern.

The permittees are California public entities: a California county and a California special district. As such, the revenues received by permittees are constrained by state law, the annual actions of the State Legislature and Governor in the state budget process, and the state constitution. The discretionary revenues available to the permittees to pay for the programs set forth in this document are subject to possible reduction by events beyond the control of the permittees.

For example, approximately ten (10) years ago, the state legislature and state governor faced a substantial state budget deficit, and decided to take substantial local property tax revenues belonging to cities and counties, and transfer those revenues to school districts to satisfy the state's funding obligation to school districts. Although cities and counties vigorously objected to the reduction in their local property tax revenues, the reduction occurred and cities and counties were obliged to reduce or eliminate their programs.

Moreover, on August 28, 2002 the California Supreme Court denied review of the district court of appeal decision in the case relating to storm water program funding. That case is known as *Howard Jarvis Taxpayers Association v. City of Salinas, (2002) 98 Cal.App.4th 1351* (the "City of Salinas" case). In the *City of Salinas* case some taxpayers challenged a storm drainage fee imposed by the City of Salinas to fund storm water programs. In overturning the City of Salinas' storm drainage fee, the District Court of Appeal held that:

1. The storm drainage fee was a "property-related fee" requiring voter approval under Proposition 218; and
2. The storm drainage fee was not a "fee related to sewer and water services", and thus did not fall into the exception to the voter-approval requirements for new taxes.

The *City of Salinas* appellate court decision negatively impacts the ability of the permittees to fund storm water programs.

The programs set forth in this document assume that available discretionary funds for each co-permittee will remain level in the future. "Discretionary funds" means funds not already committed by law to a particular program, and thus available to the permittees for needed public programs such as child abuse protection services, spousal abuse protection and recovery services, vital public safety programs, alcohol and drug dependency recovery programs, homeless and mental health programs, Russian River environmental enhancement programs, and the like.

In the unfortunate event that the permittees available discretionary funds for fiscal years beginning in FY 2003/2004 are reduced on account of events beyond the control of the permittees (for example, the State Legislature and State Governor decide to balance the state budget for FY 2003/2004 by again taking away revenues now received by the permittees, or reducing the state funding currently provided to the permittees), then it is impracticable, on account of reduced funding, for the permittees to fund the programs set forth in this document at the same level.

In this event, the permittees will seek to make a reduction in the funding of the storm water management program, in proportion to the unexpected reduction of the permittees' discretionary funding. The permittees and the RWB recognize that the SWMP may need to be modified, revised, or amended to respond to changed conditions. Such conditions could include more effective approaches to pollutant control or changes in discretionary funding levels. Permittees will work with the RWB staff to reevaluate and modify program elements.

Such modifications could include, but are not limited to, extending implementation dates or substituting, reducing, or eliminating performance goals. Modifications will be made with the intent of preserving programs, which have demonstrated a beneficial effect on water quality. Proposed modifications to the SWMP will be included in the annual report or by separate petition by the permittees.

7. ANNUAL REPORT

The annual review and reporting will be based on a fiscal year from July 1 to June 30. The County and the Water Agency will submit the following information in an annual report to the RWB by November 15 of each year (with the first report to be submitted in 2004):

1. The status of compliance with permit conditions;
2. An assessment of the appropriateness and effectiveness of the identified BMPs;
3. Status of the identified measurable goals;
4. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;
5. A summary of the storm water activities the County and the Water Agency plan to undertake during the next reporting cycle;
6. Any proposed change(s) to the SWMP along with a justification of why the change(s) are necessary;
7. A change in the person or persons implementing and coordinating the SWMP.

PART II

MINIMUM CONTROL MEASURES
COUNTY OF SONOMA

PREPARED BY:
COUNTY OF SONOMA

October 2004

1. PUBLIC EDUCATION AND OUTREACH

1.1 STORM DRAIN LABELING

Department of Transportation and Public Works (TPW)
The ongoing Storm Drain Labeling Program is included in Section 6.3, Storm Drain System Operation and Maintenance. County Departments propose to implement storm drain labeling in order to inform the public and departmental staff to make them aware of the significance of individual actions in controlling storm water/non-point pollution sources.

The County is participating in a regional storm drain-labeling project which is planned for 2005. A regional label design has been selected with the leadership of the Russian River Watershed Association. It is on a 5-inch Duracast street marker from Das Manufacturing. Sonoma County Waste Management Agency (WMA) plans to use "Used Oil Block Grant" funds to purchase 12,000 labels, and hire a contractor to install them on storm drain inlets throughout residential areas in the County. The label design was selected based on a cooperative approach by WMA, Russian River Watershed Association (RRWA), and their member agencies including Sonoma County, Cloverdale, Healdsburg, Rohnert Park, Petaluma, Sebastopol, City of Sonoma, Windsor, and Santa Rosa. The label design is shown below.

Measurable Goals/Implementation Schedule

a. Label 500 storm drain inlets in residential areas with the message "No Dumping, Drains to Creek" or equivalent/June 30, 2006.

1.2 ECOLOGY & ENVIRONMENTAL MEDIA/NEWSPAPER COLUMN

Permit and Resource Management Department (PRMD)
PRMD will participate in a proposal to the Press Democrat newspaper that a regular column covering ecology and environmental issues, including storm water issues, be included in their publication.

PRMD will identify additional activities to ensure public education and outreach is made available to a diverse audience, including minority and disadvantaged communities, and the public at large. PRMD will explore the possibility of participating in television public service messages and other media that target environmental issues such as storm water pollution prevention and awareness.

Measurable Goals/Implementation Schedule

a. Contact newspaper to propose an ecology and environmental column/June 30, 2005.
b. Identify additional County activities which provide public outreach about water quality to a diverse audience/June 30, 2005.
c. Expand storm water education and outreach to television public service messages and other media where possible/June 30, 2008.

1.3 WEBSITE

Permit and Resource Management Department (PRMD)

As a component of Public Education and Outreach, the county needs to establish a storm water web page. This web page will be part of the PRMD website, and will focus on storm water. It will provide information to the public and County staff about storm water pollution prevention activities in the county such as the Storm Water Management Plan, illicit discharge, upcoming workshops/events, Frequently Asked Questions, and BMPs for businesses and residences.

PRMD represents the County in the “Our Water Our World” program which is being implemented throughout Northern California to disseminate regional information about integrated pest management (IPM). The County’s role includes providing contact numbers to the public on the “Our Water Our World” website, distributing brochures at hardware stores, and participating in (IPM) workshops held at the hardware stores.

Measurable Goals/Implementation Schedule

a. Develop website with information on the Storm Water Management Plan, illicit discharge, upcoming workshops/events, Frequently Asked Questions, and BMPs for businesses and residences/June 30, 2006.
b. Receive feedback on website and update/June 30, 2006.
c. Participate in the "Our Water Our World" integrated pest management website, brochure distribution and public workshop program through participating hardware stores/June 30, 2005.

1.4 PET WASTE SIGNS

Regional Parks Department

The Regional Parks Department currently posts pet waste signs in all parks. The Regional Parks Department began posting signs in the mid-1990s. The exact date is unknown. There are six parks located in Sonoma Valley that are included in the permit boundary. Approximately 25 signs have been installed in these parks.

The department operates 40 park facilities throughout the County and has posted signs in most parks. The only facilities operated by Regional Parks within the permit boundary that do not have pet waste signs are Arnold Field and the Veterans Buildings. These facilities are not parks. The department will continue to post signs in new parks as they are developed. An example of these signs is provided below.

Pet Waste Sign on Joe Rodota Trail

Measurable Goals/Implementation Schedule

a. Continue to provide pet waste signs at Regional Parks facilities/ongoing.

1.5 PUBLIC EVENTS

See Section 1.6, "Hazardous Waste Disposal" for a description of activities and goals related to public event activities.

1.6 HAZARDOUS WASTE DISPOSAL

The Sonoma County Waste Management Agency (WMA) is not a co-permittee to the MS4 General Permit and therefore is not subject to the permit. However, Sonoma County is a member of the joint power authority (a regional governing body, that administers integrated waste services countywide) that includes the County and all the cities in the county, with an agreement to address solid waste management issues. Sonoma County contributes financially to the WMA and its offices are located in the Sonoma County Department of Transportation and Public Works building. WMA efforts are described because they contribute to prevention of storm water pollution in Sonoma County. If the WMA chooses to terminate the efforts described here, the County would have to revise the SWMP to delete the measurable goals.

The WMA's efforts to educate the public on household hazardous wastes and their proper disposal are extensive. The following table describes current and ongoing efforts.

Household Hazardous Waste Programs Educational Efforts

Program Description	Reach	Budget
Sonoma County Recycling Guide		
The Sonoma County Recycling Guide is a newsprint 24-page booklet listing recycling and disposal options for both solid and household hazardous wastes. The Guide is updated and printed annually. It includes schedules for hazardous waste collections, oil, filter and antifreeze recycling centers, battery recycling, paint recycling, fluorescent lamp bans and recycling, CRT bans and recycling and more.	210,000/yr Every Sonoma County residence and business.	$59,000 Printing, postage and advertising budget. Staff time not included.
Eco-Desk Hotline		
The Eco-Desk Hotline is an information line operated by Sonoma County Waste Management Agency staff to answer questions on recycling and disposal of solid and hazardous wastes. The Eco-Desk (565-DESK) is staffed from noon - 3pm Monday - Friday. During off hours there is an extensive phone tree system, which disseminates information. Callers may leave messages and receive a return call for information they can not obtain from the phone tree.	5,357 calls in 2001 (this does not includes those who obtained their information from the recorded messages)	$1,600/yr in phone and voice boxes. Staff time not included.
Sonoma County Waste Management Agency Website		
The Sonoma County Waste Management Agency maintains an extensive website at www.recyclenow.org. The website encompasses all of the information in the Recycling Guide (hazardous waste collections and centers) and more. There are 11 downloadable fact sheets on integrated Pest Management.	65,554 hits in 2001	$5,600 Consulting, domain name. Staff time not included.
Oil and Filter Recycling Campaign		
Since 1993 the Sonoma County Waste Management Agency has received annual grant monies to encourage and support oil and filter recycling. A large spectrum of campaigns have been conducted and continue to be conducted utilizing this funding. There is approximately $150,000 available annually. Generally 50% of those funds are used to conduct educational/publicity campaigns.	Varies by campaign	±$150,000/yr
Curbside Oil and Filter Recycling Campaign		
Since the start of curbside oil and filter recycling in 1998 in several Sonoma County jurisdictions, the Sonoma County Waste Management Agency has direct mailed postcards, placed newspaper ads, and seeded newspaper articles. A renewed campaign was just launched in July, 2002 including bus stop benches, billboards, newspaper ads, newsletters and door-to-door solicitation and door-hangers.	Not quantifiable	$100,000

Household Toxics Collections Publicity		
The Sonoma County Waste Management Agency publicizes its Household Toxics Roundups and other household hazardous waste collection programs. The methods include: press releases, printed schedules/brochures, banners, utility bill flyers, Recycling Guide, Eco-Desk Hotline, and the Sonoma County Waste Management Agency website. A big media effort will occur in 2003 to publicize the opening the Household Toxic Waste Facility.	Not quantifiable	$7,000 - $25,000/yr
"NO Toxics" Garbage Can Stickers		
In 1997 the Sonoma County Waste Management Agency applied "NO Toxics" stickers to residential garbage cans throughout the County. The stickers informed residents that oil, oil filters and other hazardous waste can not go in the garbage, and provided the Eco-Desk Hotline. The Sonoma County Waste Management Agency will be reapplying the stickers during 2003 - 2004.	±100,000 households	$100,000
Integrated Pest Management Workshop for City/County Employees		
In 2001 the Sonoma County Waste Management Agency sponsored two workshops for city and county employees on how to implement integrated pest management (IPM) methods. One was focused on landscape management and the other on roadside vegetation management. The Sonoma County Waste Management Agency plans to offer another workshop in 2003 as well as provide technical assistance to employees in the implementation of IPM principals.	38 employees	$10,000
Fair Booths		
Each year the Sonoma County Waste Management Agency has a booth at the Sonoma County Fair, the Harvest Fair and other public events as they arise. The booth is designed to be interactive and attention getting. In 2002, the booth is highlighting household hazardous waste management.	Over 450,000 attendees annually	$10,000

1.7 ILLICIT DISCHARGE - EDUCATIONAL MATERIAL DISSEMINATED AT SPILL SITES

Department of Emergency Services (DES)

DES staff currently distributes educational materials regarding compliance issues to business owners/operators during the course of their routine inspections. Similar materials are at times handed out at emergency response sites or during complaint investigations to responsible parties. These include pamphlets and fact sheets, often related to hazardous waste and its proper handling. Many times the information provided by DES concerns alternative disposal methods, such as the hazardous waste collection events conducted by the WMA.

DES serves as the Certified Unified Program Agency (CUPA) for most of Sonoma County, with the exception of those sites within the city limits of Santa Rosa, Petaluma, Sebastopol and Healdsburg. As the CUPA, DES inspects a variety of businesses that handle hazardous materials and hazardous wastes and/or operate underground and aboveground fuel storage tanks. These sites include Automotive Service Facilities (ASFs) and Retail Gasoline Outlets (RGOs). State law mandates that sites that are required to submit Hazardous Materials Business Plans (HMBPs) be inspected at least once every three years. The threshold amounts that require sites to file HMBPs are 55 gallons for liquids, 200 standard cubic feet for compressed gases, and 500 pounds for solids. Sites that operate underground fuel storage tanks are required by state law to be

inspected at least annually. Although not mandated, our Division's goal is to inspect sites that generate hazardous wastes at least every three years. ASFs and RGOs consistently fall into these categories and, thus, are inspected at least once every three years.

The primary goal of the inspection process is to ensure that facilities are in compliance with the environmental rules and regulations delegated to the CUPA. Education of owner/operators remain our primary means of obtaining this compliance. Follow-up inspections are conducted when necessary to ensure that sites take the corrective actions required during the initial inspection. Enforcement is always an option for egregious violations and for those sites that fail to correct serious offenses of the law.

DES receives numerous complaints each year. Many are received from private parties and concern disputes between neighbors. Others are referrals from government agencies, such as the California Department of Toxic Substances Control. Of these, some are related to regulated sites, although again, many have to do with private residences.

DES maintains records of all complaints and our investigations of them. Those that pertain to CUPA facilities are placed in the files for the sites. We do not create and maintain separate files for non-CUPA sites (e.g., private residences, roadways, etc.) because we have no statutory authority to do so and it would become an unwieldy, expensive and confusing process.

DES investigates all complaints. The investigation, however, may consist of a referral to the appropriate government agency for further follow-up.

Some sites do have repeat complaints. These may be subject to follow-up investigations. It depends on the nature of the complaint and whether it is related to a CUPA function, such as hazardous materials, hazardous wastes, etc.

Enforcement depends on the nature of any verified violation, its seriousness, and the willingness of the responsible part to take corrective action. It is always a tool that is available to the CUPA to obtain compliance or to prevent a release or threatened release of hazardous materials or hazardous wastes.

Department of Health Services/Environmental Health Division (EH)
EH will inform the public about the adverse impact that chlorine and biocides in swimming pool water discharges have on creeks and fish habitats. EH will educate the public on other disposal options for the discharge of swimming pool water containing chlorine and biocides.

Measurable Goals/Implementation Schedule

a. EH will conduct public outreach to educate the public on alternative options for the disposal of swimming pool water containing chlorine and biocides/June 30, 2006.
b. DES will continue to distribute educational materials during the course of normal inspection duties, as well as while investigating complaints and responding to releases of hazardous materials/ongoing.

1.8 PRIVATE SEPTIC SYSTEMS

Permit and Resource Management Department (PRMD)

There are more than 40,000 Standard Septic Systems in Sonoma County. PRMD maintains records of all permitted systems. These records include what type of system is installed, where on the property it is installed, the soil type, and other information pertinent to the property. These records are available to all property owners upon request. This is important public education in the sense that many property owners need this information in order to ensure satisfactory septic system operations. In addition to answering questions on these system operations, the PRMD Well & Septic Section staff make presentations on these Standard Septic Systems to realtors and home owner associations, upon request.

There are more than 1,850 active Non-Standard Septic Systems in Sonoma County. PRMD mails out annual notices to all property owners of these systems, to perform their twice-a-year self-monitoring inspections. Property owners need to inspect their septic system, fill out a form and submit results of inspection to the County. One of these mailings includes a flyer inviting owners to attend the annual 3-hour class on Operation and Maintenance of Non-Standard Septic Systems. This class is usually held in the Spring. The County has conducted the septic system owners' class once a year for approximately fifteen years. Attendance ranges between 70–90 people. In addition to these classes, the Santa Rosa Junior College sponsors a one-day septic system owners' class every semester. Information about how the systems work and how to maintain them, as well as the permitting requirements is presented in the classes. In addition, PRMD Well & Septic Section staff conduct routine inspections of all active Non-Standard Systems, every one to three years depending on system type. Prepared materials are distributed at each initial inspection, and upon change of ownership. Flyers about how to maintain the systems as well as information about how to access septic system information on the County's website are distributed during inspections. New owners receive information about non-standard systems in the title report when they buy the property. Annual reports on the non-standard septic system program are submitted to Blair Allen at the San Francisco Bay Regional Water Quality Control Board.

There are many Commercial/Industrial Systems in Sonoma County. The County has applied for and has received a tentative approval of an EPA grant, for $75,000. This grant is to 1) create a database of these systems; 2) create guidelines of BMPs for distribution to the owners of these systems; and 3) to conduct inspections of these systems and distribute these prepared materials. As part of the ongoing outreach, PRMD intends to develop and distribute information on the impacts of failed systems on water quality.

Measurable Goals/Implementation Schedule

a. Develop and distribute storm water quality BMP information to non-standard septic system owners annually, and to others upon request/December 31, 2004.
b. Summarize the status of the EPA grant program in Annual Report/annually.

1.9 BUILDING AND CONSTRUCTION

Permit and Resource Management Department (PRMD)
Private construction sites that are required to obtain grading permits are required to implement erosion and sediment controls. However, no formal education or outreach to these builders has yet been conducted.

Outreach materials for the building and construction industry will be developed and distributed by County inspectors of private construction sites. These materials can also be displayed in the PRMD building lobby. In the 2002-2003 fiscal year, approximately fifty-three percent of building permits handled by PRMD were classified as Type A Building Permits, which are non-discretionary permits usually consisting of minor improvements conducted by owner/builders. A handout for Type A Building Permits will be developed stressing the importance of erosion and sediment control measures and the preservation of water quality. The educational material will focus on construction site storm water pollution prevention, including controlling waste that may cause adverse impacts to water quality.

Measurable Goals/Implementation Schedule

a. Create a handout of Erosion and Sediment Control BMPs to be attached to all Type A Building Permits/June 30, 2004.
b. Develop educational material, focused on construction site storm water pollution prevention, for the building and construction industry/December 31, 2005.
c. Display educational material in the PRMD building lobby/June 30, 2006.

1.10 SPRING LAKE ENVIRONMENTAL DISCOVERY CENTER

Regional Parks Department
The Regional Parks Department operates and manages the Environmental Discovery Center (EDC) at Spring Lake Regional Park. Partial funding is raised through the Sonoma County Regional Parks Foundation (Foundation). The EDC offers a hands-on, interactive environment where people of all ages can learn the value of environmental stewardship, habitat restoration, parks, open space, conservation, and responsible use of Sonoma County's natural resources.

The EDC acts as an environmental education resource providing school field trip programs and an outreach program in underserved communities, bringing messages of environmental stewardship and responsible resource use to students, teachers and parents. The EDC is open to the public 25 hours each week to provide access to community groups, families and individuals.

The EDC is currently in its third year of presenting programs to students and the public. The EDC features a variety of exhibits, educational computer games, nature videos in the theater, and outdoor activities. One of the most popular exhibits is a real 30-foot storm drain that children can crawl through. The storm drain is the main feature of the overall program designed to educate children and adults about the environmental hazards of storm drain runoff.

Over 20,000 people visited the EDC in fiscal year 2002-2003, an average of over 1,600 per month. The school field trip program hosted over 4,500 children and teachers in the 2002-2003 school year.

The EDC issues press releases to all local and regional media throughout the year. Flyers are produced and distributed for each of the three themed programs. Every student on the school field trip program leaves with a promotional piece. The Center has feature stories for each themed program in the Sonoma County newsletter (5,000 circulation) and the Regional Parks newsletter. The Center Coordinator is interviewed on a local radio program each quarter.

On average, the EDC has 800-900 school children each month and 7-10 community groups, such as the Boy Scouts and senior groups.

The school field trip program features a natural resource and environmental educational program four mornings each week. During the school year 2004-2005 the EDC launched a new program called "Discovering Science in the Parks" targeted at underserved communities. This program features educational materials covering earth science topics including clean creek information and storm water runoff.

The spring exhibit, at the EDC, called Down the Drain (January- June) focuses primarily on storm drain education and the reduction of non-point source pollution offering simple ways the public can make positive changes toward reducing pollution in their watersheds. The school field trip program for the spring also focuses on the science of clean water and pollution prevention practices.

The EDC delivers sponsor messages in a format that allows visitors to gain understanding of environmental issues that affect Sonoma County. It educates the public about what storm drains are. There is a giant drain in the building for children to see, touch and interact with. County staff also teaches the public that everything that goes down storm drains ends up in our creeks, streams, rivers and eventually the ocean. There are exhibits and games about types of household non-point source pollution and the responsible use of these products. Through displays, integrated pest management and healthy yard and garden practices are promoted. At the EDC children and their parents can play computer games and watch videos about non-point source pollution. Visiting classrooms can cover curriculum that is required by the State of California. The EDC school field trip program is designed for grade levels 1-6. There is written curriculum for each grade level based on the science, math and language arts standards set by the State of California. The curriculum that is covered reinforces these standards. There are 60 students per day, all of the same grade level. Each school rotates through four "centers" during the morning field trip. The "centers" are based on grade level standards and include: a center for science experiments, a nature hike, a center for live animal presentation and touching, and a math and language center. Each student is expected to fill out a journal based on grade level as a means to access his or her understanding of the information being presented. All grades focus on our watersheds and clean water.

First through third grades participate in a series of activities and lessons designed to enhance their awareness of the water cycle and why water needs to be clean. Fourth graders focus on what a watershed is and the many factors that make up non-point source

pollution. Fifth and sixth graders use the scientific method to write an environmental impact report based on clean water practices and the effects of pollutants on the local waterways.

Some examples of the curriculum we offer:

DOWN THE DRAIN
FIFTH GRADE

Objectives: Students will become familiar with the Sonoma County watershed and its connection to the local water cycle. Students will be able to distinguish between point and non-point source water pollution, and understand that changes in the environment can be detrimental to wildlife and the preservation of resources. Students will learn about their local watersheds and the watershed area in Spring Lake Park by examining maps and studying the local terrain.

Awareness to Action: Protecting plants and animals by:

- Being good stewards of resources.
- Preventing non-point source pollution.

California Fifth Grade Science Content Standards Reinforced:

Earth Sciences

- Students know water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to earth as rain, hail, sleet, or snow.
- Students know that the amount of fresh water located in rivers, lakes, underground sources, and glaciers are limited, and that water availability can be extended by recycling and decreasing the use of water. Students know the origin of the water used by their local communities.

Inside Discovery Center

Students will learn about non-source point pollution and its effects on wildlife in the waterways and ocean.

- Storm Drain Display.
- Touch Tank.

Hike

Students will observe any record signs of water movement or pollution and study creek movement to the Lake. Students will understand the connection of local weather patterns and how that affects the use of local water resources:

- Nature Trail.
- Hypothesizing and Observing.

Science Table

Students will collect data and graph results of five water experiments testing pH, clarity under microscope, percolation and nitrogen/phosphorus levels in water representing sources near a park, single home, high density apartment and agricultural area. They will also be studying a topographical map of the local area to determine downstream effects from land use projects. This data will help students make conclusions for their land use project and EIR.

EDC sponsors include:

- Sonoma County Water Agency
- Sonoma County Department of Transportation and Public Works Integrated Waste Division

- Sonoma County Department of Health Services – Environmental Health Division
- Sonoma County Office of Education
- Sonoma State University – Hutchins School of Liberal Studies
- City of Santa Rosa
- Sonoma County District Attorney
- North Bay Corporation
- Agilent Technologies

The County's evaluation of the effectiveness of the programs at the EDC is related to meeting the needs of the program participants and sponsors. Ongoing funding and evaluation from sponsors, plus teacher evaluation and their class enrollment in the program are the means currently used to review the programs offered.

All teachers who participate in the school field trip program evaluate the EDC. They evaluate the EDC on the program content, effectiveness in teaching the program, the program adhering to state standards, and the program overall.

Evaluations from the 2003-2004 school year schoolteachers representing 3,000 children are compiled as follows:

- 100% of teachers found the program assisted them in meeting the State Curriculum Content Standards.
- 99% of teachers found the presentation beneficial to their classroom curriculum.
- 99% of teachers will schedule a trip to the EDC again.
- 95% of teachers rated the lessons as excellent in the areas of: Improvement, Information Conveyed, Preparation/Organization, and Delivery.
- 5% of teachers rated the lessons good in the areas of: Improvement, Information Conveyed, Preparation/Organization, and Delivery.

Each student will receive an activity/information journal. This journal includes a section on Storm Water Pollution Prevention. Each student may take the journal home. This journal supplies the students and parents information on many subjects, including natural resource conservation and information on how to keep storm drains clean. The storm drain logo is prominently displayed in the literature in an effort to educate the students in identifying storm water inlet locations throughout their community.

<u>Measurable Goals/Implementation Schedule</u>

a. Continue to operate and manage Spring Lake Park Environmental Discovery Center/ongoing.
b. Continue to seek sponsorship for operation of the Environmental Discovery Center/ongoing.
c. Continue to contribute funding to the Environmental Discovery Center to promote public education of storm water pollution prevention/ongoing.
d. Increase the school field trip programs for storm water pollution prevention from 80% to 100% of enrollment capacity/June 30, 2005
e. Continue to evaluate teachers on effectiveness of Storm Water Pollution Prevention Program and compile feedback from evaluations/ongoing.

f. Create and distribute educational activity/information journals for students to take home/June 30, 2005.

1.11 INDUSTRIAL/COMMERCIAL FACILITY PUBLIC EDUCATION AND OUTREACH

Department of Health Services/Environmental Health Division (EH)
For the Phase I Storm Water Permit public outreach and education, EH and the City of Santa Rosa Public Works created a Food Facility Storm Water Pollution Prevention Guideline (Guideline) that includes Best Management Practices for:

1. Pavement cleaning
2. Dumpsters, grease binds and recycling containers
3. Spill cleanup
4. Cleaning and maintaining equipment
5. Grease handling
6. Landscaping and garden maintenance
7. Training employees

This Guideline can be modified to represent agency resources for the San Francisco Bay Regional Water Quality Control basin.

EH will follow the same policy as conducted in the Phase I permit, that being only to distribute the Guideline to retail food facilities within the unincorporated areas of the permit boundary. EH will not be involved with the City of Sonoma's Business License Department and there are no business licenses for the unincorporated area of the County.

Department of Emergency Services (DES)
The Certified Unified Program Agency (CUPA) program has been using an Access database, CUPA DMS, for several years, which includes Retail Gasoline Outlets (RGOs) and Automotive Service Facilities (ASFs). This existing database can be modified somewhat to identify CUPA sites that fall within the permit boundary and will be subject to storm water management requirements. Since the database already exists and only has to be modified to identify facilities within the expanded boundary, the educational materials will be developed afterwards.

The City of Santa Rosa developed an Automotive Repair Facilities Storm Water Pollution Prevention Guide (Guide) as part of the Phase I Permit public education and outreach that includes:

1. Storm drain protection
2. Parts cleaning
3. Material storage
4. Fueling
5. Pavement maintenance
6. Vehicle washing
7. Body repair and painting
8. Vehicle fluid removal
9. Spill prevention and control

10. Inventory and training

This Guide can be modified for use in the watershed contributing storm water to the San Francisco Bay Basin. DES also serves as the CUPA for the City of Sonoma. The CUPA will also inspect RGOs and ASFs outside the permit boundary at regular intervals.

The CUPA may encourage the City of Sonoma to distribute Guides, Guidelines and applicable regulations to new business license applicants for RGOs and ASFs. The CUPA may request that the City of Sonoma notify it of new CUPA-related business license applicants. However, the CUPA feels that a more effective educational effort will result from its inspectors finding new businesses during the normal course of their inspection work and discussing best management practices with owner/operators on site.

Measurable Goals/Implementation Schedule

a. EH staff will create an inventory in the EH database of all retail food facilities in the unincorporated area of the MS4 General Permit Boundary for distribution of the Guidelines/June 30, 2004.
   This inventory will include all retail food facilities, defined as follows:
   1. Prepare food or drinks
   2. Restaurants
   3. Markets
   4. Bars with food preparation
   5. Bakeries
   6. Bed and breakfast establishments
b. EH will revise the Phase I Santa Rosa Storm Water Area "Food Facility Storm Water Pollution Prevention Guidelines" to reflect County storm water system and agency contacts for the San Francisco Bay Regional Water Quality Control Board/September 30, 2004.
c. EH staff will distribute the guide to retail food facilities as defined above within the unincorporated area of the MS4 General Permit boundary twice during the 5-year permit term, and there will be a minimum of one year between the first distribution and the second distribution. Distribution of the Food Facility Guideline will begin with the first compliance inspection/March 31, 2005.
d. DES staff will start to create an inventory in the DES database of all automotive repair facilities in the unincorporated area of the MS4 General Permit boundary for distribution of the Guide/June 30, 2004.
e. DES staff will begin to develop a Guide for use in the San Francisco Bay Basin/December 31, 2004.
f. DES staff will distribute the Guide to RGOs and ASFs within the City of Sonoma and the unincorporated areas of the MS4 General Permit boundary once during the 5-year permit term/June 30, 2005.

1.12 CITIZEN BASELINE INFORMATION ON STORM WATER

Permit and Resource Management Department (PRMD)
As a component of Public Education and Outreach, the county needs to establish some baseline information about its citizens knowledge of storm water issues. To prepare for this, the County will review surveys conducted and data collected by other agencies such as the City of Santa Rosa and the City of San Diego.

PRMD will explore the feasibility of partnering with other agencies, including Sonoma County Water Agency, to gather baseline information to provide insight into the understanding and knowledge of citizens on storm water systems in the county. The County plans to participate in a regional telephone survey regarding storm water awareness. This survey will be administered throughout Sonoma County, including the Phase II permit area, by the Russian River Watershed Association (RRWA).

This information will be used to evaluate the effectiveness of Public Education and Outreach Programs in Sonoma County. Another survey with a follow-up effectiveness measure is planned for the next permit term.

Measurable Goals/Implementation Schedule

a. Review other agencies methods to gather baseline information/June 30, 2005.
b. Explore the feasibility of partnering with other agencies, including SCWA, to gather baseline information about citizens knowledge of storm water issues/June 30, 2005.
c. Establish, or partner with other agencies to establish, baseline information about citizens storm water awareness/June 30, 2006.

1.13 REGIONAL AND STATEWIDE STORMWATER ASSOCIATIONS

Permit and Resource Management Department (PRMD)
North Bay Watershed Association
Sonoma County is a member of the North Bay Watershed Association (NBWA). The mission of the NBWA is to facilitate partnerships across political boundaries that promote stewardship of the North San Pablo Bay watershed resources. This mission is accomplished through meeting NBWA's goals:

1. Bring together local agencies to work cooperatively and effectively on issues of common interest;
2. Be proactive on watershed-based regulation, which increasingly affects areas beyond traditional political boundaries;
3. Work cooperatively to increase eligibility for watershed based funding;
4. Maximize effective use of resources;
5. Enhance the NBWA's influence on local, state, and federal policies and programs; and
6. Educate communities about the importance of watershed stewardship.

NBWA has spearheaded a number of projects which have the goal of improving water quality in the North Bay. The projects with the greatest relevance is the Mercury Pollution Prevention Plan.

In fall 2001, the NBWA began development of a Mercury Pollution Prevention Program (PPP) for the North Bay region. Streams draining to San Francisco and San Pablo Bays are listed as impaired due to mercury pollution, and a TMDL program which includes all tributaries flowing to the Bay is in the process of adoption into the Basin Plan. The TMDL for reductions in the input will help to address the mercury problem in the bay. The NBWA Mercury Pollution Prevention Plan will focus outreach materials and implementation of pollution prevention efforts on three significant sources of mercury: dentist offices, fluorescent lamps, and other mercury containing products, such as thermometers and thermostats. These sources can contribute to mercury in wastewater and storm water through improper disposal practices and accidental discharges. Project goals are to develop public outreach materials about mercury pollution prevention for businesses and residents in the North Bay region and to implement pollution prevention measures to help reduce the release of mercury into the environment.

Most of Phase 1, the Dental Outreach Program, has been completed. The target audience of this program is dentists and dental technicians. As part of this program, other successful dental outreach programs were researched, dental societies within the NBWA were identified, and outreach materials describing BMPs for mercury disposal were developed and distributed. Surveys will be distributed to dental offices which will gather information about increases in mercury amalgam recycling, purchasing of pre-treatment equipment, and other BMPs. To document the success of this program, the number of mailings, presentations, and other activities will be recorded annually. The quantifiable target for this BMP is an increase in amalgam recycling by dental offices, as reported in the survey.

Florescent bulbs will be the focus of Phase 2 of the Mercury PPP, which is being undertaken starting in 2004. The goal of this program is to educate the public about the presence of mercury in florescent bulbs, and encourage them to recycle the bulbs. This is intended to reduce mercury introduction into the environment through aerial deposition caused by improper disposal of florescent bulbs. A pilot program scope will be developed, which incorporates hardware store drop-off locations, recycling centers, collection procedures and schedules, and community outreach materials. This pilot program will be run for eight months, during which time the program coordinator will keep in contact with retailers and recycling companies. After completion of the pilot program, the effectiveness will be evaluated and a full-scale program may be launched.

Bay Area Stormwater Management Agencies Association (BASMAA)

Sonoma County, as a copermittee with the Sonoma County Water Agency, is a member of the Bay Area Stormwater Management Agencies Association (BASMAA). BASMAA provides leadership in storm water issues for all Phase I MS4 permittees in the Bay Area. There are plans for BASMAA to include Phase II permittees in the organization in the near future. County staff will continue to participate in relevant committee and board meetings of BASMAA.

California Stormwater Quality Association (CASQA)

County staff attends California Stormwater Quality Association (CASQA)

North Bay Phase II Coordination Group

During the development of the Phase II Storm Water Management Plans for review by San Francisco Bay Regional Water Quality Control Board to meet the regulations of the NPDES MS4 General Permit, a group of cities and counties was formed to discuss issues. This group meets every few months to discuss topics specific to the Phase II General Permit, such as Enforcement Response Plans and Annual Reports. County staff participate in this group, which is expected to continue until the coordination responsibilities for Phase II permittees are fully embraced by one or more of the existing, Phase I stormwater organizations.

Measurable Goals/Implementation Schedule

a. Continue to participate in NBWA activities/ongoing.
b. Report Mercury Pollution Prevention Plan activities in Annual Report/June 30, 2005.
c. Support NBWA expansion into leadership on additional regional stormwater activities/ongoing.
d. Continue to participate in BASMAA activities/ongoing.
e. Continue to participate in CASQA activities/ongoing.
f. Continue to participate in North Bay Phase II coordination group, until a more permanent association is formed/ongoing.

2. PUBLIC INVOLVEMENT AND PARTICIPATION

2.1 PUBLIC NOTIFICATION

A public notice was posted on the public notice board outside of the County of Sonoma Board of Supervisor's meeting room and on the County of Sonoma's Web site to inform the public each time the Board of Supervisors considered the Storm Water Management Plan (SWMP); on February 25th and August 8th 2003. This notice was posted three days before the Board meeting, in accordance with the Ralph M. Brown Act. This is in compliance with State and local public notice requirements. At the Board meeting, the public was given an opportunity to comment on the SWMP. If significant public comments were received, they would have been considered for inclusion in the revision of the SWMP during the drafting of the first annual report. There were no public comments on the SWMP.

When the Board of Supervisors meets to consider certifying the revised SWMP, the public will be notified via posting of the agenda at least three days prior through the public notice board mentioned above and through the County's website. When the State Water Resources Control Board (SWRCB) begins its 60-day public notification period of the County's revised SWMP, the County will also notify the public of the revised SWMP on the PRMD website. The Board of Supervisors review date and the public notification period is yet to be determined, and will follow the time frames outlined in the measurable goals below.

The County recognizes the benefits of having active public participation as a facet of the SWMP. The County will determine possible projects, which may be suitable for public

participation coordinate with cities to help administer and implement volunteer public participation projects, such as Coast and Creek Cleanup Day.

The SWMP will also be distributed to various sections within the Water Agency and County departments, such as County Administrator's Office, County Counsel's Office, Health Services Department, Department of Transportation and Public Works, Regional Parks Department, General Services Department, Permit and Resource Management Department and Agricultural Commissioner's Office. The County will use feedback from these sections when proposing any revisions to the SWMP.

The County of Sonoma plans to meet regularly with the Water Agency, as well as with the cities of Petaluma and Sonoma to discuss and coordinate our programs. Through close collaboration a more consistent message can be imparted to the community.

Measurable Goals/Implementation Schedule

a. Prepare and present Phase II Storm Water program to the County of Sonoma Board of Supervisors upon the completion of each year's Annual Report/annually.
b. Notify the public of the Board of Supervisors' meeting to consider approving the revised SWMP.
c. If certified by the Board of Supervisors, post the SWMP on the County website for a similar time frame as the SWRCB's 60-day public notification period and run a public notice in the newspaper.
d. Determine possible additional public participation projects/June 30, 2005.
e. Coordinate with the Water Agency, Petaluma and Sonoma to increase citizen participation in Coast and Creek Cleanup Day and other creek and river cleanup activities/June 30, 2006.

2.2 STANDARD URBAN STORM WATER MITIGATION PLAN

The Standard Urban Storm Water Mitigation Plan (SUSMP) requirements will affect the planning, design, review, technical analysis, inspection and ongoing maintenance of many projects. Education and participation of County staff, the RWB and the public are essential in implementing this element of the SWMP. For consistent and effective SUSMP application, guidance documents and formal training will be provided to County staff and the development community. The County will include the public in the development of the SUSMP guidance documents. See Chapter 5, Post-Construction/Development SUSMP, for additional details related to the activities and goals of this element.

Measurable Goals/Implementation Schedule

a. Include the public in the development of SUSMP guidance documents/June 30, 2006.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

3.1 INDUSTRIAL/COMMERCIAL INSPECTIONS, SPILL RESPONSE, INVESTIGATION AND PUBLIC REPORTING

The Sonoma County Sheriff's dispatch maintains a 24-hour emergency response telephone line for spills and other County emergencies. The dispatcher uses REDCOM, the county's in-house emergency telephone system, to contact the appropriate department in spill response situations.

Department of Health Services/Environmental Health Division (EH)
EH inspectors will inspect food facilities described in Section 1.11 to confirm that storm water BMPs are being effectively implemented in compliance with County ordinances and California Retail Food Facility Law (CURFFL). EH inspectors will note deficiencies on a Food Facility Storm Water Checklist and provide a copy of the "Storm Water Pollution Prevention Guidelines for Food Handling Facilities" to the operator/owner.

Environmental Health receives calls from the public regarding spills or discharges of both hazardous and non-hazardous materials into the storm drainage system. Spill reports within the city limits of Petaluma and Sonoma are referred to the appropriate city agency. Hazardous material spills in the unincorporated area are referred to DES.

Spills of pollutants onto roadways or storm drain inlets are referred to TPW and discharges of sediment from private construction projects are referred to PRMD.

Sewage spills from septic systems are referred to PRMD. Sewage spills from public treatment operations are referred to the sanitation district operator. Reported spills at food facilities, swimming pools and animal management facilities in the unincorporated area of the County will be recorded for response by an EH inspector.

In the unincorporated area of the County, EH will respond within one business day of a report of a suspected spill or discharge of non-hazardous materials, such as grease at food facilities, filter backwash at swimming pools and waste at animal management facilities.

EH has a 24/7 standby emergency response system in place for response to reports of spills or discharges of non-hazardous materials into storm drainage systems within EH's jurisdiction. Complaints of sewage flowing off property from septic systems during weekends, holidays, or non-business weekday hours are responded to by EH staff who post health warning signs at the site as well as immediately contacting PRMD management to advise of the discharge. See Section 3.2 for follow-up activities.

Department of Transportation and Public Works (TPW)
Minor illicit discharges, such as traffic accidents where pollutants can be contained on the road and do not create a water pollution hazard, are cleaned up and no further action is taken. Illicit discharges that create a water pollution hazard or plume are reported to the Department of Emergency Services, Environmental Health, the Regional Water Quality Control Board and other agencies as required. TPW maintenance staff contact the Sheriff's Office to dispatch the DES Hazardous Materials Response Team when illicit discharges are considered major and/or of unknown substances.

TPW Road Maintenance Division responds to spills within the County maintained road right-of-way for containment and clean up. A road crew is dispatched to the area where the spilled material is cleaned up and removed for appropriate disposal. These spills include motor oils and fuels that the road crew will mop up and place in 55-gallon drums for ultimate disposal by a licensed hazardous waste carrier.

If the spill is determined or suspected to be unrelated to motor vehicle fluids or paint, and the County road crew does not have the training and equipment to do the clean-up, the Sheriff's Department is notified, (if not already notified as above), and the DES Hazardous Materials Response Team is dispatched to handle the actual clean-up. The County road crew assists on an as-needed basis.

TPW spill response is in effect throughout the County.

Department of Emergency Services (DES)
DES currently inspects Retail Gasoline Outlets (RGOs) and Automotive Service Facilities (ASFs) in the City of Sonoma and the unincorporated areas of the County. RGOs are inspected annually to comply with Title 23 requirements. ASFs are inspected every 3 years to comply with Health and Safety Code Chapter 6.95 requirements. In some cases, ASFs that generate minimal quantities of hazardous wastes conduct annual self-inspections and submit the results to DES each year. When inspectors are on-site, storm water BMPs will be reviewed with owner/operators and compliance will be verified.

RGOs are inspected for compliance with underground fuel storage tank and hazardous materials regulations and may be inspected for hazardous waste activities, depending on the nature of their business. ASFs are always inspected for compliance with hazardous waste generator regulations and may be inspected for hazardous materials and underground fuel storage tank activities, depending on the nature of their business. In some cases, above ground fuel storage tank or hazardous waste treatment regulations may apply as well. Inspections are essential tools in verifying compliance and in discovering illicit storm water discharges, especially during the winter months.

DES staff discovers illicit discharges through inspections, complaint investigations, and emergency response activities. Inspections, generally speaking, occur once every three years. Most complaints are investigated within three business days of receiving the reports. Emergency response results in an immediate investigation. On-scene first responders provide the initial information, usually within minutes of being notified by REDCOM. DES personnel, if summoned to the scene, respond within 1-2 hours of notification. Often, this response time is much less, within 15 minutes in many cases, but because of the rural nature of the County and the centralized nature of DES, cannot be clearly defined. If deemed necessary by responding DES personnel, the emergency response team may be summoned, again with a response time within 1-2 hours. Depending on the severity of the violation and the type of discharge, the discovery may result in any of the following: immediate referral to the District Attorney’s office for enforcement action, referral to another agency (e.g., RWB) for further investigation and/or enforcement, and/or on-site documentation through the inspection report (including photos, if necessary) with a firm timeline for correction.

DES receives calls from the public, as well as referrals from other agencies, related to releases or threatened releases of hazardous materials in the City of Sonoma and in the unincorporated area of the County. DES routinely investigates these reports and maintains written records of its actions. If the complaint is the result of a referral from another agency, DES informs them of the results of the investigation through a written report. If the complaint involves a CUPA-regulated facility, the CUPA DMS database and the site file are updated to reflect the results of the investigation.

Spills come to the attention of DES through three means: discoveries made during inspections, complaint investigations, and emergency response activities. In all of these cases, DES responds and investigates. Therefore, a report of the number of spills by DES is, by definition, a report of its number of responses.

DES has written spill response and enforcement response procedures, including Sonoma County Operational Area Hazardous Materials Incident Response Plan (Area Plan) and Oil Spill Contingency Plan.

Permit and Resource Management Department (PRMD)

Private sanitary septic system complaints are received and evaluated by PRMD Code Enforcement. If the complaint alleges that sewage is flowing off the property or into a stream, the complaint is investigated within one working day. If the sewage is confined to the property where the septic system is located and does not pose an immediate health hazard, then inspection will be made within one week.

Upon inspection, PRMD Code Enforcement verifies whether the sewage problem is from a failed septic system or from some other source (such as an illegal gray water discharge) or an illegal use of the property (such as a trailer). If the discharge is within the cities of Petaluma or Sonoma, the complaint will then be referred back to the appropriate city for follow up legal action. If the discharge is in the unincorporated area, PRMD Code Enforcement maintains jurisdiction for follow-up corrective action.

If septic system permits are required to correct a failing septic system within the City of Petaluma or Sonoma or the unincorporated area, the permits are processed by PRMD Well and Septic Division. The property owner generally initiates this after notification from Code Enforcement.

If permits are required for corrections to plumbing or connection to sewer lines, then they are processed through the local jurisdiction. PRMD Well and Septic will issue a permit for any septic tank abandonment associated with these permits within the City of Petaluma or Sonoma or the unincorporated area.

PRMD handles illicit discharges from construction sites and determines if the activity is permitted. Non-permitted activities are referred to Code Enforcement for further action. Permitted activities are referred to appropriate inspection staff to investigate the complaint. See Chapter 4 for further information regarding construction activities.

Measurable Goals/Implementation Schedule

a. DES to enhance RGO inspections to include storm water BMPs. Sites out of compliance receive a correction notice and follow-up inspection/December 31, 2003.
b. DES to enhance ASF inspections to include storm water BMPs. Sites out of compliance receive a correction notice and follow-up inspection/December 31, 2004.
c. Inspect retail food facilities within the unincorporated area of the permit boundary twice during the 5-year permit term. There will be a minimum of one year between the first compliance inspection and the second compliance inspection. Follow-up inspections will be scheduled for facilities in non-compliance based on the nature of the storm water problems noted at the time of the inspection/June 30, 2004.
d. EH will put its spill response procedures in written form/June 30, 2005.
e. EH will report the total number of spills reported along with the number of spills that were investigated according to EH's spill response procedures in the Annual Report/annually.
f. PRMD's goal is to make referrals within one business day to the Cities of Petaluma or Sonoma for follow-up action when the sewage problem occurs on a property within the city limits from a failed septic system or from some other source, such as gray water or a trailer/ongoing.
g. PRMD to coordinate with DES, EH and TPW to prepare a draft of written spill response policies and procedures currently in use addressing all types of illicit discharges, including public reporting/June 30, 2005.

3.2 STANDARDIZED ENFORCEMENT PROCEDURES

Department of Transportation and Public Works (TPW)
TPW manages the cleanup of illicit discharge on County roads and TPW facilities as necessary to mitigate water pollution. Illicit discharges outside of TPW jurisdiction are referred back to the respective County department in charge of that type of illicit discharge.

TPW will report suspected illicit septic discharges to PRMD whenever they are located in roadside drainage facilities.

Permit and Resource Management Department (PRMD)
When PRMD receives an illicit septic system discharge complaint, Code Enforcement clerical staff routes the complaint to the Code Enforcement Supervisor, or designee, for assignment to staff and investigation. The timing of the investigation is based on the existing response protocol.

When Code Enforcement staff determines that an illicit discharge from a septic system has occurred, he or she has the option of pursuing the violation via criminal or civil litigation. Based on the egregiousness of the violation, a person may be cited criminally via the assistance of a Deputy Sheriff under Section 7-21 Sonoma County Code. Criminal citations are prosecuted at the discretion of the Sonoma County District Attorney's Office. However, violations are typically pursued via civil action per the following:

Notice of Violation. A notice of violation is sent to the property owner's that identifies the property, the nature of the violation and the property owners' ability to appeal the violation to a hearing officer. Sonoma County Code allows a property owner 30 days to remove the violation without the imposition of civil penalties.

Notice and Order. If the property owner fails to abate the violation, a Notice and Order which is a final notice is sent to the property owner via certified mail return receipt requested and a second copy of the notice is posted on the property. The Notice and Order gives the property owner a time certain to remove, correct or legalize the violation. If the property owner fails to comply with the Notice and Order, a notice of abatement proceeding is recorded against the title of the property in the County Recorder's office which notifies any potential buyers, lenders or agents that the County has an unresolved abatement proceeding on the subject property.

Public Hearing. Following the recordation, a public hearing is scheduled and the property owner is notified to appear at a scheduled, publicly noticed abatement hearing. Both the County and the property owner have the opportunity to present their respective cases for the determination of a violation and corrective measures. The hearing officer notifies all parties of the determination per Section 1-7.3 Sonoma County Code. If a violation is upheld, all costs and civil penalties are imposed and the property owner is given a deadline for compliance.

Civil Lawsuit. If the property owner fails to comply with the hearing officer's deadline, staff directs County Counsel to file a lawsuit in Sonoma County Superior Court. On occasion, a judge will issue a contempt order against the property owner with the sentence reserved pending correcting the violation.

After the property is in compliance, if the property owner does not voluntarily pay all costs and penalties, a partial abatement lien is recorded on the property. Failure to pay will ultimately result in all costs and penalties being collected by the County Collection Department.

One exception to the civil procedure is contained within Section 1-7.3 (m) Sonoma County Code which allows staff to sidestep the noticing and public hearing process and present a case directly to the Board of Supervisors for a determination that the violation poses a significant health or safety hazard to the public. By resolution, the Board of Supervisors may direct County Counsel to file a lawsuit or temporary restraining order as required.

PRMD Code Enforcement will continue to implement existing enforcement procedures for septic system discharges.

Department of Emergency Services (DES)
Illicit discharges may result in immediate referral to the District Attorney for enforcement action. An alternative may be to refer them to the appropriate agency for further investigation and/or enforcement.

Depending on the severity of the violation, the inspector may also choose to handle the problem through a firm deadline for correction specified in the field report. If

compliance is not attained, the case may then be referred to the District Attorney or handled through the administrative process.

Health Services/Environmental Health Division (EH)
EH implements a progressive enforcement procedure for illicit discharge storm water violations at food facilities in the unincorporated area of the County related to activities covered under the California Uniform Retail Food Facility Law that provides for:

Notice of Violation. Food facility operators/owners are issued a notice of violation on the Food Facility Inspection Report for illicit discharge connections, and are directed to repair the connection. The County Department of Transportation and Public Works is notified about those facilities in the unincorporated area.

Violation Reinspection Fees. A violation re-inspection fee is charged to the operator/owner for failure to correct illicit discharge connections. Up to two violations re-inspection fees will be charged before the matter is taken up at an administrative hearing.

Office Hearing. Failure to correct illicit discharge connections to the storm drainage system results in the operator/owner appearing at an office hearing to discuss remedial and preventative actions.

Show Cause Hearing. Failure to correct the illicit discharge connection discussed at the office hearing result in the operator/owner required to appear at a Show Cause hearing for intent to revoke the food facility permit. At this meeting the operator/owner can either provide documentation of compliance or appeal to the hearing officer not to revoke the Food Facility Permit.

Measurable Goals/Implementation Schedule

a. Report the number of enforcement actions in the Annual Report/annually.
b. County agencies will develop enforcement response plans for all types of illicit discharges under its jurisdiction including a time frame for each escalation/June 30, 2006.
c. EH will prepare written enforcement response plan procedures for all types of illicit discharges under its jurisdiction including a time frame for each escalation/June 30, 2006.

3.3 RECORD KEEPING AND DOCUMENTATION

Department of Transportation and Public Works (TPW)
TPW records on actions taken related to illicit discharges on County roads and TPW facilities vary depending on the severity of the discharge.

Minor discharges are limited to notes in the Maintenance Foreman's Diary while more significant discharges, such as an underground fuel tank, may have substantial records kept on the clean-up of the discharge and cost recovery attempt. TPW records on illicit septic discharge are typically limited to reporting the incident to the appropriate department. In areas where TPW is planning a capital project that may affect septic systems, a survey of all the septic systems in the project area is conducted to evaluate

their condition and to determine the correct way to address the project's impact on the systems.

Permit and Resource Management (PRMD)
PRMD maintains a database backed up by written files related to violation investigations and notifications. The Code Enforcement Supervisor is provided with quarterly reports on active violations and case closures.

Department of Emergency Services (DES)
DES maintains its database, CUPA DMS, with records related to the facilities staff inspects. DES also maintains site files in its office sorted by street address. These contain copies of inspection reports, permits, correspondence, etc.

Department of Health Services/Environmental Health Division (EH)
EH uses and updates its computerized databases to track activities related to the MS4 General Permit. EH documents its own inspections and actions and maintains its own database irrespective of whether the inspection or activity was routine, follow-up or resulted from referral. EH compiles summary reports of its activities for annual reporting purposes.

Measurable Goals/Implementation Schedule

a. TPW, DES and PRMD will report the total number of illicit discharges discovered and reported, the total number of illicit discharges that were investigated pursuant to response plan procedures, and the number of illicit discharges that were corrected as a result of each escalation step in the enforcement response plan in the Annual Report/annually.
b. EH will report the total number of illicit discharges discovered and reported, the total number (out of the total) of illicit discharges that were investigated pursuant to the EH response plan procedures, and the number of illicit discharges that were corrected as a result of each escalation step in the EH enforcement response plan/annually.

3.4 ILLICIT CONNECTION INVESTIGATION

Department of Transportation and Public Works (TPW)
If TPW staff discovers an illicit connection during the course of normal operations, the connection is reported to the appropriate agency. Records on illicit connections vary depending on the severity of the discharge. Minor discharges are limited to notes in the Maintenance Foreman's Diary while more significant discharges may have substantial records kept on the clean up of the discharge and cost recovery attempt.

TPW will refer septic illicit connections to PRMD to respond to with an investigation and abatement per Section 3.3.

In cases where a TPW capital project is being planned or underway, TPW will conduct septic system evaluations to determine the cause of an illicit connection in a project area and the appropriate way to address the situation.

Permit and Resource Management Department (PRMD)

PRMD Code Enforcement would respond with an investigation if TPW were to report an illicit septic system connection.

Department of Emergency Services (DES)
DES may discover illicit connections during the course of its normal inspection work, through emergency response activities or through complaint investigations. Owner/operators will be required to take corrective actions and enforcement may be pursued. If DES inspectors discover illicit connections, enforcement action will be pursued through the District Attorney, handled administratively or through the inspection process, or referred to the appropriate agency.

Health Services/Environmental Health Division (EH)
EH staff inspects storm drain systems for illicit connections during routine food facility inspections in the unincorporated area of the County. When discovered, the operator/owner is directed to correct the deficiency. A referral to the Department of Transportation and Public Works is also made.

Measurable Goals/Implementation Schedule

a. County agencies will investigate complaints of illicit connections and pursue enforcement action or refer to the appropriate agency for follow-up/ongoing.
b. EH will investigate complaints of illicit connections at retail food facilities and public swimming pools in the unincorporated area of the permit boundary and pursue enforcement action or refer to the appropriate agency for follow-up/ongoing

3.5 DISPOSAL OF USED OIL AND TOXIC MATERIALS

Department of Transportation and Public Works (TPW)
Integrated Waste Division
As a point of information, there are a number of programs in Sonoma County that manage hazardous waste generated by residents and businesses that generate small quantities of hazardous waste. Most of the hazardous waste programs are operated by the Sonoma County Waste Management Agency (SCWMA).

The SCWMA is not a co-permittee to the MS4 general Permit and therefore the programs of the SCWMA are not subject to the MS4 General Permit; however, Sonoma County contributes financially to and administers SCWMA. The programs are listed in this permit document because they contribute to pollution prevention of storm water. See Section 1.6 for a discussion of the relationship between TPW and the SCWMA.

The SCWMA provides collection services for Sonoma County residents and businesses that qualify as Conditionally Exempt Small Quantity Generators under California H&SC Title 22. Since 1993, SCWMA has provided Household Toxic Roundups and Business collections, which were one-day collection events held in parking lots. In 1998 the SCWMA added a door-to-door collection program for both residents and businesses. In 2004 the SCWMA will open a Household Toxic Waste Facility at the Central Landfill, which provides weekly drop-off opportunities for both residents and businesses. Additionally, small community collections will be operated weekly in different locations throughout the County and door-to-door collections will be available for a fee.

Curbside oil and oil filter collection is offered with other curbside recycling in the City of Sonoma and the unincorporated county, and will be offered in the near future in the City of Petaluma. Lastly, there are 64 businesses and city corporation yards in the County that accept oil from the public. Forty-two of those oil recycling centers also accept oil filters and nineteen accept antifreeze.

The County operates load-checking programs that remove hazardous waste from solid waste at each refuse disposal site. The load check program includes an educational effort to inform landfill users of the proper disposal options available. The County also offers recycling centers at all refuse disposal sites within the County which accept automotive batteries, oil, and oil filters, CRTs (Cathode Ray Tubes-computer monitors and televisions), and three centers accept latex paint. The County is planning a potential future expansion to provide recycling services for all electronic products containing circuit boards in the near future.

Department of Emergency Services (DES)
DES refers both business and the public to the SCWMA program for assistance with disposal of used oil and other toxic materials. DES inspectors may also respond to complaints related to the improper disposal of used oil and other toxics.

Although these may result in enforcement action, they most often are handled through discussions with homeowners and public education. DES may also respond to emergency releases of these wastes in the City of Sonoma and the unincorporated area of the County (e.g., roadside abandonments) in which case DES will identify the materials and arrange for pickup and proper disposal. Response procedures are detailed in the Area Plan, see Section 6.6. In brief, DES maintains an emergency response team equipped to respond to releases of used oil and other toxics and to prevent or mitigate their release into the environment.

Measurable Goals/Implementation Schedule

a. County agencies will implement their programs for disposal of used oil and toxic materials/ongoing.
b. TPW will submit the amount of household hazardous waste collected countywide in the Annual Report/annually.

3.6 TRAINING OF TARGETED EMPLOYEES

Department of Transportation and Public Works (TPW)
TPW Maintenance staff train employees on emergency response to minor illicit discharges on an ongoing basis at monthly foreman's meetings and bi-weekly road crew tailgate meetings. TPW staff can manage minor spills at traffic accidents and contain spills of recognized hydrocarbon fuels, and other liquids that spill from auto accidents. For major spills or spills of unknown substances TPW staff coordinate with the Sheriff to bring in the contracted DES Hazardous Materials Response Team.

TPW will develop a written illicit discharge response protocol and make it part of its routine road maintenance standards manual. TPW will continue to train Maintenance staff in emergency response to minor illicit discharges as part of its monthly foreman's

meetings and bi-weekly road crew tailgate meetings. Refer to Section 6.4.3 for discussion and measurable goals related to the manual.

TPW staff will continue to manage minor spills at traffic accidents and contain spills of recognized hydrocarbon fuels, and other liquids that spill from auto accidents. For major spills or spills of unknown substances TPW staff will continue to coordinate with Sheriff to bring in contracted DES Hazardous Materials Response Team.

Permit and Resource Management Department (PRMD)
PRMD Code Enforcement staff participate in weekly meetings to discuss current procedures, active cases and classes available.

Department of Emergency Services (DES)
DES staff participates in training regarding proper handling of toxics and used oil. DES staff will continue to conduct training for other agencies (e.g., volunteer fire companies), regarding the proper handling of incidents involving used oil and toxics, etc. Use of dry cleanup methods and avoidance of washing any used oil or toxics into storm drain system will be emphasized.

There may be additional training available for DES staff regarding illicit discharges and connections to the storm drain system. DES expects that it will participate in such training and use the information to be more effective in its work related to the storm water management program.

DES staff attends meetings related to storm water issues. DES is an active member of the Sonoma Environmental Quality Assurance Committee (SEQAC) in which issues related to storm water are frequently discussed.

DES coordinates the Sonoma Green Business program, which recognizes businesses that are in compliance with environmental regulations, including storm water provisions. The Sonoma Green program requires a high degree of communication and cooperation among various regulatory agencies.

Department of Health Services/Environmental Health Division (EH)
EH emergency response team members meet quarterly to discuss and review spill responses for the previous quarter and to discuss new issues. EH Food Team inspectors discuss storm water management pollution prevention at regularly scheduled biweekly staff meetings. EH staff will participate in monthly interagency coordination meetings.

<u>Measurable Goals/Implementation Schedule</u>

a. Continue to train staff who are responsible for identification, investigation, termination, clean up, and reporting of illicit discharges and connections including training on written enforcement response plan when completed/ongoing.
b. EH to train staff who are responsible for identification, investigation, abatement and reporting of illicit discharges and connections at retail food facilities and public swimming pools in the unincorporated area of the permit boundary/annually.
c. EH to train staff on the modified enforcement response plan procedures/annually.

d. EH inspectors will participate in monthly interagency coordination meetings/June 30, 2004.

3.7 DRAINAGE SYSTEM MAPPING

The intent of this activity is to develop a storm water facilities map showing the locations of storm water outfalls and the names and locations of waters of the US that receive discharges from those outfalls. In addition, this activity also is intended to develop an inventory of a more comprehensive storm water system, including information on storm drain inlets and pipes.

Department of Transportation and Public Works (TPW)

TPW maintains most of the County road storm water control system. The Sonoma County Water Agency owns and maintains some of this system including portions of surface waters such as reaches of some rivers and creeks and their tributaries. Sonoma County Water Agency's portion of the system is typically limited to large conveyance systems.

The majority of the TPW-maintained system is rural in nature. Typically, it consists of a combination of natural drainage ways, roadside ditches and short sections of culverts as necessary to drain storm water from one side of the road to the other or from a roadside ditch to a waterway (outfall). The rural system often discharges to waterways via open channel (natural outfalls). A minority of this system is urban in nature, located in residential subdivisions and in commercial and industrial areas. These urban systems consist of closed system components such as storm drain inlets, pipes, manholes and outfalls.

Urban - Closed Drainage Systems: TPW does not currently have a comprehensive mapped inventory of its closed storm drain/inlet system.

Rural - Open Drainage systems: No inventory of these culverts exists.

TPW will develop a drainage system map in a phased approach. Initial focus will be on identifying and mapping the rural portion of the system's outfalls that are associated with the TPW-maintained road system. In this regard, TPW will map the outfalls that discharge into natural watercourses designated by a solid line or dash and three dots symbol shown in blue on the largest scale USGS survey topographic map. The subsequent focus will be to identify and map the urban storm water systems, including all the closed system components, in the commercial and industrial areas. Following this focus, will be the identification and mapping of their remaining urban system, in the residential areas. This later effort is not expected to be completed until the next term of this permit (after July 2008).

This work will include a quality control/review component, to ensure map accuracy.

Regional Parks Department

The Regional Parks Department currently does not have a mapped inventory of the closed conduit storm drain systems under its maintenance responsibilities. These include storm water systems in their facilities and facilities maintained under contract (parks, veterans building parking areas, the Gateway Plaza, the Boyes Hot Springs Park and Ride Lot, etc.). Regional Parks currently has no categories for closed conduit storm drain systems or any method of quantifying the number or length of the systems. The system components are the same as listed in TPW section, except that most of these facilities likely flow to a TPW system (rural or urban). A Regional Parks facility may have an outfall directly to a natural watercourse (as defined above). If so, Regional Parks Department will identify and map these outfalls.

Measurable Goals/Implementation Schedule

a. TPW to identify and map outfalls in rural areas, piped and open channel, within the MS4 General permit boundary/December, 2006.
b. TPW to identify and map commercial and industrial area outfalls/December, 2007.
c. TPW to identify and map the remaining commercial and industrial area system components, including inlets, pipes and manholes, and Regional Parks to identify Regional Parks facility outfalls and map in cooperation with TPW/ June 30, 2008.
d. TPW to identify and map the residential area system/next permit term.

3.8 CATEGORIES OF NON-STORM WATER DISCHARGES OR FLOWS

Section D.C.6 of the Phase II MS4 General Permit lists categories of non-storm water discharges or flows (i.e. authorized non-storm water discharges) which are to be addressed by the SWMP only where they are identified as significant contributors of pollutants to the small MS4. These are:

1. Water line flushing
2. Landscape irrigation
3. Diverted stream flows
4. Rising ground waters
5. Uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers
6. Uncontaminated pumped ground water
7. Discharges from potable water sources
8. Foundation drains
9. Air conditioning condensation
10. Irrigation water
11. Springs
12. Water from crawl space pumps
13. Footing drains
14. Lawn watering
15. Individual residential car washing
16. Flows from riparian habitats and wetlands
17. De-chlorinated swimming pool discharges

Discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to water of the U.S.

The County has not determined that any individual or class of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses). Therefore this requirement is not applicable to the County of Sonoma. If any of the above non-stormwater categories become a significant source of pollutants, measures to address discharges will be added to the Storm Water Management Plan during future Annual Reports.

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

4.1 PRIVATE DEVELOPMENT PROJECTS

Permit and Resource Management Department (PRMD)
Development/construction projects in County of Sonoma (County) jurisdiction are subject to Appendix Chapter 33 of the California Building Code (CBC), Chapter 7 of the Sonoma County Code (SCC) and Chapter 11 of the SCC. Appendix Chapter 33 of the CBC details the criteria and requirements for permitted grading activities and erosion control. Chapter 7 of the SCC provides more stringent requirements for grading activities and erosion control measures through amendments to portions of Appendix Chapter 33 of the CBC. Chapter 11 of the SCC stipulates drainage and storm water management requirements. Amendments to Appendix Chapter 33 of the CBC, Chapter 7 of the SCC and Chapter 11 of the SCC are included in Part I, Section 5.1.2 of the Legal Authority.

The CBC provisions require a Grading Permit for any project that involves moving more than 50 cubic yards of earth material (with exceptions for certain specified types of excavations), creating cut slopes greater than 2 feet or importing fill greater than 1 foot in depth. The CBC specifies certain thresholds for requiring engineered grading plans (e.g., volume of earth material being moved). Not all grading plans are “engineered grading plans”. If an engineered grading plan is required, the applicant’s engineer must submit a report certifying the project, including any erosion and sediment control facilities, has been constructed as designed, prior to final inspection by PRMD.

Section 13 in Chapter 7 of the SCC modifies certain conditions of Appendix Chapter 33 of the CBC, requiring a grading permit and engineered plans for any importation of fill in flood prone urban areas, requiring erosion control BMPs to be in place and maintained from October 15 to April 15, and requiring erosion control measures during construction and post-construction.

Chapter 11 of the SCC contains drainage and storm water management provisions including protecting the County’s waterways, regulating drainage design requirements, and enhancing the water quality of the County’s watercourses by prohibiting non-storm water discharges.

When a project needs a Grading Permit, PRMD staff require Grading and Erosion Control Plans to be submitted for review and approval prior to construction. The

regulations mentioned above govern the adequacy of such plans. Additionally, PRMD staff references the "Erosion and Sediment Control Field Manual" (Latest Edition) published by the San Francisco Bay Regional Water Quality Control Board or equivalent resources when reviewing Erosion Control Plans.

PRMD will develop standard Erosion Prevention and Sediment Control Notes to be included on all plan sets requiring Grading Permits. These standard notes will include requirements for construction site operators to implement appropriate erosion and sediment control BMPs and to control waste that may have adverse impacts to water quality such as discarded building materials, concrete truck washouts, chemicals, litter and sanitary waste.

PRMD will develop written procedures for site plan review which incorporate consideration of potential water quality impacts. The procedures may include requiring all construction sites that are greater than or equal to one acre to implement erosion and sediment control measures and to demonstrate evidence of filing a Notice of Intent to comply with the State Water Resource Control Board's General Permit. PRMD will also develop a checklist to aid staff review of site plans, which may serve as a summary or a quick reference to the site plan review procedures.

Measurable Goals/Implementation Schedule

a. Continue to require Erosion Control Plans for grading permitted projects/ongoing.
b. Develop standard Erosion Prevention and Sediment Control Notes to be included on all plan sets requiring Grading Permits/June 30, 2004.
c. Develop written procedures for reviewing site plans/June 30, 2005.
d. Develop a checklist to aid staff review of site plans /June 30, 2005.

4.2 PRIVATE CONSTRUCTION ON PUBLIC LAND (ENCROACHMENT PERMITS)

Permit and Resource Management Department (PRMD)

Any construction work performed in the public right-of-way that is not a public project, is required to be covered by an Encroachment Permit, and issued by PRMD. Presently the Encroachment Permit includes language that requires that the work will be done in accordance with all County of Sonoma rules and regulations. There is no specific language on the permit related to NPDES program elements or goals, nor are there any Special Provisions/Conditions that specify the need for Erosion Control Plans.

The County will review and revise the process for issuing Encroachment Permits with consideration of potential water quality impacts. Revisions will include developing erosion and sediment control conditions for construction sites disturbing one or more acres of land. Encroachment Section staff inspect construction sites for compliance with the conditions of Encroachment Permits. As new conditions for Encroachment Permits are introduced, corresponding Encroachment inspections will be conducted. Training of Encroachment Section staff is discussed in Section 4.6.

Measurable Goals/Implementation Schedule

a. Review/revise Encroachment Permit issuance process, and identify process improvements/June 30, 2006.

b. Develop Erosion and Sediment Control conditions for Encroachment Permits disturbing one or more acres of land/December 31, 2006.
c. Inspect Erosion and Sediment Control measures for all Encroachment Permits/June 30, 2007.
d. Report total number of sites inspected out of the total number of permits, how many are repeat inspections, and how many sites are in complete compliance at first inspection in the Annual Report/June 30, 2007.

4.3 PROCEDURES FOR INSPECTION OF SITES REQUIRING EROSION CONTROL PLANS

Permit and Resource Management Department (PRMD)
Erosion Control Plans are required on projects requiring Grading Permits while erosion control measures may be required on projects requiring Building Permits. Currently, PRMD has two grading inspectors responsible for reviewing construction sites for compliance with Erosion Control Plans, assessing the effectiveness of the BMPs in place and recommending measures to reduce negative impacts to water quality. One is a Building Inspector who has become the "grading inspector" for the Building Division and the other is a Civil Engineering Technician III who provides grading inspections for the Engineering Division (mostly subdivision projects).

The inspectors attempt to hold pre-construction meetings, which include the owner of record, the grading contractor, the engineer of record, the geotechnical engineer and the grading inspector. Subsequent to the pre-construction meetings, PRMD staff conducts at least one Erosion Control inspection for "significant projects" to verify that the approved BMPs are in place and to discuss the requirements of the Erosion Control Plan.

"Significant Projects" are:

1. In the Flood Prone Urban Area
2. In the Flood Hazard Zone (as defined on flood insurance rate maps)
3. Legalized Grading Violation Sites (grading violations that are issued a permit to legalize the work)
4. Projects that require Engineered Grading Plans
5. As required by Engineering Division Plan Review staff

The inspectors also attempt to conduct Erosion Control inspections of "sensitive sites". These sites are identified by a variety of factors, including public or staff concerns, and workload issues such as location or available time. Approximately five to ten percent of the total grading permits issued annually are considered "sensitive sites". These inspections are usually conducted prior to the rainy season and are to ensure that the erosion controls are in place prior to winter weather.

Other grading inspections occur when requests for routine Building Inspections are received and erosion control problems are identified. The contractor and/or owner are usually given a Correction Notice identifying the erosion problem and necessary correction.

Grading Permits can remain active up to three years from the date of issuance, after

which the permit expires, or until a final grading inspection is conducted. The purpose of a final grading inspection is to verify that grading operations have been completed, including erosion and sediment control measures, after which the permit is finaled. If grading activities are performed after the permit has expired and no new grading permit has been obtained, then the property owner may be subject to a grading violation.

Grading inspections may also be initiated when Code Enforcement staff receives a complaint. If the complaint is related to a grading permit, then one of the two grading inspectors conducts a site review to ensure erosion control plan compliance. If the complaint is not related to a grading permit, then it is handled by Code Enforcement staff (see Section 4.5 for enforcement activity). Final grading inspections are conducted at all grading permitted sites.

These inspection efforts will be continued. PRMD will develop an Erosion and Sediment Control checklist to aid inspection staff review and evaluation of the erosion control measures used at construction sites. PRMD staff will also develop notification letters to be sent to non-compliant construction sites in an effort to educate the development community before enforcement actions are executed. In addition, educational materials for the building/construction industry will be developed and could be handed out by inspectors during erosion control inspections. See Section 1.9 for more information about educational materials.

To promote and verify erosion control efforts, County staff inspects as many construction sites as possible before inclement weather begins. Due to budget constraints and lack of personnel, County staff does not have the opportunity to inspect all construction sites before the rainy season. To alleviate this situation, PRMD will propose an increase in permit fees to help fund PRMD's Storm Water Quality Program. The proposed fee increase will be submitted to the Board of Supervisors for their consideration. If approved, an additional inspector will be recruited to review construction sites for effective BMPs. If approved, the extra inspectors will be recruited in phases increasing the number of construction sites being inspected before each rainy season during the permit term.

Currently, inspections conducted before the rainy season occur between September 1st and October 15th. Construction sites disturbing one or more acres of land will be inspected before the rainy season through a phased approach, increasing annually (beginning in year 2 of the permit term) until 90% of construction sites are inspected before the rainy season during year 5 of the permit term. Random construction sites disturbing one or more acres of land will be inspected within 48 hours of a storm event to verify BMP effectiveness. A storm event is defined as producing at least 1 inch of precipitation in a 24-hour period.

PRMD staff intends to have construction sites disturbing one or more acres of land in full compliance at first inspection through a phased approach, increasing annually (beginning in year 2 of the permit term) until 70% of inspected sites are in full compliance at first inspection by year 5 of the permit term. A summary of relevant inspections (building, grading, and erosion control) conducted at construction sites disturbing one or more acres of land will be included in the Annual Reports following fiscal year 2004-2005.

Measurable Goals/Implementation Schedule

a. Hold pre-construction meetings with grading personnel on "significant projects" when possible/once per project.
b. Conduct BMP verification inspection, subsequent to the pre-construction meeting, at "significant projects" when possible/once per project.
c. Inspect Grading Permit activities on "sensitive sites" for erosion control plan compliance prior to the rainy season/once per year.
d. Conduct final grading inspections for Grading Permits/ongoing.
e. Report number of construction inspections conducted in Annual Report/June 30, 2004.
f. Develop an Erosion and Sediment Control checklist for inspection staff/June 30, 2004.
g. Distribute educational material during site inspections/June 30, 2006.
h. Propose an increase in permit fees to help fund PRMD's Storm Water Quality Program/June 30, 2004.
i. Submit proposed fee increase to the Board of Supervisors for their consideration/June 30, 2004.
j. If approved by the Board of Supervisors, recruit a new inspector to review construction sites for effective BMPs/June 30, 2005.
k. Inspect active construction sites disturbing one or more acres of land before the rainy season through a phased approach, increasing annually (beginning in Year 2 of the permit term) until 90% of construction sites are inspected before the rainy season during Year 5 of the permit term/September 1, 2004.
l. Inspect selected construction sites disturbing one or more acres within two business days of each major storm event (>1 inch) when they are at least two weeks apart, to verify BMP effectiveness/October 15, 2006.

4.4 PROCEDURES FOR ENFORCEMENT OF NON-COMPLIANT CONSTRUCTION SITES

Permit and Resource Management Department (PRMD)

PRMD enforcement of non-compliant construction sites is separated into three groups. The first group is projects started, underway or completed without grading permits. The second group is permitted projects that have deviated from the approved plans. Grading violations are considered permitted activities. The third group is activities that contribute to storm water pollution and violate Chapter 11 of the Sonoma County Code and no PRMD construction permit is required. These are known as non-permitted activities. Examples of such non-permitted activities include but are not limited to removal of vegetation leading to polluted runoff, construction of fences and small grading activities.

Sites Without Permits

When PRMD receives a complaint, Code Enforcement clerical staff determines if a grading permit has been issued for the project. Complaints received on properties that do not have a grading permit are routed to a Senior Code Enforcement Inspector for investigation.

When the Senior Code Enforcement Inspector determines a violation, he or she has the option of pursuing the violation via criminal or civil litigation. Based on the egregiousness of the violation, a person could be cited criminally via the assistance of a

Deputy Sheriff under Section 7-21 Sonoma County Code. Criminal citations are prosecuted at the discretion of the Sonoma County District Attorney's Office. However, violations are typically pursued via civil action.

Civil action consists of sending the property owner a Notice of Violation that identifies the property, the nature of the violation and the property owner's option to appeal the violation to a hearing officer. County Code allows a property owner 30 days to remove the violation without the imposition of civil penalties. If the property owner fails to abate or appeal the violation, a Notice and Order, which is a final notice, is sent to the property owner certified mail return receipt requested and a second copy of the notice is posted on the property. The Notice and Order gives the property owner a time certain to remove, correct or legalize the violation. If the property owner fails to comply with the Notice and Order, a notice of abatement proceeding is recorded against the title of the property in the County Recorder's office, which notifies any potential buyers, lenders, or agents that the County has an unresolved abatement proceeding on the subject property. Following the recordation, a public hearing is scheduled and the property owner is notified to appear at a scheduled, publicly noticed abatement hearing. Both the County and the property owner have the opportunity to present their respective cases for the determination of a violation and corrective measures. The hearing officer notifies all parties of the determination per Section 1-7.3 Sonoma County Code. If a violation is upheld, all costs and civil penalties are imposed and the property owner is given a deadline for compliance. If the property owner fails to comply with the hearing officer's deadline, staff directs County Counsel to file a lawsuit in Sonoma County Superior Court. Ultimately, the lawsuit ends with compliance. On occasion, a judge will issue a contempt order against the property owner with the sentence reserved pending correcting the violation.

Once the property is in compliance, if the property owner does not voluntarily pay all costs and penalties, a partial abatement lien is recorded on the property. Failure to pay will ultimately result in all costs and penalties being collected by the County Collection Department.

One exception to the civil procedure is contained within Section 1-7.3 (m) Sonoma County Code which allows staff to sidestep the noticing and public hearing process and present a case directly to the Board of Supervisors for a determination that the violation poses a significant health or safety hazard to the public. By resolution, the Board of Supervisors may direct County Counsel to file a lawsuit or temporary restraining order as required.

Based on the sensitivity of the violation, which includes the number of properties impacted and threat to public safety, this entire civil process may take anywhere between 15 days to over a year to gain compliance.

Sites With Permits

When clerical staff determines that a grading permit has been issued for the subject property, the complaint is routed to the appropriate Building Inspector or Engineering Technician. They in turn perform a site inspection to determine if the project is in conformance with the approved plans, specifications and in compliance with best management practices. If inspection staff determines that the project is not in compliance, a correction notice is written directing corrective measures.

In the future, correction notices will contain a statement giving a time certain to complete the corrective measures. Failure to complete the corrective measures within the allotted time will trigger a referral to Code Enforcement staff to commence an abatement action.

PRMD currently has many active grading violations. These violations are the result of inadequate disincentives for illegal grading activities. PRMD will continue enforcing non-compliant construction sites and propose an amendment to the Sonoma County Code to substantially increase civil penalties for storm water quality violations. In addition, PRMD will create a written policy and procedure for grading violations and non-permitted activities. See Section 3.2 for more information regarding enforcement procedures.

Measurable Goals/Implementation Schedule

a. Continue enforcement protocol for sites with permits/ongoing.
b. Develop enforcement notifications to be sent to non-compliant construction sites/June 30, 2004.
c. Propose to Board of Supervisors to amend the Sonoma County Code, for substantial increases in the civil penalties regarding storm water quality violations, including construction site violations. As part of the proposed amendment, review the legal authority for right-of-entry for inspectors/June 30, 2004.
d. Report information on the non-compliant sites to the RWB in the Annual Report/annually.
e. Create a policy and procedure for grading violations and other construction site storm water violations/June 30, 2005.
f. Develop enforcement response plan for construction sites, including a time frame for each escalation/June 30, 2006

4.5 TRAINING OF TARGETED STAFF

Permit and Resource Management Department (PRMD)

Many staff members are involved in one aspect or another of the Grading Permit process, including technical, professional, supervisory, managerial, planning, and administrative staff. They attend at least one Erosion Control/NPDES formal training session conducted by State or Regional Water Quality Control Boards or by qualified staff members within PRMD. These training sessions range from two to eight hours long. Many staff members have attended more than once, and more than one type of workshop.

It may be helpful to the inspectors if RWB staff could accompany inspectors on ride-alongs. This interaction could serve to improve the quality of the Erosion Control inspections.

Annual erosion prevention and sediment control training will be provided to appropriate staff members working in areas related to land disturbance. Such staff members include personnel in the Building Division, Code Enforcement Division, Engineering Division (Drainage Review, Encroachment, Inspection, NPDES, Sanitation, and Land Development), and Well & Septic Division. Staff members include Building Inspectors,

Code Enforcement Inspectors, Engineers, Environmental Health Specialists, Managers, Plans Examiners, Supervisors, and Technicians.

Measurable Goals/Implementation Schedule

a. Provide annual training to inspectors, engineers, engineering technicians, environmental health specialists and other employees whose jobs include land development permitting/ongoing.
b. Provide time, as appropriate, at staff meetings and Code Corners, to discuss current Erosion Prevention and Sediment Control practices/ongoing.
c. Provide formal training to supervisors and senior staff in the Engineering Division, Well and Septic Division, Building Division and Code Enforcement Division/annually.
d. Invite Regional Water Board staff to ride along with inspectors/annually.

5. POST CONSTRUCTION/DEVELOPMENT STANDARD URBAN STORM WATER MITIGATION PLAN (SUSMP)

5.1 BACKGROUND

The State Water Resources Control Board (SWRCB) Water Quality Order No. 2003-005-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 includes a list of Storm Water Management Program Requirements. One of these requirements is to describe BMPs and associated measurable goals needed to fulfill six Minimum Control Measures. One of the six Minimum Control Measures is "Post-Construction Storm Water Management in New Development and Redevelopment". We also refer to this measure as Post Construction/Development Standard Urban Storm water Mitigation Plan (SUSMP).

The MS4 General Permit notes that urban development can increase pollutant load, volume and velocity of runoff. During urban development two important changes can occur. First, where no urban development has previously occurred, natural vegetated pervious ground cover may be converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants, providing a very effective natural purification process. Because rooftops, pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost.

Secondly, urban development can create new pollution sources as human population density increases and may bring with it higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc., which can be washed into the storm drain system. As a result of these two changes, the runoff leaving a newly developed urban area may be significantly greater in volume, velocity and/or pollutant load than pre-development runoff from the same area. In addition, the cumulative increase in off-site runoff may cause downstream erosion and flooding, which can subsequently increase pollutant loads to the entire storm water conveyance system.

This SUSMP has been developed as part of the County of Sonoma Phase I Term 2 NPDES (Santa Rosa Area) Permit municipal storm water program. For purposes of consistently applying this minimum control measure within all NPDES Permit Boundary areas, this SUSMP will be implemented in the MS4 General Permit Boundary (the urbanized areas and urban clusters within watersheds in the County of Sonoma that drain to the San Pablo Bay).

This SUSMP addresses post-development storm water pollution and peak flows from new development and redevelopment projects.

Implementation of this SUSMP constitutes the maximum extent practicable for development and redevelopment projects.

5.2 GOALS

The goals of this SUSMP are to manage storm water runoff from new development and redevelopment for both quality and quantity, as close to the point of origin as possible, and to conserve natural areas of the development site.

Water Quality / Minimize Storm Water Pollutants
The first goal of the SUSMP is to prevent, to the maximum extent practicable, pollutants generated at a developed or redeveloped site from reaching the storm water conveyance system. Owners of development and redevelopment sites subject to SUSMP will be required to design projects so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern to the storm water conveyance system.

Water Quantity / Limit Channel-Forming Discharge
The second goal of the SUSMP is to limit storm water flows from post-development sites to pre-development quantities to the maximum extent practicable. Storm water generally flows off developed sites at higher volumes and velocities than off undeveloped sites, due to the addition of impervious surfaces. The project design should limit the post-development runoff to pre-development conditions to the maximum extent practicable.

Conserve Natural Areas
The third goal of the SUSMP is to conserve natural areas of a development site to the maximum extent practicable. New developments and redevelopment's will be required to: maximize the amount of land left in a natural undisturbed condition, limit clearing of native vegetation, maximize trees and vegetation, promote the use of native and drought tolerant vegetation, and preserve riparian areas and wetlands.

This goal also addresses the previous two goals of minimizing storm water pollutants and peak flows by preserving pervious areas where storm water runoff can naturally infiltrate into the soil, and flow into and over vegetated areas.

5.3 SCOPE

This SUSMP has been developed as part of the storm water program to address post-development storm water pollution from new development and redevelopment projects.

The following is the scope of this document:

1. Identifies projects subject to post-construction Best Management Practices (BMPs);
2. Outlines project requirements during project planning, design and construction and post-construction phases;
3. Addresses targeted uses and activities and potential site-specific pollutants;
4. Lists examples of source control and treatment control BMPs; and
5. Provides sizing criteria for BMPs.

5.4 REQUIREMENTS

Applicable Projects

New development and redevelopment projects, that are under the County's jurisdiction and are within the MS4 General Permit Boundary, that fall into one or more of the following four categories are Applicable Projects and are required to design and implement source control and treatment control BMPs.[1] This SUSMP applies to projects that require a discretionary permit and/or a building permit within these categories. Projects under the permittee's jurisdiction are defined in County Codes.

1 Development projects that create one acre (43,560 square feet) or more of new impervious surface. This category includes development of any type on public or private land, which falls under the planning and building authority of the Permittee, where one acre or more of new impervious surface, collectively over the entire project site, will be created. Project phasing to decrease impervious surface area shall not exempt the project from SUSMP requirements.

2. Streets, roads, highways, and freeways that create one acre (43,560 square feet) or more of new impervious surface. This category includes any newly constructed paved surface used for the transportation of pedestrians, bicycles and motorized vehicles.

3. Redevelopment projects that are located on an already developed site and result in the addition of and/or reconstruction of one acre (43,560 square feet) or more of new impervious surface. Only the additional and/or reconstructed portion(s) of the site must be included in treatment design. Excluded from this category are

[1] The Santa Rosa Area Phase I NPDES Storm Water Discharge Permit, CA0025054, expired in March 2002. As part of the permit renewal, a Reapplication was prepared and submitted to the North Coast Regional Water Quality Control Board in September 2001. The original reapplication identified nine categories of priority development projects for which BMPs would be required. Projects that fall into the original nine categories are expected to fall into one or more of the four categories above, with the exception of hillside development and land uses related to automotive repair facilities, retail gasoline outlets, and food facilities. Hillside developments are considered a priority due to the potential for erosion problems during project construction. BMPs for these projects are required as part of the construction NPDES permit and include requirements for erosion prevention and sediment control, and thus are not included in this SUSMP. Land uses related to automotive repair facilities, retail gasoline outlets, and food facilities are governed by environmental regulations that are independent of NPDES, but incorporate source control BMPs.

interior remodels and routine maintenance or repair, including roof or exterior surface replacement and resurfacing.

4. Development and redevelopment projects located directly adjacent to a natural waterway, modified natural waterway, or constructed channel, or that requires a new storm drain outfall to such waterway, regardless of project size or impervious surface. This requirement is intended to protect environmentally sensitive areas.

Excluded from this category are interior remodels and routine maintenance or repair for redevelopment projects, including roof or exterior surface replacement and resurfacing.

Hillside developments would only be applicable to projects under the SUSMP if they fall into one of the four categories above. If future hillside development within the Permit Boundary is identified as a significant source of storm water pollution after construction, amendments to the SWMP will be considered. Implementation of appropriate source control and treatment control measures are required for all applicable projects. See Section 5.5 for discussion of a waiver program that may be developed in future.

Project Planning
All new development and redevelopment projects subject to SUSMP (Applicable Projects) shall consider and incorporate storm water management practices into the project planning phase of development.

Identify Pollutants of Concern
All applicable projects shall include identification of the pollutants of concern, which will be generated by the proposed project. Pollutants of concern can be basin specific or site specific. The San Francisco Bay Basin pollutants of concern are currently targeted by the Regional Board and Permittee as sediment, nutrients and pathogens. Additional basin-specific pollutants of concern may be added to the list if regulatory conditions change or the Basin Plan is amended.

Site-specific pollutants of concern are based on the unique uses and activities of a proposed development. The applicant, in cooperation with the Permittees, is responsible for identifying all site-specific pollutants of concern. Examples of site-specific pollutants include, but are not limited to, sediment, nutrients (phosphorous and nitrogen compounds), pesticides, temperature, pathogens, petroleum hydrocarbons, oil/grease, and metals. Examples of uses and activities within a development specifically targeted by SUSMP for pollution control is identified in Table 1.

Evaluate Channel-Forming Discharge
The applicant shall provide runoff calculations for pre-development and post-development runoff conditions. The design shall limit post-development runoff to pre-development quantities. The runoff calculations shall be based on the channel-forming discharge in the downstream waterway.

Select Appropriate BMPs
The applicant shall select BMPs, which control identified pollutants. BMPs shall be selected based on their appropriateness to the uses and activities of the project as well as their effectiveness given site conditions.

In general, there are two types of BMPs for storm water pollution control. Source control measures focus on minimizing or eliminating the source of the pollution so that pollutants are prevented from contacting runoff or entering the drainage system. Treatment control measures are designed to remove pollutants after they have entered runoff. Examples of source control BMPs are identified in Table 2 and examples of treatment control BMPs are identified in Table 3. A glossary for BMP selection is included in Table 3 for reference. Suggested Resources and References are listed in Table 4.
Most source control measures tend to be non-structural, and most treatment BMPs tend to be structural in nature, although there can be exceptions. For example, a roof over a materials storage area at an industrial site would be considered a structural source control. Treatment control measures tend to be more expensive than source control measures. Cost-effective storm water management considers and incorporates all of the source control measures possible prior to implementation of treatment controls.

Every property has unique characteristics and drainage systems. Some sites have a constructed storm drain system with catch basin inlets, whereas others drain to a ditch or naturally infiltrate into the ground. The type or size of the drainage system, slope characteristics, depth to water table, ground cover, and soil conditions should all be considered in the selection of BMPs. In many cases, a project may require a combination of BMPs to appropriately address pollutant control and treatment.

Infiltration BMPs are not recommended for areas of industrial activity, areas subject to high ground water, or areas with high levels of vehicular traffic, unless appropriate pre-treatment is provided to ensure that groundwater is protected and the infiltration BMP is not rendered ineffective by overload.

Certain BMPs may create a habitat for mosquitoes and rodents if not properly designed or maintained. Close collaboration and cooperative effort between Permittees, the Regional Board, local vector control agencies, and the State Department of Health Services during the development and implementation of the applicant's storm water mitigation plan is necessary to minimize nuisances and public health impacts.

Funding for long-term BMP maintenance shall be the responsibility of the development.

Develop a Preliminary Storm Water Mitigation Plan
The applicant shall submit a Preliminary Storm Water Mitigation Plan as part of application completeness. This preliminary plan shall identify the project's proposed design approach and selected storm water management measures.

Applicants are encouraged to minimize the amount of new impervious surface through source control BMPs. A project which initially falls under an "applicable project" category due to impervious surface cover can be redesigned through source control BMPs such that it no longer qualifies as an "applicable project" and is therefore exempt from SUSMP requirements. Likewise, a project design which incorporates source control BMPs whenever feasible, may reduce or eliminate the need for an extensive treatment control system.

Improper maintenance is one of the most common reasons why water quality controls will not function as designed or which may cause the system to fail entirely.

It is important to consider who will be responsible for maintenance of a permanent BMP, and what equipment and funding is required to perform the maintenance properly.

At a minimum, the Preliminary Storm Water Mitigation Plan shall include the following:

1. Project description;
2. Pre- and post-development impervious surface area in square feet;
3. Pre- and post-development run-off calculations;
4. Identified pollutants of concern;
5. BMPs selected to mitigate pollutants;
6. BMPs selected to limit channel-forming discharges;
7. Location and conceptual design of BMPs;
8. Preliminary BMP sizing; and
9. Responsibility for BMP maintenance.

BMP Sizing Criteria

For decades the storm water management philosophy and infrastructure design has been based on controlling the peak flows of the storm water runoff produced by large but infrequent storm events. Drainage facilities have been (and will continue to be) designed to convey the storm water runoff to the receiving waters, minimizing the potential for loss of life and property attributed to flooding in urbanized areas. In addition to sizing BMPs according to the criteria below, drainage facilities shall be designed to convey peak flow discharge to provide stream channel and over bank flood protection, based on flow design criteria selected by the local agency.

In contrast to flood control design, effective management of storm water quality through best management practice methodology is based on the capture and treatment of the frequent smaller runoff producing storm events. These frequent smaller storms account for a large portion (85%) of the total annual rainfall volume. Treating a large portion of the annual storm water runoff volume, which occurs in small increments, maximizes the benefit of pollutant treatment in storm water runoff while maintaining a reasonable cost for storm water treatment.

1. If structural or treatment control BMPs are selected for use on a project, the design of the facilities is based on either the volume or the flow rate of the storm water runoff. Appropriate safety factors should be applied during the design of these BMPs.
2. Most runoff-producing storm events occur from the predominant population of smaller storms. To be effective, storm water quality management should be designed based on these smaller events. As a result, detention facilities, wetland basins, infiltration facilities, media filters, and swales need to be sized to accommodate runoff volumes and flows from such storm events to maximize pollution control benefits in a cost-effective manner.
3. See the Sonoma County Water Agency, Flood Control Design Criteria Manual and design standards adopted by local agencies for site specific values of mean seasonal precipitation, runoff coefficient “C” and “K” factor.

Volume Based BMP Calculation

The Maximized Storage Volume is based on Equation 5.2 of the *Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No.87, pages 170-178* (1998). The analysis is based on a 6-hour interevent time to define a new storm event and a minimum depth of 0.10 inch of precipitation to produce incipient runoff.

Equation 5.2:

$$P_o = (a \bullet C) P_6$$

Where:

- P_o = maximized detention volume determined using either the event capture ratio or the volume capture ratio as its basis, watershed inches
- a = regression coefficient from least-squares analysis
- C = watershed runoff coefficient (developed condition)
- P_6 = mean storm precipitation volume, watershed inches

From an analysis of the local mean storm precipitation depth for the Santa Rosa/Sonoma County area, the 85th percentile mean storm precipitation depth is 0.6 inches. This value correlates closely with the precipitation records summarized in *Figure 5.3 in Urban Runoff Quality Management*.

The value of the regression coefficient, *a*, can be found in *Table 5.4 in Urban Runoff Quality Management* utilizing the 24-hour drain time and volume capture ratio. The value of *a* is 1.582.

Substituting these values into Equation 5.2 results in:

$$P_o = (1.582\ (C))\ (0.6 \text{ inches}) = 0.90 \text{ inches } (C)$$

$$P_o = (0.90 \text{ inches})\ (C) \div (12 \text{ inches/foot})$$

Which reduces to:

$$P_o = (0.08')\ (C)$$

This gives the depth of rainfall over the watershed. This depth (feet) multiplied by the watershed area A (acres) gives the volume of runoff.

$$P_o\ (A) = (0.08')\ (C)\ (A)$$

Applying the K factor, from the Sonoma County Water Agency's Flood Control Design Criteria manual, to account for the local variation of mean seasonal precipitation:

Maximized Storage Volume = $V = (P_o)\ (A)\ (K) = (0.08')\ (C)\ (K)\ (A)$

Therefore, when designing volume based BMPs, use the following calculation:

i.) V= (0.08') (C) (K) (A)

Where:

V = Maximized Storage Volume (acre-feet)
C = Watershed Runoff Coefficient (developed condition)
K = k Factor
A = Drainage Basin Area (acres)

Or, as an alternative,

ii.) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in *California Storm Water Best Management Practices Handbook - Industrial/Commercial (1993)*

Flow Based BMP Calculation

In order to provide water quality treatment to the same quantity of runoff as identified in the volume based criteria further analysis of local precipitation records were required. The rainfall intensity that occurs during the 85^{th} percentile mean annual 24 hour storm event is 0.21 inches per hour. This design constant intensity of 0.21 inches per hour does not vary by basin size or time of concentration.

Therefore, when designing flow based BMPs, use the following calculation:

Q = (0.21) (C) (A) (K)

Where:

Q = design flow rate (cfs)
C = watershed runoff coefficient (developed condition)
A = drainage basin area (acres)
K = k Factor

Design, Construction and Maintenance

Prepare Final Storm Water Mitigation Plan

The project applicant shall submit a Final Storm Water Mitigation Plan as part of public and/or subdivision improvement plans and/or building permit application, whichever occurs first.

This plan shall be consistent with the approved plan that identified the project's proposed design approach and selected storm water management measures.

At a minimum, the Final Storm Water Mitigation Plan shall include the following:

1. Detailed hydraulic calculations identifying the sizing criteria for each BMP based upon the anticipated flow and/or volume;
2. Plan view of the project showing all storm water related BMPs. This plan may be included as part of the grading plan, site plan, other related plan, or on a separate

plan sheet, included in the public improvement plans or building permit application;
3. Construction details for each BMP;
4. Appropriate maintenance declarations or agreements for each BMP; and
5. Mechanism for funding long-term maintenance by the development.

As part of project review, if a project applicant has included or is required to include Source Control or Treatment Control BMPs in project plans, the Permittee shall require that the applicant provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.

For all projects, the verification will include the project applicant's signed statement, as part of the project application, accepting responsibility for all BMP maintenance until the time the property is transferred. The transfer of property to a private owner must have conditions requiring the recipient to assume responsibility for maintenance of any BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all BMPs at least once a year or as specified by the designer or manufacturer of the BMP and retain proof of inspection.

For residential properties where the BMPs are located within a common area which will be maintained by a homeowner's association, language regarding the responsibility for maintenance must be included in the project's conditions, covenants and restrictions (CC&R's). The project applicant shall be required to include printed educational materials with the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, evidence that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information shall also be required with any subsequent sale of the property.

Construct Source Control and Treatment Control BMPs
Source Control and Treatment Control BMPs shall be constructed in accordance with the Final Storm Water Mitigation Plan. Along with inspection by Permittee, the project applicant shall provide a written certification by the project designer that the BMPs were installed as intended by the designer and, for manufactured BMPs, as recommended by the manufacturer.

Monitor Source Control and Treatment Control BMPs
For all projects, the project applicant shall conduct maintenance inspection of all Source Control and Treatment Control BMPs for the first year or as specified by the designer or manufacturer of the BMP and retain proof of inspection, to be provided to the appropriate Permittee upon request. If BMPs are located within a public area proposed for transfer, maintenance of the BMPs would be the responsibility of the project applicant until they are accepted for transfer by the appropriate Permittee. BMPs proposed for transfer must meet design standards adopted by the Permittee, if any, for the BMP installed and should be approved by the appropriate Permittee prior to its installation.

Provide Ongoing BMP Maintenance
For all projects, the property owners shall conduct maintenance inspection of all Source Control or Treatment Control BMPs at least once a year or as specified by the designer or manufacturer of the BMP. For properties where the Structural or Treatment Control BMPs are located within a common area which will be maintained by an association, language regarding the responsibility for maintenance must be included in the projects conditions, covenants and restrictions (CC&Rs).

5.5 WAIVER

Upon approval by the Regional Board staff, a Permittee may grant a waiver from SUSMP requirements if impracticability for a specific project can be established when all other Structural or Treatment Control BMPs have been considered and rejected as infeasible. Justification for impracticability must be submitted by the Permittee to the Regional Board staff for consideration. No waivers shall be granted by the Permittee to any development or redevelopment project without written approval by the Regional Board.

If a waiver is granted, the developer shall be required to pay an in lieu fee to the Permittee. The amount of the fee shall be determined by the Permittee, included with the waiver application, and approved in writing by the Regional Board. This fee shall be placed in a fund designated for a specific project to be determined with the waiver documentation.

5.6 REPORTING AND IMPLEMENTATION SCHEDULES

The Permittee shall report on the SUSMP to the Regional Board according to the schedule in Table 5. The Permittee shall implement the SUSMP according to the schedule in Table 6.

5.7 DEFINITIONS

Bank Full Discharge means discharge that fills a stable alluvial channel up to the elevation of the active flood plain. Field indicators can be used for estimating the elevation of the stage associated with bank full flow. In stable channels, bank full discharge corresponds closely with effective discharge and “Channel-Forming Discharge”.

Best Management Practice (BMP) means a program, technology, process, siting criteria, operational method or measure, or engineered system, which when implemented prevents, controls, removes, or reduces pollution.

Channel-Forming Discharge or effective discharge means the flow rate that transports the largest fraction of the sediment load over a period of years. For stable streams, the channel-forming discharge is considered equivalent to the “Bank Full Discharge”. The channel-forming discharge generally has a recurrence interval of 1.5 to 2 years.

Constructed Channel means all waterways that are not in closed conduits and do not meet the definition of a “Natural Waterway” or “Modified Natural Waterway”.

Constructed Channels do not include street gutters and drainage facilities installed in connection with the development of property, or road-side ditches.

Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and improvements related to land subdivision.

Directly Adjacent means within a parcel of land that includes or is contiguous with a Natural Waterway, Modified Natural Waterway, or Constructed Channel (City of Santa Rosa).

Directly Adjacent means property that is within 200 feet of the top of bank of a Natural Waterway, a Modified Natural Waterway, or a Constructed Channel, and is not to exceed the boundaries of the subject property (County of Sonoma).

Discretionary Permit means a permit, which requires the exercise of judgment or deliberation by a public agency or body to approve or disapprove a particular activity. Examples of discretionary permits include tentative maps, conditional use permits and design review.

Maximum Extent Practicable refers to the technology based standard established by Congress in the Clean Water Act U.S.C.S 1342 (p)(3)(B)(iii) that municipal dischargers of storm water must meet. To achieve the maximum extent practicable standard, municipalities must employ whatever Best Management Practices (BMPs) are technically feasible (i.e., are likely to be effective) and are not cost prohibitive. The major emphasis is on technical feasibility. Reducing pollutants to the maximum extent practicable means choosing effective BMPs, and rejecting applicable BMPs only where other effective BMPs will serve the same purpose, or the BMPs would not be technically feasible, or the cost would be prohibitive.

Modified Natural Waterway means any natural waterway that has been modified to accommodate peak flood flows while retaining significant riparian vegetation, fish, wildlife habitat, and/or scenic values. Modified natural waterways do not include artificially created channels for storm waters, such as street gutters and drainage facilities installed in connection with the development of property.

Natural Waterway means any natural stream of water flowing in a definite course or channel and possessing a bed and banks. It is not necessary that the flow of water be continuous throughout the year. Natural waterways do not include artificially created channels for storm waters, such as street gutters and drainage facilities installed in connection with the development of property.

Redevelopment means, on an already developed site, the creation or addition of impervious surface. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition or replacement of a structure; structural development including an increase in gross floor area and/ or exterior construction or remodeling; replacement of impervious surface that is not part of a routine maintenance activity; and land disturbing activities related with structural or impervious surfaces.

Treatment means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants.

TABLE 1: EXAMPLES OF USES & ACTIVITIES TARGETED BY SUSMP	TYPICAL POLLUTANTS GENERATED				
	SEDIMENT*	NUTRIENTS*	PATHOGENS*	PETROLEUM HYDROCARBONS & OIL/GREASE	METALS
STORAGE					
Outdoor material storage areas				●	
Trash storage areas	●	●	●	●	●
Parking areas	●			●	●
TRANSFER OF MATERIALS					
Loading/unloading dock areas				●	●
Fueling areas				●	●
Vehicle repair/maintenance bays				●	●
Food storage/processing facilities		●	●	●	
Landscaping maintenance activities	●	●			
WASHING					
Vehicle/equipment wash areas	●	●		●	●
Cooking equipment wash areas		●	●	●	

* Basin-specific pollutants currently targeted in the Lower Russian River Basin by the Regional Board and permittes include sediment, nutrients and pathogens, based on the 1996 Regional Board Basin Plan. Additional basin-specific pollutants of concern may be added to the list if regulatory conditions change or the Basin Plan is amended.

TABLE 2: EXAMPLES OF SOURCE CONTROL BMP's
SITE PLANNING*
Minimize pavement or pavement widths for walks, drives, parking areas, cul-de-sacs, etc.
Cluster development to minimize impervious surface or to increase efficiency of water treatment facilities.
Provide setbacks to waterways and riparian areas.
Avoid development and/or grading on steep slopes.
Minimize building footprints through vertical development or expansion.
Use porous pavement for sidewalks, driveways, overflow parking lots or other interior surfaces where there is limited use and activity, or low risk for pollutant loading. Consider erosion potential and maintenance when selecting materials for porous pavement.
Provide shared driveways, alternative driveway surfaces, and/or smaller parking spaces.
Retain existing trees and vegetation and use native and non-invasive plants in new landscaping.
Design courtyards, plazas, and amenity open space to store, filter, or treat storm water runoff.
Incorporate floor plans to accommodate for potentially pollutant loading activities to occur indoors, instead of outdoors, such as for material storage, food processing and wash areas, trash receptacles, loading/unloading zones, and vehicle washing areas.
EDUCATION & TRAINING
Label storm drains with "No Dumping - Drains to Creek", where applicable, to prevent intentional or ignorant disposal of pollutants.
Provide spill avoidance and response training for personnel who handle hazardous materials.
STRUCTURAL SOURCE CONTROL
Direct rooftop runoff to pervious areas such as yards, swales, or vegetated areas.
Elevate stored materials so that storm water run-on and run-off does not mix directly with materials.
Cover storage, loading, parking, fuel dispensing, and trash areas with a roof structure or canopy.
Enclose storage and trash areas to avoid material dispersal by storm water run-off and wind.
Equip fueling areas with spill kits containing dry, absorbent material, storm drain covers or shut-off values.
Provide a secondary containment facility for potential spill areas.

* Site Planning BMPs shall be implemented in coordination with fire, building, vehicle and other state and local code requirements.

TABLE 3: EXAMPLES OF TREATMENT CONTROL BMPs	**TARGETED POLLUTANTS**				
	SEDIMENT*	NUTRIENTS*	PATHOGENS*	PETROLEUM HYDROCARBONS & OIL/GREASE	METALS
SLOPE PROTECTION					
Topsoiling	●	○	○	○	○
Seeding	●	◘	○	○	◘
Sodding	●	◘	○	○	◘
Planting	●	◘	○	○	◘
STORM WATER FILTERS					
Biofiltration swale (Vegetated swale)	◘	○	○	◘	◘
Bioinfiltration swale (Bioretention swale)	●	◘	◘	●	●
Vegetative filter strip	◘	◘	◘	◘	◘
Sand filter	●	◘	◘	◘	◘
Compost storm water filter	●	◘	◘	●	●
Catch basin insert	◘	○	○	◘	◘
INFILTRATION FACILITIES					
Infiltration trench	●	◘	●	●	●
Bioretention basin (Infiltration facility)	●	●	●	●	●
DETENTION FACILITIES					
Wet pond	●	◘	◘	◘	●
Wet extended detention pond	●	◘	◘	◘	●
Dry extended detention pond	◘	◘	○	◘	◘
Biodetention basin (Constructed wetland)	●	◘	◘	●	●
Presettling/sedimentation basin	◘	◘	○	○	◘
Wet vault/tank	◘	◘	○	○	◘
OTHER CONTROLS					
Oil/water separator	○	○	○	●	◘
Check dams	●	○	○	○	○
Level spreader (Energy dissapater)	○	○	○	○	○

● very effective, removes >70% of pollutant

◘ moderately effective, removes 25-70% of pollutant

○ least effective, removes <25% of pollutant

The pollutant removal efficiencies given above are for PLANNING PURPOSES ONLY. Actual removal rates are dependent on specific site characteristics, maintenance, and other factors.

* Basin-specific pollutants currently targeted in the Lower Russian River Basin by the Regional Board and Permittes include sediment, nutrients and pathogens, based on the 1996 Regional Board Basin Plan. Additional basin-specific pollutants of concern may be added to the list if regulatory conditions change or the Basin Plan is amended.

TABLE 3:
GLOSSARY FOR BMP SELECTION

SLOPE PROTECTION
Topsoiling: The placement of topsoil or other suitable plant growth material over disturbed lands to provide a suitable soil medium for vegetative growth and a supply of native or locally occurring seeds and propagules. Topsoiling may involve bringing in soils from off site or merely replacing fertile topsoils that were stripped and stockpiled during earlier site development activities.
Seeding: Growing a long-term or permanent vegetative cover (plants) on disturbed areas or areas that need assistance in revegetation. The purpose of permanent seeding is to reduce erosion and sedimentation and to establish desirable competitive ground cover for wildlife habitat and ease of roadside maintenance.
Sodding: The placement of rolls or strips of sod as a landscape planting or erosion control measure. Sod is a layer of soil bound by grass and plant roots into a thick mat. It is commercially available in rolled strips that are laid over an area of exposed soil. Sod stabilizes the area by immediately covering the surface with vegetation and enabling storm water to infiltrate into the ground.
Planting: The process of establishing vegetation, particularly trees and shrubs, by setting out plants that have been grown to a specified size or age. The plants may be potted in plastic tubes or in containers of various sizes, or root wrapped, or may be bare rootstock.
STORM WATERFILTERS
Biofiltration Swale (Vegetated Swale): Biofiltration swales are vegetated channels with a slope similar to that of standard storm drains channels, but wider and shallower to maximize flow residence time and promote pollutant removal by filtration through the use of properly selected vegetation and settling.
Bioinfiltration Swale (Bioretention Swale): Bioinfiltration swales are depressions created by excavation, berms or small dams placed in channels intended to infiltrate storm water runoff from impervious surfaces through a grass or vegetative root zone.
Vegetative Filter Strip: A band of vegetation located between a pollutant source (such as a parking lot) and a stream, pond, or wetland. The key to a successfully functioning filter strip are the use of dense vegetation (typically grass) and allowing only overland sheet flow to cross the strip, avoiding concentrated flows.
Sand Filter: Device which filters storm water runoff through a sand layer into an underdrain system which conveys the treated runoff to a detention facility or to the ultimate point of discharge. The sand bed filtration system consists of an inlet structure, sedimentation chamber, sand bed, underdrain piping and liner to protect against infiltration.
Compost Storm Water Filter: A mechanical filter which percolates storm water through specially designed compost, which traps particulates and adsorbs dissolved materials such as metals and nutrients. Floating surface scums along with oil and grease is also removed. After filtering through the compost media, the filtered water is channeled into a collection pipe or discharges to an open channel drainageway. Compost filters are not intended for use as storm water detention systems.
Catch Basin Inserts: Devices installed under a storm drain grate or inlet that provide water quality treatment through filtration, settling, or adsorption. Catch basin inserts are commercially available products and are generally configured to remove one or more of the following contaminants: coarse sediment, oil and grease, and litter and debris. Units must be routinely maintained to achieve maximum removal efficiency.

TABLE 3:
GLOSSARY FOR BMP SELECTION

INFLITRATION FACILITIES
Infiltration Trench: A trench designed to intercept and reduce direct site surface runoff. Holds runoff long enough to allow it to enter the underlying soil. Includes layers of coarse gravel, sand or other filtering media to filter the runoff before it infiltrates the soil. Infiltration trenches are shallow trenches in relatively permeable soils that are back filled with a sand filter, coarse stone, and lined with filter fabric.
Bioretention Basin (Infiltration Facility): Bioretention facilities usually contain the following components: a temporary ponding area, a mulch layer, a sandy or loamy planting soil, the plants, and, where necessary, underdrains. Most bioretention devices are off-line basins designed to infiltrate all flow up to the design storm. Design configurations may include basins, trenches, vaults, leach fields, and porous pavements.
DETENTION FACILTIES
Wet Pond: A wet pond is an open pond with the outlet set higher than the bottom of the facility. This usually results in a permanent pool of water that serves as "dead storage" and is very effective at removing conventional pollutants. A Wet Pond designed for nutrient removal has a shallow marsh area that provides additional treatment of pollutants, especially nutrients. The shallow marsh is contained within the "permanent pool" volume.
Wet Extended Detention Pond: A pond which combines the pollutant removal effectiveness of a permanent pool of water with the flow reduction capabilities of an extended storage volume (see Dry Extended Detention Pond).
Dry Extended Detention Pond: A pond designed to drain completely between storm events. Detains runoff longer than a regular detention pond and provides some treatment for water quality. Its benefits are chiefly in its moderating influence on peak flows helping to control stream bank erosion.
Biodetention Basin (Constructed Wetland): An artificial wetland intentionally constructed on a nonwetland site for the purpose of managing storm water runoff. Primary function is to provide runoff treatment of both settleable pollutants and nutrients, using a permanent pool of water that has an extensive shallow marsh area. A secondary function is to provide recreational opportunities, wildlife habitat, and to be an aesthetic amenity.
Presettling/Sedimentation Basin: Provides pretreatment of runoff in order to remove suspended solids that can impact other primary treatment BMPs. Has no "permanent pool" volume; runoff is detained so that particulates can settle out before being discharged to another BMP. Runoff treated by a Presettling Basin must be further treated by a water quality filtration BMP, a wet pond-type BMP, or a biofilter. Presettling basins may need to be located "off-line" from the primary conveyance/detention system if used to protect infiltration or filtration BMPs from siltation.
Wet Vault/Tank: Underground facilities used for the storage of surface water. Typically constructed from reinforced concrete (vaults) or huge density polyethylene pipe (tanks). The water that is captured in these vaults and tanks may be used for irrigation of planter strips, common areas and general landscaping activities. Wet vaults and tanks are typically concrete or structural facilities designed to provide runoff treatment through the use of a permanent pool of water.

TABLE 3:
GLOSSARY FOR BMP SELECTION

OTHER CONTROLS
Oil/Water Separator: Oil/water separators are multi-chambered devices designed to remove hydrocarbons from storm water runoff as it moves through the device. Three variations include: 1) Spill control (SC) separators - a simple underground vault or manhole with a "T" outlet designed to trap small spills; 2) American Petroleum Institute (API) separators - long vaults with baffles designed to remove sediment and hydrocarbon loadings from urban runoff; and 3) Coalescing plate (CP) separators - a series of parallel inclined plates to encourage separation of materials of different densities. The plates are typically made of fiberglass or polypropylene and are closely spaced to improve the hydraulic conditions in the separator and promote oil removal.
Check dams: A small dam constructed in an open channel, swale, or drainageway. Check dams may be temporary or permanent barriers made of logs and brush, straw bales, stone, or other materials. They are used to reduce or prevent excessive bank and bottom erosion by reducing the gradient or runoff velocity.
POLLUTANTS
Sediment: Sediment includes suspended and settleable solids, silt, sand, and gravel.
Nutrients: Nutrients stimulate plant growth. There are two types of nutrients: nitrogen compounds and phosphorus compounds. Nitrogen compounds include fertilizers, animal wastes, leaves and grasses. Phosphorus compounds include detergents, cleaners, fertilizers, organic materials and animal wastes.
Pathogens: Pathogens are disease-causing microorganisms such as bacteria and viruses that come from the fecal waste of humans and animals. Sources of pathogens may include organic debris, food wastes, and some chemical wastes.
Petroleum Hydrocarbons: Sources of petroleum hydrocarbons may include gasoline fuel, diesel fuel and motor oil.
Oil/Grease: Sources of oil and grease include activities common to the automotive and food processing industries.
Metals: Metals include lead, copper, zinc, and cadmium. Sources of metals may include paints and pesticides.

TABLE 4:

RESOURCES & REFERENCES

SUGGESTED RESOURCES	HOW TO GET A COPY
California Storm Water Best Management Practices Handbooks (2003) for Construction Activity, Municipal, New Development and Redevelopment and Industrial/Commercial *Presents a description of a large variety of Structural BMPs, Treatment Control, BMPs and Source Control BMPs.*	California Storm Water Quality Association PO Box 2105 Menlo Park, CA 94026 650 366-1042 650 365-8678 (fax) *www.cabmphandbooks.com*
Caltrans Storm Water Management Plan and Water Quality Practice Guidelines (2001) *Presents guidance for design of storm water BMPs.*	California Department of Transportation P.O. Box 942874 Sacramento, CA 94274-0001 916-653-2975 *http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/_pdfs/management_ar_rwp/CTSW-RT-02-008.pdf*
Flood Control Design Criteria (1983) by Sonoma County Water Agency *Includes local rainfall intensity versus duration, runoff coefficient, mean seasonal precipitation and K factor, as well as flood control requirements.*	Sonoma County Water Agency 2150 West College Avenue Santa Rosa, CA 95401 707-526-5370 *http://www.scwa.ca.gov/*
National Storm Water Best Management Practices (BMPs) Database, Version 2.0 *Provides data on performance and evaluation of storm water BMPs.*	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 703-296-6000 *http://www.bmpdatabase.org*
Second Nature: Adapting LA's Landscape for Sustainable Living (1999) by Tree People *Provides a detailed discussion of BMP designs presented to conserve water, improve water quality, and achieve flood protection.*	Tree People 12601 Mullholland Drive Beverly Hills, CA 90210 818-753-4600 818-753-4635 *http://www.treepeople.org/trees/orderform.pdf*

TABLE 4:

RESOURCES & REFERENCES

SUGGESTED RESOURCES	HOW TO GET A COPY
Start at the Source (1999) by Bay Area Storm Water Management Agencies Association (BASMAA) *Provides a detailed discussion of permeable pavements and alternative driveway designs presented.*	Friends of the San Francisco Estuary P. O. Box 791 Oakland, CA 94604 510-622-2465
Stream Corridor Restoration: Principles, Processes, and Practices (1998) by The Federal Interagency Stream Restoration Working Group *Provides a detailed discussion of stream restoration concepts, including channel-forming discharge.*	National Technical Information Service (NTIS) 5285 Port Royal Road Springfield, VA 22161 (703) 605-6000 or 1-800-553-NTIS FAX (703) 605-6900 *www.ntis.gov*
Urban Runoff Quality Management (1998) WEF Manual of Practice No.23. ASCE Manual and Report on Engineering Practice No. 87 *Provides a general guide for designing controls for urban runoff on a watershed-wide basis that is not geared toward a specific geographic region. Material covered includes urban runoff effects and control requirements, best management practices, and water quality parameters.*	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 703-296-6000
Water Quality Control Plan (Basin Plan) North Coast Region 1 (1996) *Includes information on beneficial uses, water quality objectives, and water quality implementation plans for the North Coast Region.*	North Coast Regional Water Quality Control Board 5550 Skylane Blvd, Suite A Santa Rosa, CA 95403 707-576-2220 *http://www.swrcb.ca.gov/rwqcb1/*

Table 5
SUSMP Reporting Schedule

Provision	Information to report	Reporting Year(s)
Legal Authority	Summary of review and findings	2003 - 2004
SUSMP Revision[1]	Summary of revision	03 - 04, 04 - 05, 05 - 06 06 - 07, 07 - 08
General Plan Review	Summary of review and findings	2004 - 2005
Code Review	Summary of review and findings	2003 - 2004
Environmental Review Process	Summary of review and findings	2003 - 2004
Guidance Documentation	Submit standard special provisions for City / County contracts	2003 - 2004
	Submit Site Design Guidance (source controls)	2004 - 2005
	Submit guidance on long term funding, inspection and reporting procedures for BMP maintenance	2004 - 2005
Training	Submit summary of training workshops attendees and dates	2004 - 2005
Project Approval	Summarize implementation of SUSMP measures on applicable projects	Annually
Waiver	Summarize projects which were granted a waiver	Annually

[1] Experience in using Best Management Practices and treatment processes during the term of this Permit may show that, in certain situations, some practices and processes will work better than others and/or be more cost effective. In addition, new Best Management Practices and treatment processes, not currently used or available, may become available during the term of this Permit and be more cost effective than existing practices and processes. Other cities, counties and agencies may develop or utilize practices and processes that might be effectively used in the permit area. To encourage innovation and so that scarce public resources can be targeted at the most cost effective practices and processes, during the term of this Permit, each permittee may revise or change its programs, or eliminate existing programs (or parts of programs) and substitute new programs, as determined by each permittee for its particular situation. The permittees shall report on any revisions or substitutions in the Annual Report.

Table 6
SUSMP Implementation Schedule

5.1 Legal authority	Implementation Date
a. Determine if legal authority exists to implement SUSMP.	09/30/03
b. If legal authority does not exist – establish legal authority. Summarize in Annual Report.	06/30/04
c. Review General Plan for conformance to water quality and watershed protection principles and policies. Summarize in Annual Report.	09/30/04
d. Review applicable codes for conformance with SUSMP requirements. Summarize in Annual Report.	06/30/04
e. Revise the environmental review process as needed to evaluate water quality impacts of storm water runoff from new development and redevelopment projects. Summarize in Annual Report.	06/30/04
5.2 Guidance Documentation	
a. Update special provisions/general specifications for County contracts.	06/30/04
b. Develop SUSMP site design guidelines or requirements for developers (source controls).	06/30/05
c. Develop guidance on long term funding, inspection and reporting procedures for BMP maintenance where SUSMP BMPs are implemented.	06/30/05
d. Implement long-term inspection and maintenance program.	06/30/05
5.3 Training	
a. Provide training to staff. Summarize in Annual Report.	04/30/05
b. Provide workshop to the development community on planning procedures, policies, design guidelines and BMPs for storm water pollution prevention.	06/30/05
5.4 Project Approval Process	
a. Implement SUSMP measures on applicable County capital improvement projects within Urban Service Boundary within Permit Boundary which have not yet begun the environmental review process projects.	06/30/05
b. Encourage applicants to implement SUSMP measures on projects.	06/30/04
c. Implement SUSMP measures on applicable projects within Urban Service Boundary within Permit Boundary. Summarize in Annual Report.	06/30/05

6. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

For purposes of this document, Municipal Operations includes the following activities:

6.1 Public Construction Activities Management.
6.2 Landscape and Recreational Facilities Management.
6.3 Storm Drain System Operation and Maintenance.
6.4 Street and Road Maintenance.
6.5 Parking Facilities Management.
6.6 Emergency Procedures.

6.1 PUBLIC CONSTRUCTION ACTIVITIES MANAGEMENT

There are three different County departments that manage public construction projects: General Service Department/Architect's Division, Regional Parks Department and Department of Transportation and Public Works. The three departments manage three different types of projects: General Service Department/Architect's Division manages County building construction; Regional Parks manages County park- related projects; and Department of Transportation and Public Works manage road, refuse and transportation related projects. This means each department performs a different type of construction. Because the types of construction are different, each department has its own type of construction provisions for storm water management. Therefore, there is no measurable goal to compose standard provisions for storm water Best Management Practices (BMPs) that would apply to all of these departments. Please note: Each department develops contract documents based on standards of different source agencies that work with their respective type of development.

6.1.1 CONTRACT DOCUMENTS

General Services Department/Architect's Division
The Architect's Division manages public construction projects for the general government facilities of the County of Sonoma. Projects range in size from a few hundred dollars to several million dollars. Most projects are interior remodeling and deferred maintenance of existing buildings and structures. There are a few projects that result in new buildings, which are considered major projects.

Small construction projects (less than $25,000) are completed with in-house Facility Operations Division construction crews. All other projects are completed by licensed contractors selected through competitive public bidding.

All construction projects managed by the Architect's Division are designed by licensed architects and engineers who prepare complete construction documents (plans and specifications) which are submitted for building permits (including grading permits) from the County of Sonoma Permit and Resource Management Department (PRMD).

Where applicable, projects comply with California Environmental Quality Act (CEQA) and sometimes National Environmental Policy Act (NEPA) when there is federal funding or permitting. Environmental review, initial studies and other required documentation are

provided by PRMD through an agreement with the Architect's Division. Any and all requirements, including storm water management during construction, that come from code or environmental review are incorporated into the construction documents and become part of the agreement with the construction contractor. Each project has a Project Manager assigned to it to oversee the project and assure the construction documents are being followed.

The Project Manager is responsible to confirm that any mitigation-monitoring program established through the environmental review process has been completed. At the end of the project, the Project Manager certifies that the mitigation measures have been implemented.

Construction contract documents for major projects include provisions for BMPs in several areas related to storm water and pollution control. (Sheriff Building documents are used as an example. These documents are based on standard documents for major projects. Standard documents for smaller projects are being updated and made consistent with the major project standards). The following specification sections in the Sheriff's building construction contract include applicable provisions:

1. Supplemental General Conditions Section 00800 covers provisions for Dust Control and Disposal of Surplus Soils, Sediment Control, Groundwater, and Flammable Liquid Storage.
2. Supplemental General Conditions – Hazardous Materials Section 00805 covers procedures for location, removal, remediation, disposal and abatement of hazardous materials.
3. Regulatory Requirements Section 01410 covers the regulatory requirements and agencies that apply to the project.
4. Regulatory Requirements for Hazardous Materials Section 01411 covers the regulatory requirements and agencies relative to hazardous materials that apply to the project.
5. Testing and Inspection Section 01450 covers the requirements and procedures for testing and inspecting the work.
6. Construction Facilities and Temporary Controls Section 01500 covers controls for dust, pollution, water, erosion and storage.
7. Individual technical specifications prepared by the architects and engineers include provisions for the storage, application and clean up of specific materials.

Standard contract documents for all projects are being updated and provisions for storm water management during construction will be reviewed and modified to include appropriate BMPs. This will include review of the documents for activities related to inspection of construction sites to confirm that storm water requirements are being met.

Regional Parks Department

Public construction activities undertaken by the Regional Parks Department includes a variety of facilities, including vehicle parking areas and access roads, restrooms, trail systems, athletic fields, and miscellaneous appurtenant structures and facilities including storm drain improvements. The majority of public construction projects undertaken by the Regional Parks Department result in less than one acre of grading.

The Regional Parks Department applies for grading and drainage permits from PRMD on new construction projects, and in cases of projects over 1 acre, applies for coverage under the Construction General Permit from the State Water Resources Control Board. Regional Parks Department uses Caltrans Standard Specifications.

Contractors working with Regional Parks Department Project Managers are required to ensure that appropriate storm water management mitigation measures are in place during construction at times of the year when construction activities may be directly affected by rain and runoff. Following completion of all construction projects Regional Parks staff ensure that contractors install appropriate erosion and sediment control measures and mitigation measures. Contractors are also required to provide a Storm water Pollution Prevention Plan (SWPPP) for approval as part of the permit requirement. The Regional Parks contract documents for projects that include earthwork and grading work have specifications and plans, where appropriate, that include BMPs.

Although RWB permits are not required on projects of less than 1 acre the standard erosion control and earthwork provisions apply. In addition, Regional Parks Department uses BMPs from the Association of Bay Area Governments "Standards for Erosion and Sediment Control" (ABAG 1982) and the "California Department of Forestry and Fire Protection and Mendocino County Resource Conservation District's Handbook of Forest and Ranch Roads" (1994). This latter document is not only approved by the Department of Fish and Game (DFG), but also mandated by DFG on projects where Regional Parks has utilized DFG funds to reduce sediment loads on creeks and streams. Many of these are small trail projects that have been rebuilt or reconstructed using BMPs that reduce sediment loads.

Public construction projects are designed by in-house staff. Some public construction projects require specific engineering design, which is completed under contract, under the supervision of in-house staff. Construction documents, including plans and project specifications, are prepared by in-house staff. Public construction projects are constructed by licensed contractors selected through competitive public bidding. In-house staff also supervises construction activities and assures the provisions included in the construction documents are being followed.

All public construction projects are subject to CEQA and some are subject to NEPA. In-house staff conducts environmental review, CEQA and NEPA document preparation, and Mitigation Monitoring Plan preparation. Requirements, including storm water management and pollution prevention, that come from code or environmental review are incorporated into the Mitigation Monitoring Plan and the construction documents, becoming part of the agreement with the construction contractor.

The Regional Parks Department currently includes appropriate BMPs that reduce the discharge of pollutants from public construction sites in the design process and construction documents. Some BMPs are developed in consultation with various agencies such as Caltrans, Regional Water Quality Control Board, California Department of Fish and Game, National Fish and Wildlife Service, National Marine Fisheries Service, and the Sonoma County Permit and Resource Management Department. The following published BMP sources are reviewed for incorporation into the Mitigation Monitoring Plan and construction documents, as necessary:

1. Erosion and Sediment Control Field Manual
2. Manual of Standards for Erosion and Sediment Control Measures
3. General Industry Safety Orders
4. Caltrans Standard Specifications
5. Handbook for Forest and Ranch Roads

If required by contract, the contractor will submit a Storm Water Pollution Prevention Plan (SWPPP) before start of work that details temporary BMPs to be used. The contract may also include permanent erosion control/storm water measures.

The Regional Parks Department will review the BMP sources utilized in the design and project specification preparation process for public construction projects. The Regional Parks Department will incorporate the most current BMPs in the project design and project specification process.

Department of Transportation and Public Works (TPW)
TPW manages public construction projects related to the following Divisions:

1. Airport
2. Refuse/Solid Waste
3. Roads - Capital Improvements
4. Roads – Maintenance
5. Transit

Projects range in size from a few hundred dollars to multi-million dollars and project types vary greatly. Please see below for illustrations of construction types that take place under each division of the Department.

Division	Construction type
Airport	Hangars, runway work, various buildings, support roadways.
Refuse / Solid Waste	Landfills, transfer stations, support building and facilities.
Roads – Capital Projects	Improvements associated with 1,400 miles of roads including pavement, culverts, bridges, maintenance yards and facilities, retaining walls, slide repairs, etc. Generally these are major projects performed by contractors under TPW design and TPW supervision.
Roads – Maintenance	Maintenance of 1,400 miles of roads including pavement, culverts, bridges, maintenance yards and facilities, retaining walls, slide repairs, etc. Generally, these are smaller projects performed by Department crews.
Transit	Park and Ride lots, maintenance yards, support building and facilities. Generally these projects are performed by contractors under TPW design and under TPW supervision.

Small construction projects (less than $25,000) are completed with in-house crews or under minor contracts. All other projects are completed by licensed contractors selected through competitive public bidding. TPW requires full storm water BMPs on all of its contracts, regardless of acreage.

All construction projects managed by TPW are designed by licensed engineers who prepare complete construction documents (plans and specifications). All TPW projects are required to comply with CEQA and/or NEPA with environmental review, initial studies and other required documentation provided by PRMD. Often the environmental documents are also subject to approval by various state and federal agencies.

Any and all requirements, including storm water management during construction, that emerge from codes and the environmental review process are incorporated into the construction documents and become part of the agreement with the construction contractor.

Each project has a Project Manager assigned to oversee the project and assure the construction documents are being followed. The Project Manager is responsible to confirm that any mitigation/monitoring program established through the permitting process has been completed. At the end of the project, the Project Manager certifies that the mitigation measures have been implemented.

Construction contract documents for major projects include BMPs related to storm water and pollution control developed in consultation with various agencies including Caltrans, Regional Water Quality Control Boards, State Fish and Game, Federal Fish and Wildlife, National Marine Fisheries Service, etc. These documents employ well-accepted BMPs.

Currently, TPW uses the Caltrans Standard Specifications, including:

1. Section 20 on Erosion Control and Highway Planting.
2. Section 7.101G on Water Pollution.
3. Section 7.101H on Use of Pesticides.

Additional project-specific BMPs are developed through the project environmental documents and by consultation with permitting agencies. Performance standards and implementation schedules are included in each project's specifications and permits.

Standard contract documents for all projects are constantly being updated. Provisions for storm water management during construction are continually being reviewed and modified to include appropriate, up-to-date BMPs. The measurable goals involve review of contract documents for activities related to inspection of construction sites to confirm that storm water requirements are being met.

<u>Measurable Goals/Implementation Schedule</u>

a. Continue to reference appropriate BMPs in construction documents for public construction projects/ongoing.
b. Review and update Construction Standard Documents to ensure they include the most recent BMPs/June 30, 2005.

c. Require all public construction projects to implement appropriate storm water BMPs/June 30, 2005.

6.1.2 COMPLIANCE WITH STATE GENERAL CONSTRUCTION PERMIT

General Services Department/Architect's Division
Regional Parks Department
Department of Transportation and Public Works (TPW)
The County currently complies with the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit). Compliance with the General Permit includes submitting a complete Notice of Intent (NOI) package and preparing a Storm Water Pollution Prevention Plan (SWPPP) for public construction projects disturbing one or more acres of soil.

Measurable Goals/Implementation Schedule

a. Continue to comply with the State General Construction Permit requirements/ongoing.

6.1.3 INSPECTION

General Services Department/Architect's Division
The Project Manager for each project is responsible to observe the work to confirm that it is being completed in compliance with the contract documents. On larger projects, the Project Manager is stationed at the site and observes the construction on a daily basis. For smaller projects, the Project Manager observes the work on a regular basis, at intervals appropriate to the size and complexity of the project. Also, the Architect or Engineer of record provides site observation. For larger projects, an Inspector of Record is hired to provide on going inspections. Testing agencies are hired for special tests and inspections required in the specifications. PRMD provides inspections at the intervals established in the permit. Testing and Inspection Section 01450 in the contract documents describes the requirements and procedures.

For large projects, response to any lack of erosion control measures is almost immediate, as staff is onsite and can quickly and efficiently bring any lapses to a contractor's attention. Construction documents require the general contractor to comply with the requirements for storm water management, although no enforcement action has been necessary to date. Should the RWB find it necessary to issue a citation to the County for any non-compliance, the contract documents require the general contractor to reimburse the County for any fines levied on the County and the contractor is ordered to complete any necessary mitigating measures at once. If the work is not completed within the 30 day billing cycle, the County will withhold that portion of the contractor's request for payment needed to complete work. In the event of an imminent discharge, the County will use its own forces to remedy the situation. The cost of such operations is deducted from the contractor's next pay request. As mentioned above, no such action has ever been required on any County General Services project. The contractors who compete for projects such as the Juvenile Justice Center (JJC) and Valley of the Moon Children's Home are of the very highest quality in both engineering and customer services.

Regional Parks Department
The Regional Parks Department currently inspects public construction sites during construction to ensure adherence to construction documents. The timing and frequency of construction site inspection is determined by the particular project, the project location, the time of year that construction is occurring, and the specific BMPs required for implementation during the construction process.

Regional Parks Department uses by reference in its contract documents the Caltrans Standard Specifications that contain storm water BMPs. The Project Managers, who inspect all of Regional Parks Departments' public contracts, enforce these BMPs. These BMPs are continually being updated, primarily by Caltrans. Regional Parks also creates special situation BMPs as necessary for unusual projects and these are usually developed as part of the environmental review process.

Department of Transportation and Public Works (TPW)
All TPW projects are assigned a Resident Engineer or Inspector. The Resident Engineer enforces the storm water BMPs as specified in the contract document (including compliance with plans, specifications, special provisions and various permits).

If required by contract, the contractor will submit a Storm Water Pollution Prevention Plan (SWPPP) before start of work that details temporary BMPs to be used. The contract may also include permanent erosion control/storm water measures.

TPW uses, by reference in its contract documents, the Caltrans Standard Specifications that contain storm water BMPs. These BMPs are enforced by department Resident Engineers, who inspect all TPW's public construction project contracts. These BMPs are continually being updated, primarily by Caltrans. TPW also creates special situation BMPs as necessary for unusual projects and these are usually developed as part of the environmental review process. All the BMPs are described in written form in the construction contracts.

During construction of the project, the Resident Engineer or Inspector will visit the site on a daily basis. The Resident Engineer inspects the work to ensure the contractor is complying with the contract, including installing erosion control/BMP features per details, specifications or manufacturer's recommendations. The Resident Engineer also tracks the contractor's progress in implementing BMPs to ensure their placement within the time requirements of the contract. During non-working periods, the Resident Engineer or Inspector will monitor the project during rainstorm events to insure the BMPs are in place and functioning.

Measurable Goals/Implementation Schedule

a. Continue to inspect public construction sites during construction activities/ ongoing.

6.1.4 ENFORCEMENT

General Services Department/Architect's Division
The construction contractor submits pay requests monthly to the County for payment. The architect/engineer of record certifies that the pay request is valid. The Project

Manager confirms and approves the pay request. If the contractor has not performed some portion of the work, including any required storm water management, the pay request will be modified to be consistent with actual work completed, and funds will be withheld for work not performed. A ten- percent retention is held until the project is complete. The construction agreement provides that the County may suspend work if the contractor fails to comply with the contract documents, which includes any requirements for storm water management.

Regional Parks Department
The Regional Parks Department, through the General Conditions set forth in the Contract Specifications, has the ability to temporarily suspend work or terminate a contract for failure on the part of the contractor to carry out orders given or to perform any provisions of the contract.

Other remedial actions would include having a different contractor or County forces complete the work and charge the original contractor accordingly. The Regional Parks Department inspection practice provides authority to address non-performance of project specifications, including BMPs included to reduce the discharge of pollutants from public construction sites.

Department of Transportation and Public Works (TPW)
Once construction has begun:

1. The Department of Transportation and Public Works requires that the contractor have materials on hand to implement their storm water BMPs and SWPPP in the event of an unexpected storm.
2. If there is a prediction of rain, the contractor is reminded of the SWPPP or elements of their plan that need to be enacted, depending on the progress of the work and vulnerability of the site.
3. If the contractor has not completed the erosion control/SWPPP work and a storm occurs, the Resident Engineer or Inspector will order the contractor to undertake emergency measures to prevent runoff damage.
4. Certain projects are only allowed to work during specific times of the year to prevent damage to the ecosystem. An example would be bridge work in streams. For these projects, Department Inspection forces warn the contractor of impending deadlines needed to cease work and winterize the project.
5. If the contractor does not respond by the required date, the Resident Engineer or Inspector will withhold progress payments until the contract is in compliance.
6. If the contractor is not able or willing to perform, TPW has the option of ordering the contractor to stop work or to undertake emergency erosion control/SWPPP work with County forces and then back-charge the contractor.

<u>Measurable Goals/Implementation Schedule</u>

a. Continue to enforce construction documents containing the most recent BMPs, including the provisions set forth regarding failure to carry out orders given or to perform the provisions of the contract/ongoing.

6.1.5 TRAINING OF TARGETED STAFF

General Services Department/Architect's Division
Project Managers currently receive ongoing in-service training regarding project management procedures and enforcement of contract documents.

Project management staff will receive in-service training on the new BMPs and standard contract documents, including their responsibility to observe the work to confirm that the requirements are being met.

Regional Parks Department
The Regional Parks Department staff has participated in the Erosion Control Management training sponsored by the Regional Water Quality Control Board, North Coast Region.

The Regional Parks Department will develop and implement training for staff who may be involved in BMP implementation. The training may include topics such as:

1. Requirements of the State General Construction Permit;
2. Incorporating applicable BMPs in the design process and construction documents;
3. Inspecting construction sites for BMP implementation;
4. Frequency and timing of BMP inspections;
5. Enforcement of construction documents; and
6. Remedial action.

Department of Transportation and Public Works (TPW)
Depending on the needs of the project, TPW employs either in-house permanent full-time inspectors or expert consultant construction management services, both of which are experienced with current BMPs.

The Regional Water Quality Control Boards usually host several workshops annually targeted at construction personnel. TPW utilizes these for keeping current with new BMPs and their applications. The Department's goal is for construction personnel to attend a workshop every year. At a minimum, TPW requires construction inspection personnel to attend a workshop at least every other year. Staff also attends similar seminars offered through private industry and other agencies. New or inexperienced construction inspection staff are required to attend at least one workshop. In addition, an experienced person is assigned to aid new staff with BMP implementation and monitoring.

Each season, TPW staff reviews the various elements of the SWPPPs used on past projects to evaluate their effectiveness. TPW also reviews erosion control measures visible on projects constructed by other agencies in the area to observe and learn about new or alternative techniques.

TPW also relies on published reference manuals for detailed information. These include:

1. "Erosion and Sediment Control Field Manual" by California Regional Water Quality Control Board San Francisco Bay Region.
2. "Erosion and Sediment Control" by the Association of Bay Area Governments.
3. Storm Water Quality Handbooks Series prepared for and distributed by Caltrans:
    i. "Project Planning and Design Guide".
    ii. "Storm Water Pollution Prevention (SWPPP) and Water Pollution Control Program (WPC) Preparation Guide".
    iii. "Construction Site Best Management Practices (BMPs) Guide".
    iv. "Construction Contractor's Guide and Specifications".

TPW will continue to enhance its in-service training for staff members involved in BMP implementation. The in-service training may include topics such as incorporating applicable BMPs in the design process and project specifications, inspecting construction sites for BMP implementation, frequency and timing of BMP inspections, enforcement of BMPs, and remedial actions.

Measurable Goals/Implementation Schedule

a. Continue to provide training to all applicable staff involved in public construction projects/ongoing.
b. Provide annual training to key personnel to enhance construction BMP knowledge/annually.

6.2 LANDSCAPE AND RECREATIONAL FACILITIES MANAGEMENT

Regional Parks Department

The Regional Parks Department manages 41 facilities totaling approximately 6,452 acres. The facilities include community and neighborhood parks, regional recreation areas, Open Space parks, and trails. Many of the Regional Parks Department facilities include infrastructure elements such as parking areas, minor road systems, and storm drainage systems.

6.2.1 MANAGEMENT OF PESTICIDES, FERTILIZER AND NATIVE VEGETATION

Regional Parks Department

The Regional Parks Department currently adheres to all federal, state, and local regulations that govern fertilizer, pest control, and fire management in all applicable facilities. Weekly and monthly staff meetings are conducted, one purpose of which is to reinforce the proper use of pesticides, herbicides, and fertilizers. The Department follows chemical application procedures, such as:

1. Chemical applicators comply with standardized protocol for routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers.
2. Chemical applicators comply with the State Water Resources Control Board guidelines and monitoring requirements for application of aquatic pesticides to surface waters (WQ Order No. 2001-12 DWQ).

3. Chemical applicators do not apply pesticides and fertilizers immediately before, during, or after a rain event or when water is flowing off the application area.
4. Chemical applicators do not use or store banned or unregistered pesticides.
5. Chemical applicators are certified by the California Department of Food and Agriculture or are under the direct supervision of a certified pesticide applicator.
6. Monthly reports are submitted to the County of Sonoma Agricultural Commissioner.

The Regional Parks Department currently utilizes four permanent chemical storage areas and utilizes temporary chemical storage areas as needed for specific activities. The permanent and temporary chemical storage areas comply with federal, state, and local regulations. Current practices include:

1. Banned or unregulated chemicals are not stored.
2. Chemicals are stored indoors, or are stored outdoors under cover on a paved surface.
3. Required signage is installed and maintained.
4. Secondary containment is used where appropriate.
5. Chemical storage areas are inspected regularly, including annual inspection in compliance with the City of Santa Rosa Fire Department.

The Department complies with federal, state, and local regulations regarding the disposal of pesticides, herbicides, and fertilizers. Chemical disposal is handled through a vendor, Safety-Kleen, Co.

Additionally, the Regional Parks Department is currently implementing a program to reduce the use of pesticides, herbicides, and fertilizers.

Reduced chemical use also reduces the chemical storage and disposal needs, which also reduces chemical handling and the potential for spills. Elements of the chemical reduction program include:

1. Reduce the toxicity level of pesticides, herbicides, and fertilizers.
2. Reduce the actual number of pesticides, herbicides, and fertilizers used.
3. Implement Integrated Pest Management Program practices over chemical solutions.

The Regional Parks Department is working with the Agricultural Commissioner to identify pesticides, herbicides and fertilizers the Department is using that have an impact on storm water. In addition to following state and federal guidelines for the use of these products, our program is to work with the Agricultural Commissioner to identify alternative products or discontinue use of products that could discharge pollutants into storm water. This has yet to be implemented and the goals are to develop a comprehensive program for items 1, 2, 3, as listed as they relate to the Permit Boundary.

The Regional Parks Department also requires all vendors and contractors to adhere to federal, state, and local regulations that govern pesticide, herbicide, and fertilizer use, storage, and disposal by including appropriate provisions in project specifications and agreements. The activities of vendors and contractors are inspected to ensure that the

provisions are being adhered to. The timing and frequency of inspection is determined by the particular activity, the activity location, the time of year that the activity is occurring, and the specific provisions that require implementation. The Regional Parks Department inspection practice provides authority to address non-performance by documentation, sending notice to the contractor, and withholding payment for non-performance.

Maintenance staff participates in the Integrated Pest Management Program (IPMP) and receives annual training and certification. Currently, staff maintains their own training and certification records. Regional Parks Department maintenance staff has been participating in IPMP training and has been implementing IPMP practices as appropriate. These practices include utilizing mulch in landscaping and on recreational facility grounds to reduce the need for herbicide and fertilizer use. The use of mulch, as part of the IPMP implementation, results in the causal effect of water conservation in landscaping and recreational facility grounds because less water is used to irrigate mulched plantings.

The Regional Parks Department designs its projects to minimize potential environmental impacts from a given project, including the impacts associated with loss of native vegetation. Complete vegetation loss cannot be avoided for some projects.

The Mitigation Monitoring Plan, which is prepared for some CEQA documents, includes requirements for replacing trees, shrubs, and native habitats adversely affected by a project. These re-vegetation plantings are generally completed using native vegetation.

The Regional Parks Department will create a database to maintain staff training and certification records associated with pesticide, herbicide, and fertilizer use, storage, disposal, and reduction. Currently, these records are maintained by individual employees.

The Regional Parks Department will develop written guidelines to address the following landscape and recreational facility items:

1. Pesticide and fertilizer management.
2. Native plant retention and planting.

Regional Parks Department current practices are to retain the use of native plants and to re-vegetate areas with native plants that are disrupted. These plants are used in lieu of non-native plants. The Department water conservation program is to utilize drought resistant plants and minimize turf areas at non-athletic facilities. This program helps to reduce water use needed for irrigation.

<u>Measurable Goals/Implementation Schedule</u>

a. Continue to implement chemical use, storage, disposal, and reduction practices/ongoing.
b. Continue to follow the current practices regarding retention and planting of native vegetation and water conservation/ongoing.
c. Develop a database for maintaining staff training and certification associated with pesticide and fertilizer management/June 30, 2008.

d. Develop written guidelines for pesticide and fertilizer management/June 30, 2008.

6.2.2 LANDSCAPE WASTE DISPOSAL

Regional Parks Department
The Regional Parks Department currently complies with known regulations regarding disposal of vegetation and debris. Generally, vegetation and debris are taken to the Sonoma County Landfill, utilizing the County's waste recycling program to the greatest extent possible. Vegetation is disposed of at the mulching facility and recyclable materials are recycled. A majority of Regional Parks Department facilities include separate containers to collect recyclable items from facility users.

The Regional Parks Department will develop written guidelines to address landscape waste disposal.

Measurable Goals/Implementation Schedule
a. Continue to implement the current practices regarding proper disposal of landscape waste/ongoing.
b. Develop written guidelines to address landscape waste disposal/June 30, 2008.

6.2.3 RECREATIONAL WATER BODIES

Regional Parks Department
The Regional Parks Department currently manages six recreational water bodies. These include non-swimming/boating water bodies that are maintained for natural habitat value and the swimming/boating water bodies at Spring Lake Regional Park and Healdsburg Veteran's Memorial Beach. The Regional Parks Department monitors applicable water bodies in conformance with federal, state, and local regulations. The non-swimming/boating water bodies are monitored for toxic infiltration and pesticide residuals. The swimming/boating water bodies at Spring Lake Regional Park and Healdsburg Veteran's Memorial Beach are monitored for coliform and fecal coliform, pesticide infiltration, and chlorine levels. Monitoring reports are maintained and submitted to the County of Sonoma Health Department.

The Regional Parks Department does not have any recreational water bodies or swimming pools within the Permit Boundary aside from streams that run through parks.

6.3 STORM DRAIN SYSTEM OPERATION AND MAINTENANCE

6.3.1 CLEAN AND INSPECT STORM DRAIN PIPES AND INLET STRUCTURES

Regional Parks Department
The Regional Parks Department inspects storm drainpipes and inlet structures on a yearly basis prior to the onset of the wet-weather season. Debris is removed from storm drainpipes and inlet structures as needed. This debris is disposed of in compliance with federal, state, and local regulations.

Department of Transportation and Public Works (TPW)
Urban (Closed Pipe) Drainage Systems: Maintenance requirements for urban closed pipe drainage systems is minimal. These systems typically are not prone to blockage and flooding. TPW performs annual inspections of inlets and culverts that have historically been a problem, and cleans them as necessary.

Rural (Open) Drainage Systems: Inspection of open drainage courses and cross-culverts is limited to cleaning and servicing them to minimize damage from flooding and erosion. Cross-culvert bottom conditions are typically consistent with the natural drainage courses upstream of the culvert. Cleaning typically involves removal of debris to prevent flooding and repair of those portions of the system that have been damaged by erosion.

Maintenance foremen are assigned to specific areas of the County and are typically aware of areas where past problems have occurred. New inlets and drainage facilities are typically associated with new subdivisions. With the County's policy of city centered growth, new subdivisions within the unincorporated portions of the County are relatively few and are obvious to the maintenance personnel working within their maintenance jurisdiction. The result is that maintenance personnel are well aware of areas that need specific attention.

Any new closed drainage system would be included in the inventory of closed drainage systems being developed as part of this permit and discussed elsewhere in this permit. Please note that modern subdivisions are designed to be relatively problem free.

The Regional Water Quality Control Board indicated that implementation of the permit requirements would take place gradually to allow the jurisdiction to build up personnel and equipment to implement the requirements. El Verano and Boyes Hot Springs are the most urbanized of the County maintained areas within the MS4 General Permit Boundary, and thus have been selected to start the formal storm drain inspection program.

Measurable Goals/Implementation Schedule

a. Continue annual inspection of problem inlets and clean as necessary/ongoing.
b. TPW to develop a written program to pro-actively inspect closed pipe drainage systems/December 31, 2005.
c. TPW will begin implementation with annual inspections of 20% of the closed drainage systems within El Verano and Boyes Hot Springs areas. Systems will be cleaned as necessary to prevent pollutants from entering receiving waters/ June 30, 2008.

6.3.2 OPEN CHANNEL OR ROADSIDE DITCH INSPECTION AND MAINTENANCE

Regional Parks Department
The Regional Parks Department inspects open channels and roadside ditches within its facilities on a yearly basis prior to the onset of the wet-weather season. Debris is removed from open channels and roadside ditches as needed. This debris is disposed of in compliance with federal, state, and local regulations.

Department of Transportation and Public Works (TPW)
Open channels under the jurisdiction of TPW are typically located within the road right-of-way and are typically a combination of roadside ditches and short sections of culverts. Typically, TPW does not maintain natural or manmade drainage ways outside of the road right of way. TPW does inspect roadside ditches and associated short culverts on an annual basis to maximize drainage capacity and minimize erosion. Trash and debris are removed to the extent that they may block ditches or cross-culverts and cause flooding. In certain heavily traveled areas, TPW will clean drain facilities for aesthetic purposes.

Measurable Goals/Implementation Schedule

a. Continue to inspect roadside ditches on an annual basis and remove trash and debris as necessary to prevent or minimize flooding and erosion/ongoing.

6.3.3 STORM DRAIN LABELING

Regional Parks Department
Department of Transportation and Public Works (TPW)
The County currently does not label storm drain inlets.

The County will survey its facilities and identify storm drain inlets and will develop and implement a storm drain inlet-labeling program. The future storm drain inlet-labeling program may include the following elements:

1. Identify the stenciling or labeling to be used.
2. Establish a priority system for applying stencils or labels.
3. Implement actual stenciling or labeling of storm drain inlets.
4. Develop a procedure for ongoing inspection of the legibility of storm drain inlet stencils or labels.
5. Reapply storm drain inlet stencils or labels as needed.
6. Develop a record-keeping database for the storm drain inlet-labeling program.
7. Certain inlets that obviously drain to a nearby ditch are not proposed for labeling.

Measurable Goals/Implementation Schedule

a. Develop storm drain labeling program/June 30, 2005.
b. TPW to require new storm drain inlet labeling for subdivisions in all urban areas during installation/ongoing.

6.4 STREET AND ROAD MAINTENANCE

6.4.1 STREET SWEEPING FREQUENCY

Regional Parks Department
The Regional Parks Department currently maintains the minor paved road systems and parking areas within its facilities. The Regional Parks Department also maintains paved road systems parking areas including the Gateway Plaza in Sonoma and the Boyes Hot Springs Park and Ride Lot. The paved road systems within Regional Parks Department jurisdiction are not considered city streets for urban traffic and debris is removed as necessary. Debris is manually removed from paved road systems and parking areas after

storm events. Debris is disposed of in compliance with federal, state, and local regulations.

Department of Transportation and Public Works (TPW)
TPW currently sweeps the majority of the 1,400+ miles of county roads, both rural and urban. Residential roads are swept an average of 3 times per year using the two Department-owned mobile pick-up sweepers. TPW also operates commuter parking lots, road maintenance yards and the main County airport. The bus-parking yard is swept several times a year, and the other lots are attended regularly by a landscape maintenance contractor including sweeping if needed. County sweepers operate full time throughout the year. The ability to meet a fixed schedule can be affected by:

1. The need to divert staff to respond to other needs, such as complaints from the public for specific unusual needs.
2. Emergency or unforeseen problems.
3. The need to support maintenance projects such as chip sealing and ditch cleaning follow-up.
4. Equipment down time necessary for maintenance and repairs.

All debris generated by street sweeping goes to the County's Central Landfill facility. Most often, the debris is transported directly in the sweeper units themselves. Occasionally sweeping debris will be stockpiled and transported in dump trucks if the quantity of debris warrants.

Measurable Goals/Implementation Schedule
a. Continue sweeping intersections and various other paved facilities upon request/ongoing.
b. TPW to implement the current street sweeping plan described in Section 6.4.1/ongoing.
c. TPW to sweep residential areas within Permit Boundary that drain to closed pipe systems once before each rainy season/September 1, 2007.

6.4.2 MATERIALS MANAGEMENT

Department of Transportation and Public Works (TPW)
Street and road maintenance operations may include saw-cutting of pavement, paving and the use of concrete materials in addition to natural material, trash and debris removal discussed above. Best Management Practices to address how to manage the materials resulting from each of these special activities is described below:

Saw-cutting: Saw-cutting activities are performed only in dry weather, to the extent feasible. However, emergency sewer/water repairs must be performed during any weather condition. Saw-cutting slurry is either vacuumed or contained and disposed of at an appropriate location. Any spills from equipment or activity is disposed of in accordance with BMPs.

Paving: Paving activities are performed only in dry weather, to the extent feasible. However, pothole patching may occur in the rainy season when there is a potential safety hazard. Paving materials are prevented from entering the storm drain system during

paving operations and are stored away from drainage areas. Paving equipment is cleaned away from the site at an appropriate area.

Concrete: Concrete trucks are washed off-site or in designated areas on-site, so that there is no discharge of concrete wash water into the storm drain system. Wash water from exposed aggregate installation is contained for proper disposal. Concrete materials are stored under cover away from drainage areas. Only the required amount of concrete is mixed for any project.

The following good housekeeping practices are implemented by TPW to properly manage wastes generated during street and road maintenance activities:

1. Debris is prevented from entering the storm drain system.
2. Spills and leaks are cleaned up immediately using dry methods to the maximum extent feasible.
3. Dry materials and residue from cleaning operations are swept up.
4. Non-hazardous dry waste is collected into designated, leak-proof containers and disposed of properly.
5. Trash, litter and debris from job sites are cleaned up and disposed of promptly.
6. Work vehicles and equipment are inspected regularly for leaks.
7. Stockpiled materials are placed away from catch basins, storm drain inlets, drainage paths and natural waterways.
8. Stockpiled materials are bermed and tarped during rainy or windy weather.
9. Stockpiles are inspected regularly and after significant rain events.
10. Maintenance-related products are applied and stored in accordance with manufacturer's instructions and proper safety measures.
11. Maintenance-related products are stored in labeled containers with covers.
12. Potential polluted debris, silt and vegetation debris generated by street and road maintenance is typically disposed of at the Sonoma County Central Landfill.
13. Asphalt from street or road repair is recycled to the maximum extent practicable.
14. Natural sediments and clean materials are disposed of in various ways including: placement at County operated landfills, placement at the Korbel fill site, or placement on private land, all in accordance with County grading permit requirements.

Measurable Goals/Implementation Schedule

a. Continue to implement current good housekeeping practices regarding materials management/ongoing.

6.4.3 TRAINING OF TARGETED STAFF

Regional Parks Department

The Regional Parks Department currently conducts weekly and monthly staff meetings, one purpose of which is to reinforce current practices regarding streets and road maintenance. The Department will review the BMP sources utilized in the streets and road maintenance, incorporate the most current BMPs into written guidelines and procedures, and develop and implement training programs.

Department of Transportation and Public Works (TPW)
TPW currently conducts biweekly road-crew tailgate meetings. One purpose of these meetings is to communicate and reinforce NPDES storm water BMPs. The Department will review the BMP sources utilized in street and road maintenance and incorporate the most current BMPs in the written guidelines and procedures.

In November 2001, the County sponsored a workshop on the Endangered Species Act 4(d) Rule for steelhead. At that workshop, the Board of Supervisors directed TPW and Regional Parks to work with "FishNet 4-C counties" to develop a routine road maintenance standards manual that addresses fish protection while providing for public safety. Since that time, TPW and Regional Parks have continued to work with the FishNet 4-C consultant and other counties to shape these standards.

It is anticipated that the resulting manual will address NPDES related activities such as culvert cleaning, culvert installation, landslide removal, stockpiling, roadside ditch cleaning, and stream bank stabilization. A final draft of this manual is anticipated during 2004.

Measurable Goals/Implementation Schedule

a. Regional Parks Department to continue meetings to discuss street and road maintenance activities throughout the permit period/ongoing.
b. TPW to continue biweekly road-crew tailgate meetings to discuss streets and road maintenance activities throughout the permit period/ongoing.
c. TPW to review current street and road maintenance practices, including BMPs related to materials management/ongoing.
d. TPW to complete draft routine road maintenance standards manual that addresses water quality and fish protection, while providing for public safety. This is a collaborative effort with other counties/a draft is expected during 2004/2005.
e. Analyze draft manual for fiscal impacts and return to the Board of Supervisors for policy direction/this step is anticipated in 2004/2005.

6.5 PARKING FACILITIES MANAGEMENT

6.5.1 PARKING LOT SWEEPING

Department of Transportation and Public Works (TPW)
Regional Parks Department
See Section 6.4.1, Street Sweeping Frequency.

6.5.2 PARKING LOT SPILL CLEAN-UP

Department of Transportation and Public Works (TPW)
Debris spills or hazardous materials are cleaned up by TPW maintenance staff. If the spill is severe or of a unique nature, a contractor may be used for clean-up. If needed, maintenance personnel would report the spill by calling 911. Some of the County Park and Ride lots have surveillance cameras that are monitored by the TPW bus dispatcher and these may be used to identify the party causing the problem so that appropriate action may be taken.

Regional Parks Department
The Regional Parks Department currently cleans up spills and disposes of cleaned up material in accordance with current local, state, and federal regulations. The Regional Parks Department contacts emergency services and/or local fire departments for spills that may be hazardous materials. Non-toxic materials are disposed of at County disposal sites. The Regional Parks Department responds to spill clean-up needs immediately upon notification of the spill.

Measurable Goals/Implementation Schedule

a. Continue to clean up and dispose of spills in paved parking areas within County jurisdiction in accordance with the most current BMPs/ongoing.

6.5.3 COUNTY MAINTENANCE FACILITIES

Regional Parks
The Regional Parks Department currently performs minor maintenance activities at its facilities within the permit boundary. BMPs are used to prevent storm water pollution as appropriate.

There are no County road yards within the MS4 General Permit Boundary.

Measurable Goals/Implementation Schedule

a. Develop and implement Storm Water Pollution Prevention Plans or similar pollution prevention practices for County maintenance facilities/June 30, 2008.

6.6 EMERGENCY PROCEDURES

Department of Emergency Services (DES)
Emergency procedures recognize that public health and safety are the highest priority when conducting emergency response activities; however, such procedures should protect surface water quality by incorporating appropriate BMPs into emergency response activities.

DES is responsible for the County's Emergency Operations Plan. The Emergency Operations Plan is found in the Sonoma County Operational Area Hazardous Materials Incident Response Plan (commonly known as the "Area Plan"). The Area Plan was last updated in August 2000 and again in August 2003. The Area Plan provides the following:

1. Describes pre-emergency preparations, concept of operations, organizations and supporting systems required to implement the plan.
2. Provides for a coordinated and integrated response to hazardous materials accidents, releases or threatened releases.
3. Defines roles and responsibilities and authority of participating agencies.
4. Establishes lines of authority, communication, and coordination when the plan is implemented.
5. Confines or restricts the effects of an immediate hazardous materials incident by restricting its expansion and/or the precipitation of secondary incidents.

6. Provides for accurate and timely information and issuance of emergency instructions concerning the release or threatened release of a hazardous material to the news media and the general public.
7. Establishes responsibility and provisions for training of emergency response personnel.
8. Provides for evacuation planning.
9. Provides a listing and description of available emergency response supplies and equipment.
10. Provides for incident evaluations and follow-ups.

The Area Plan provides guidance to emergency responders to follow proper procedures to minimize contamination of storm water systems.

The Sonoma County/Operational Area Emergency Operations Plan addresses the planned response to extraordinary emergency situations associated with large-scale disasters affecting the Sonoma Operational Area. It accomplishes the following:

1. Establishes emergency management organization necessary for response to any significant emergency or disaster affecting Sonoma Operational Area.
2. Establishes the overall operational concepts associated with the management of emergencies.

The Sonoma County Oil Spill Contingency Plan describes policies and procedures to be utilized in the event of an oil spill in a navigable waterway.

Copies of the Area Plan, Emergency Operations Plan and Spill Plan are maintained in DES offices. Emergency responders for DES also keep copies of the Area Plan and Emergency Operations Plan in their response vehicles.

DES routinely works with other agencies in planning for and responding to hazardous materials incidents. Examples of the agencies that DES works with include the Sonoma County Sheriff, Department and Transportation and Public Works, United States Coast Guard, California Highway Patrol, California Department of Toxic Substances Control and Santa Rosa Fire Department.

The Area Plan update was completed in August 2004. It was reviewed for improvements related to storm water pollution concerns.

The Emergency Operations Plan is next due to be updated in November 2005, although it may be modified at an earlier date if necessary. It will also be reviewed for improvements related to storm water pollution concerns.

The Spill Plan was reviewed in 2003. Improvements related to storm water pollution prevention are included. Any necessary revisions and substantial changes will be forwarded to the Administrator of the Office of Oil Spill Prevention and Response (OSPR) in August 2003.

<u>Measurable Goals/Implementation Schedule</u>

a. Continue to follow Area, Emergency Operations and Spill Plans/ongoing.

b. Review and update Area Plan/August 31, 2004.
c. Review and update Emergency Operations Plan/November 30, 2005.
d. Review and update Spill Plan/August 31, 2003.
e. Include information about Plan updates in Annual Reports/annually.
f. Continue to work with other agencies and County departments in planning for and responding to emergencies involving releases or threatened releases of hazardous materials throughout the permit term/ongoing.

7. OTHER COUNTY PROGRAMS

7.1 LANDSCAPE AND AGRICULTURAL INDUSTRIES

The County Agricultural Commissioner's Department receives monthly summary pesticide use reports from users throughout the County regarding the use of pesticides. These reports document the name and manufacturer of products applied and their registration numbers, the total product used and the number of applications performed in a given month. Reports are forwarded electronically to the California Department of Pesticide Regulation. Golf courses and parks as well as agricultural and residential pesticide users report their pesticide use to the Agricultural Commissioners office.

The Agricultural Commissioner's office continues its annual information update to pesticide users who visit the office when applying for pesticide identification numbers, restricted material permits and when conducting annual registrations of maintenance gardeners and pest control businesses. Safe use and storage of pesticides and hazardous waste is discussed during these office visits. The Agricultural Commissioner's office also gives out the documents and brochures pertaining to pesticide and hazardous material during these office visits.

The Agricultural Commissioner's staff conducts a two-hour pesticide laws and regulations and vertebrate pest control workshop each December, which is attended by approximately 250 growers who need continuing education hours in order to maintain their Private Application Certification. Additionally, ten hour-long training sessions are conducted in the Spring and Fall Semester at Santa Rosa Junior College to provide continuing education for license and certificate holders.

Education of the general public occurs when citizens contact the Agricultural Commissioner's office or attend the numerous seminars at which the Agricultural Commissioner's staff speak. Four recycling days in the spring and fall are held for plastic pesticide/chemical containers.

The Agricultural Commissioner's office continues to conduct inspections as scheduled, and the Agricultural Commissioner's staff continues to respond to all complaints concerning pesticides.

<u>Measurable Goals/Implementation Schedule</u>
a. Summarize the activities of the pesticide use program in the Annual Report/ annually.

7.2 VINEYARD PLANTING/REPLANTING COMPLIANCE

Agricultural Land Use activities are not subject to this permit. However, agricultural activities are described here because they help meet the goal of reducing sediment in storm water runoff. The goals listed are optional.

Agricultural Commissioner's Office staff review vineyard planting and replanting plans, per the requirements of Article V of Chapter 30 of the Sonoma County Code. Article V of Chapter 30 of the Sonoma County Code requires notification to the County Agricultural Commissioner prior to planting or replanting a vineyard to request review of that planting or replanting. Based on the average percent slope of the site, new vineyard developments on slopes of 10% or greater with highly erodible soils or 15% or greater on less erodible soils, or vineyard, replants on slopes of 15% or greater on highly erodible soils or 30% or greater on less erodible soils (level II and III) requires a certified erosion and sediment control plan developed by a registered civil engineer. Slopes greater than 50% are prohibited from being developed for new vineyard planting. Sites on slopes of 10% or less on highly erodible soils or 15% or less on less erodible soils (level I) require a twenty-five (25) foot riparian setback, a fifty (50) foot riparian setback is required on all other sites (level II and III). Initial vineyard planting work shall be carried out between April 1 and November 15 with winterization of the site by November 1 for all new vineyard plantings, and between April 1 and November 15 for vineyard replants.

All vineyard development work shall be carried out according to the notification and approved certified Erosion Control Plan. All disturbed areas on the vineyard site shall be protected during the rainy season.

When reviewing these vineyard planting/replanting erosion control plans, Agricultural Commissioner staff uses the "Erosion and Sediment Control Field Manual", by San Francisco Bay Regional Water Quality Control Board, the "Vineyard Management Guidelines" by Southern Sonoma County Resource Conservation District, and "Fish Friendly Farming" by Sotoyome Resource Conservation District as guidelines.

<u>Measurable Goals/Implementation Schedule (optional)</u>

a. Summarize the plan review activities of the vineyard planting/replanting program in the Annual Report/annually.

PART III

MINIMUM CONTROL MEASURES
SONOMA COUNTY WATER AGENCY

PREPARED BY:
SONOMA COUNTY WATER AGENCY

April 2004

This section lists the activities that will be performed by the Sonoma County Water Agency (Water Agency) to comply with the six Minimum Control Measures (MCM) required by the MS4 General Permit. The Best Managemant Practices (BMPs) and quantifiable targets described below are summarized in the At-A-Glance table at the beginning of the Storm Water Management Plan (SWMP).

1. PUBLIC EDUCATION AND OUTREACH

Because the Water Agency is not a municipality, its target population cannot be simply defined as the population of citizenry within its limits. The Water Agency's "public" can be divided into different categories. In the most general sense, the Water Agency's "public," and the largest target audience of the public education and outreach activities are the residents of Sonoma County. Residents of the entire county are targeted by many of the outreach activities described below, including the Water Education Program (WEP) and the newspaper column. The segment of the population that use the flood control channels for recreation (e.g. dog walking, bike riding, etc.) is a subset of the population that is specifically targeted by the Water Agency. Another subset of the general public considered in this SWMP are people performing construction activities within the Water Agency right-of-way. The last group of people targeted by this SWMP are the Water Agency employees. Employees receive not only the messages that are conveyed to the general public, but also more specific messages regarding the maintenance of the flood control channels in a manner which is protective of storm water quality.

The Water Agency is currently undertaking a variety of public education and outreach initiatives with the intent of educating the community about water issues with local significance.

1.1 TELEPHONE SURVEYS

The Water Agency has conducted a survey of the general public about many water quality issues, including storm water. The survey was administered by Evans/McDonough Company, Inc., a consultant specializing in opinion research, on September 15-18, 2003. Six hundred twelve Sonoma County voters were interviewed by telephone, by trained professional interviewers.

This survey will be repeated in three to five years, and the first year's results will serve as a baseline. The results of the portions of the annual survey pertinent to storm water and a comparison to the baseline will be included in the annual report. The survey will help to gage whether the Water Agency's messages about water conservation and pollution prevention are being retained by the public.

Additionally, the Water Agency plans to help to fund a regional telephone survey regarding storm water. This survey was developed by the City of Santa Rosa, and will be administered throughout areas of Sonoma County, including the Phase II Permit area, by the Russian River Watershed Association (RRWA). No schedule has yet been developed for this task, though a baseline and follow-up survey a few years later are tentatively planned. When a schedule is developed, it will be included in an Annual Report.

Although surveys are not an exact science, this information may help to quantify whether the public outreach activities are effective.

Quantifiable Targets/Implementation Schedule

a. Include baseline results from Water Agency telephone survey, as it relates to storm water/in first Annual Report.
b. Repeat telephone survey within three to five years/include results in Annual Report.
c. Compare results of baseline and subsequent surveys.
d. Include questions from RRWA survey in next Annual Report.
e. Include schedule for implementation of RRWA survey in Annual Report.

1.2 NORTH BAY WATERSHED ASSOCIATION ACTIVITIES

The Water Agency is a member of the North Bay Watershed Association (NBWA). The mission of the NBWA is to facilitate partnerships across political boundaries that promote stewardship of the North San Pablo Bay watershed resources. This mission is accomplished through meeting NBWA's goals:

1. Bring together local agencies to work cooperatively and effectively on issues of common interest;
2. Be proactive on watershed-based regulation, which increasingly affects areas beyond traditional political boundaries;
3. Work cooperatively to increase eligibility for watershed based funding;
4. Maximize effective use of resources;
5. Enhance the NBWA's influence on local, state, and federal policies and programs; and
6. Educate communities about the importance of watershed stewardship.

NBWA has spearheaded a number of projects which have the goal of improving water quality in the North Bay. The two projects with the greatest relevance to this SWMP are described below.

1.2.1 MERCURY POLLUTION PREVENTION PLAN

In fall 2001, the NBWA began development of a Mercury Pollution Prevention Program (PPP) for the North Bay region. Although neither the Petaluma River nor Sonoma Creek are impaired for Mercury, San Francisco and San Pablo Bays are listed as impaired due to Mercury pollution, and reductions in the input from these two tributaries will help to address the Mercury problem in the Bays. The NBWA Mercury Pollution Prevention Plan will focus outreach materials and implementation of pollution prevention efforts on three significant sources of Mercury: dentist offices, fluorescent lamps, and other Mercury containing products, such as thermometers and thermostats. These sources can contribute to Mercury in wastewater and storm water through improper disposal practices and accidental discharges. Project goals are to develop public outreach materials about Mercury pollution prevention for businesses and residents in the North Bay region and to implement pollution prevention measures to help reduce the release of Mercury into the environment.

Most of Phase 1, the Dental Outreach Program, has been completed. The target audience of this program is dentists and dental technicians. As part of this program, other successful dental outreach programs were researched, dental societies within the NBWA were identified, and outreach materials describing BMPs for Mercury disposal were developed and distributed. Soon, surveys will be distributed to dental offices which will gather information about increases in Mercury amalgam recycling, purchasing of pre-treatment equipment, and other BMPs. To document the success of this program, the number of mailings, presentations, and other activities will be recorded annually. The quantifiable target for this BMP is an increase in amalgam recycling by dental offices, as reported in the survey.

Florescent bulbs will be the focus of Phase 2 of the Mercury PPP, which will be undertaken starting in 2003. The goal of this program is to educate the public about the presence of Mercury in florescent bulbs, and encourage them to recycle the bulbs. This is intended to reduce Mercury introduction into the environment through aerial deposition caused by improper disposal of florescent bulbs. A pilot program scope will be developed by March 2004, which incorporates hardware store drop-off locations, recycling centers, collection procedures and schedules, and community outreach materials. An example of a community outreach sticker is shown in Figure 3. This pilot program will be run for eight months, during which time the program coordinator will keep in contact with retailers and recycling companies. After completion of the pilot program, the effectiveness will be evaluated and a full-scale program may be launched.

1.2.2 THOMPSON CREEK RESTORATION

In November 2001 the NBWA organized creek restoration activities along a stretch of Thompson Creek, which meanders through an open space corridor in the Westridge subdivision area in southwest Petaluma. Thompson Creek is one of the channels within Petaluma for which the Water Agency has responsibility for maintaining the channel capacity, and the city of Petaluma is responsible for mowing the banks for fire protection and public safety. This was the first major revegetation project sponsored by the NBWA, with the dual goals of improving conditions along a stretch of creek and gaining community involvement in the project. The Water Agency provided approximately $25,000 for the project, paying for equipment and materials such as wheelbarrows, shovels, gloves and topsoil. The Water Agency purchased native seedlings, including Oak, Oregon Ash, California Box Elder, Arroyo Willow, California Black Walnut and White Alder. Additionally, Water Agency staff prepared the site, by removing invasive species and pre-digging holes for native seedlings.

The goal of planting 300 trees and 200 shrubs was achieved through the efforts of elementary school students from the nearby Grant School, Cub Scouts, Boy Scouts, Girl Scouts, and neighbors. The volunteers shoveled topsoil into the pre-dug holes and placed tiny seedlings into the ground. The city will install drip irrigation to provide enough moisture during the first three growing years until the plants are well established.

By pulling out invasive species that were blocking the creek and planting native trees on the banks, a healthy riparian canopy will form. That will improve the habitat, presumably attract birds to the area and will help protect the creek from future flooding and erosion.

The Thompson Creek project was a success, and NBWA hopes it will serve as a model for other stream restoration projects in the area.

1.2.3 STORM WATER PROGRAMS

In the upcoming years the NBWA will begin to focus a greater effort on storm water pollution prevention outreach. Details of what this program might consist of were not available at the time of the writing of the SWMP, but will be included in Annual Reports.

Quantifiable Targets/Implementation Schedule

a. Continue Water Agency membership in NBWA/ongoing.
b. Water Agency representative will attend at least one water quality subcommittee meeting per year/ongoing.
c. Continue to participate in implementation of Mercury Pollution Prevention Plan/ ongoing.
d. Support future storm water pollution prevention outreach programs on a regional scope/schedule TBD.

1.3 WATER EDUCATION PROGRAM

Note: The Water Agency's Water Education Program (WEP), described below, is funded by the Water Agency's water contractors and other customers (including the Cities of Sonoma and Petaluma, and the Valley of the Moon Water District). As noted in Part 1, the Water Agency is obligated by contract to keep Water Transmission System funds legally separate from other Water Agency funds and to spend those funds solely on transmission system activities. Accordingly, these funds are not legally available to fund the storm water program or its requirements. The Water Agency's WEP,does however, provide significant water conservation and pollution prevention outreach in Sonoma and North Marin Counties to schools that are serviced by the Water Agency's water contractors and other customers. Therefore, it is included for informational purposes.

Students and teachers in Sonoma and North Marin Counties are the target audience of the Water Agency's WEP. The goal of the WEP is to provide a comprehensive learning experience encompassing watershed issues. Topics include the hydrological cycle, physical properties of water, water supply issues, pollution prevention methods, and treatment of wastewater. Teacher participation in this program is voluntary, but has received an enthusiastic response in past years.

Every year, the Water Agency sends out information packets to teachers in the approximately 125 kindergarten through 12^{th} grade public and private schools in areas serviced by the water contractors and other customers. These packets provide sample materials and an order form for free educational materials. In the past three years, program curriculum has been modified to meet science curriculum requirements for the State of California. The packets also contain information on free workshops available to teachers and allow teachers to sign up for the in-class/field instruction sessions available through the Water Agency.

The Water Agency maintains a lending library for use by eligible schools. It includes books and other materials; the enviroscape model and a groundwater model; California

Alive, a CD ROM on California's biodiversity; and a computer game called Hydroexplore, which focuses on pollution prevention. The watershed model is a "hands-on" exhibit that demonstrates the impacts of urban runoff and the harmful consequences of unmanaged runoff from agriculture, industry, residential consumers, and recreational areas such as parks and golf courses.

The Water Agency's program includes classroom visits and field trips. For school year 02-03, the Water Agency's classroom instruction program was as follows:

Kindergarten : Teacher training
Grades 1 & 2: Field study programs are being offered at the Environmental Discovery Center at Spring Lake Regional Park.
3rd Grade: This program includes two, 60 minute lessons conducted by Water Agency staff in your school classroom. Through hands-on experiments and discussions, students explore how their attitudes and daily habits affect their water supply source. Topics include: what is water and how does it move about the earth, how do living things adapt to obtain and use water, and how do we manage our water for the community.
4th Grade: Field study program which examines the natural processes in a watershed through physical exploration of a local watershed. This program consists of a one hour pre-site visit to the classroom by Water Agency staff and a follow-up field trip. Students will travel by bus and on foot into the natural portions of a local watershed and trace the origins of the water that ultimately flows from their faucets at home and school.
5th Grade: In-class training and site visit to Mirabel focusing on water quality. Students will receive basic training on water quality sampling and how to identify a healthy watershed including looking at benthic diversity.
6th Grade: In-class instruction and site visit to the Santa Rosa Subregional Wastewater Treatment Facility and Kelly Farm. This will cover wastewater treatment and recycled water use.

The Water Agency's outreach is expanding in its curriculum material available for teachers of the 7th through 12th grades though Project Water Science. Project Water Science offers lesson plans for the study of water chemistry and how water relates to the environment. It includes a lesson plan book for teachers with 14 laboratory exercises suitable for junior high and high school science classes in either physical or earth sciences, or integrated science and is correlated to California State Science Standards. The labs explore the chemical nature of water, as well as the relationship of water ecosystems. Direct teaching opportunities for 7th to 12th graders are available on a limited basis.

In spring 2002, the Water Agency added a pollution prevention workshop for teachers. Teachers are also sent the *Hydro-Herald*, a newsletter produced by the Water Agency.

Starting in 2003, the Water Education Program plans to request that teachers participating in the in-class and field study for 4th and 5th graders have their class take a test before and after the in-class and outdoor visits to see if the students' understanding of the key concepts is being increased by the program. Additionally, teachers will be asked if they

believe that the students have exhibited behavioral changes as a result of the outreach activities.

As this program is not funded through funds available for storm water programs, no measurable goals are included for the implementation of the program. However, an update of the previous year's activities will be included in the Annual Report.

Quantifiable Target/Implementation Schedule

a. Water Agency will explore ways of incorporating the storm water message into the existing program.
b. An update on the activities completed in the Water Education Program will be included in the Annual Report.
c. Results of pre- and post-program tests will be included in the Annual Reports.

1.4 WATER EDUCATION CALENDARS

The Water Agency distributes free Water Education Calendars to its staff and the general public. The calendars contain pollution prevention materials and conservation tips and trivia. Many of the water conservation messages double as storm water pollution prevention messages. For example, discouraging over-watering of lawns and landscaping helps to reduce irrigation runoff. Irrigation runoff is a non-storm water discharge that could contain excessive nutrients from fertilizers or herbicides. Each month features the art of a local elementary school student, focused around a water-oriented theme.

This program is funded by the water contractors, no quantifiable targets are included for the implementation of the program.

Quantifiable Target/Implementation Schedule

a. Water Agency will explore ways of incorporating the storm water message into the existing program.
b. Summary of calendar's message will be included in Annual Report.

1.5 PET WASTE SIGNS

The Water Agency's access roads that run along the flood control channels can provide opportunities for public access. In the City of Sonoma, the City has obtained an easement over Water Agency's access road along Fryer Channel to provide public access for a bike and walking path. The City of Sonoma has posted a number signs at major entrances to the Water Agency right-of-way within the City that encourage pet owners to clean up after their animals. Additionally, Sonoma has provided bag dispenser stations and disposal receptacles to make it easier for owners to clean up after their pets. These measures are aimed at reducing pathogen loading to nearby waters.

In Petaluma, the majority of the Water Agency's channels are not opened for public access. The Water Agency anticipates that if these channels are developed as part of a trail system, pet waste signs will be installed. Installation and maintenance responsibilities of pet waste signs will be determined at that time.

Quantifiable Targets/Implementation Schedule

a. Encourage development projects along Water Agency right-of-ways to install pet waste signs, bags, and garbage receptacles.

1.6 NEWSPAPER COLUMN

The Water Agency, along with the City of Santa Rosa and the County of Sonoma, will make a proposal to the Santa Rosa Press Democrat newspaper to include a regular column covering ecology and environmental issues, including issues surrounding storm water. The target audience of this BMP would be the general public. Details of how this BMP will be implemented, such as who would write the articles, have not been determined.

Quantifiable Targets/Implementation Schedule

a. Develop proposal for Ecology/Environmental Issues column/permit year 2004-05.
b. Make proposal to Press Democrat/permit year 2005-06.

1.7 WEBSITE

The Water Agency's website contains information on three topics: 1) general information about the Water Agency, 2) water conservation tips, and 3) information on the Water Education Program (WEP). The general public is targeted by the first two subjects, and teachers interested in participating in the WEP are the target of the third portion of the website. Teachers can download a catalog of products and services available through the WEP, and can sign up for workshops and request classroom instruction and materials. Additionally, the *Hydro Herald* is available online. This information will be maintained and updated, as necessary.

Information on the Water Agency's storm water program, education on the harmful effects of illicit discharges, and information on best management practices will be added to the Water Agency's website. Content will be developed and posted within permit year 2004-2005. The content will be reviewed and updated periodically. A summary of the changes to the storm water section of the Water Agency's website will be included in each Annual Report.

Quantifiable Targets/Implementation Schedule

a. Develop and post a storm water webpage on the Water Agency's website/within permit year 2004-2005.
b. Summarize changes to the website in Annual Reports.
c. Summarize number of "hits" to website and additional feedback received from users in Annual Reports.

1.8 PUBLIC EVENTS

The Water Agency conducts public outreach at the Sonoma County Fair, the Sonoma-Marin Fair, the Marin County Fair, and water and science fairs. During these outreach events, the Water Agency provides free literature and water conservation devices to those visiting the Water Agency's booth. Free give-aways or drawing registrations are used to

engage the public in discussions on water-related issues. The free literature has covered such topics as water conservation measures, landscaping tips, and lawn watering guides.

Quantifiable Targets/Implementation Schedule

a. Participation in the Sonoma County Fair/annually.
b. Provide outreach materials to those visiting the booth.

1.9 HAZARDOUS WASTE DISPOSAL

The Sonoma County Waste Management Agency (SCWMA) educates the public about waste management issues. Their website includes information on sources of residential and small business hazardous waste. It also includes information on the SCWMA's new, more convenient program for managing household and small business hazardous waste. A new permanent Household Toxic Waste Facility is currently under construction at the Central Landfill located between Cotati and Petaluma. Once this drive-thru facility is operational it will be open year-round and will completely replace the current system of Household Toxics Roundups and SCWMA-organized Small Business Hazardous Waste Collections. Residents will be able to drop off toxics for free and qualifying small quantity business generators will be charged hazardous waste disposal fees depending on material and quantity. Anticipated opening of the facility is early 2004.

Additionally, the SCWMA has developed a variety of hazardous waste disposal literature. The Water Agency distributes these materials as applicable situations arise.

By making it cheaper and more convenient to safely dispose of common hazardous wastes, these programs should minimize the incidence of illegal dumping in local streams, including Water Agency flood control channels.

1.10 EMPLOYEE EDUCATION

The Water Agency has recently reinstated its employee newsletter, *The Water Cooler*. Starting in summer 2003, the newsletter will include a storm water column to help raise employee awareness about storm water issues. A new column will appear in the newsletter on at least a quarterly basis. Columns will address various storm water related issues, including proper hazardous waste disposal, storm water-friendly yard maintenance practices, and information on organizations which connect people to their local creeks. Copies of the column will be submitted with the Annual Report. To get a baseline of employee storm water knowledge, a voluntary employee survey will replace one column during the permit year 2004-2005. This survey will be repeated in permit year 2008-2009 to assess the change.

A Phase II introductory meeting for targeted staff will be held in 2004-2005 to provide an overview of the Phase II requirements, summary of the applicable measurable goals, and an explanation of how staff will implement the measurable goals.

Quantifiable Targets/Implementation Schedule

a. Include column regarding storm water issues in employee newsletter/at least quarterly.

b. One column will be dedicated to educating employees about the Phase II Storm Water Program.
c. One column will be replaced by a voluntary employee survey to establish an employee knowledge baseline/in permit year 2004-2005.
d. Another voluntary survey will be distributed in 2008-2009 to assess the change in employee knowledge.
e. Conduct training of employees/in permit year 2004-2005.

1.11 SONOMA ECOLOGY CENTER

The Sonoma Ecology Center (SEC) is a non-profit organization working toward a condition of sustainable ecological health in the Sonoma Valley through community-supported research, restoration, education, and preservation. SEC offers Sonoma residents and visitors opportunities for discovering the beauty and natural resources of the valley. The Education Project at SEC strives to support the community by providing environmental education opportunities for adults and school children. The current menu of classroom presentations and fieldtrips that compliments science studies for Sonoma Valley students includes programs on hazardous waste and environmental education.

For adults, SEC sponsors a lecture series that has featured topics such as Stream Bank Stabilization, Steelhead Habitat Restoration in Sonoma Valley, and the problems associated with removing Arundo donax, the noxious weed choking many of the valley's streams. A Stream Stewards Project Workshop and Lecture Series ran from October 2002 through February 2003. This monthly series of workshops was given by local professionals on stream monitoring techniques and environmental topics and natural processes, and was designed to involve local residents in becoming stewards of their watershed. Additionally, the SEC sponsors Creek Clean-up Days, to get the public involved in cleaning up creeks, and docent led nature hikes.

The Water Agency has funded several projects implemented by the SEC, including a Historical Ecology of the Sonoma Creek Watershed. It is possible that the Water Agency will fund another such project during the permit term, though no quantifiable targets have been developed at this time. Any future SEC projects funded by the Water Agency will reported on in future Annual Reports.

1.12 SPRING LAKE ENVIRONMENTAL DISCOVERY CENTER

The Water Agency is one of the sponsors, along with the County of Sonoma Regional Parks Department, Sonoma County Regional Parks Foundation and the City of Santa Rosa, of the new Environmental Discovery Center (EDC). The EDC is a multi-sensory, interactive, hands-on place were people of all ages are exposed to information about what is being done to enhance the environment and highlight the natural resources of Sonoma County.

The EDC officially opened on April 20, 2002, although the EDC hosted a number of classes prior to this date. The EDC occupies the former Spring Lake Visitor's Center, situated in the 320-acre Spring Lake Regional Park. The EDC will use Spring Lake and other regional parks as resources for interpretive displays, docent-lead programs, habitat restoration projects and field laboratories. The EDC will also provide environmental

education at school sites throughout the county. The facility will host four or five rotating programs throughout the year. Each program features a different aspect of Sonoma County's unique natural resources, and what local agencies, businesses and citizens are doing to encourage environmental stewardship and the enjoyment of natural resources within our community.

From March 31 to June 13, 2003, the EDC featured a program called "Down the Drain: A raindrop's journey from cloud to creek." The centerpiece display was a storm drain system made of storm drain pipe that the children could crawl through, entering at the storm drain and exiting to either a "creek" or "beach" area. Also included were large-size board games, a technology tent with computer stations (featuring the Waterwaze game and other programs), a video center with short films, and puzzles. Students learned about water run-off during the rainy season and saw how human activity can cause water pollution which effects plant and animal life. Students observed and investigated non-point source pollution and storm drain systems, and learned about the effects on ocean and beach environments.

Water Agency staff sits on an advisory board to the EDC and acts as a resource to the EDC. The Water Agency will continue with its existing activities, including providing financial support for the EDC up to and including Fiscal Year 2003-04, actively participate in the advisory board, and acting as a resource to EDC staff.

Quantifiable Targets/Implementation Schedule

a. Continue providing financial support for the EDC up to and including Fiscal Year 2003-04.
b. Continue to actively participate in the advisory board, and act as a resource to EDC staff.
c. Summarize the activities of the EDC as they relate to storm water pollution prevention in each Annual Report.

2. PUBLIC INVOLVEMENT AND PARTICIPATION

A public notice was posted on the public notice board outside of the County of Sonaom Board of Supervisior's meeting room and on the County of Sonoma's Web site to inform the public that the Water Agency's Board of Director's would consider adopting the Storm Water Management Plan (SWMP) at its February 25, 2003 meeting. This notice was posted three days before the board meeting, in accordance with the Brown Act. This was in compliance with all State and local public notice requirements. At the board meeting, the public was given an opportunity to comment on the SWMP. If significant public comments had been received, they would have been considered for inclusion in the revision of the SWMP. This process will be followed for future SWMP modifications and Annual Report submittals.

The SWMP was also distributed to various sections within the Water Agency, such as the Flood Control Maintenance, Operations-Permit Compliance, Public Education, Fisheries, and Endangered Species Act Compliance sections. The Water Agency will use feedback from these sections when proposing any revisions to the SWMP.

The Water Agency plans to meet regularly with the County of Sonoma, as well as the cities of Petaluma and Sonoma to discuss and coordinate our programs. Through this close collaboration a more consistent message can be imparted to the community.

Quantifiable Targets/Implementation Schedule

a. Present each Annual Report to the Board of Directors, and provide appropriate public notice for the presentation.

3. ILLICIT DISCHARGE DETECTION AND ELIMINATION

3.1 ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

Detection

The Water Agency's existing illicit discharge elimination program relies on Water Agency field personnel and the public to detect illicit discharges. During working hours, the public can call (707) 521-1845 to report a problem in a Water Agency flood control channel directly to the Flood Control Channel Maintenance Coordinator. Additionally, the public can call the Water Agency's number that is staffed 24-hour per day, (707) 523-1070. The staff member answering this line will contact the appropriate response personnel. These contact numbers are available in the Sonoma County phone book and on the Water Agency's website. This number is also included on a flyer distributed by the City of Santa Rosa. The Water Agency will investigate publishing a flyer for county-wide public distribution, in conjunction with other Phase II communities in Sonoma County.

If Water Agency personnel working near the flood control channels observe significantly higher than anticipated flows during non-storm event periods, or water with an unusual color or odor, the response actions below will be initiated. Because flows in the creeks vary depending upon the creek and the time of year, what constitutes a "significantly higher flow" will be left up to the discretion of the maintenance crew leaders, who are very familiar with the different flood control channels. No written criteria will be developed.

If the spill is not located in a Water Agency channel, the Water Agency will either refer that caller to the proper local authority or pass on the pertinent information to said local authority for response.

Response

The Water Agency prioritizes its investigations of illicit discharges and disposal based on the nature, location, and quantity of the material spilled and the time of year. The highest priority is given to those incidents involving large quantities and occurring in the wet weather with the highest potential of discharge to a creek. If the Water Agency notices a problem, staff will begin looking upstream to locate the source of an illicit discharge. If the source is a storm drain, the Water Agency will notify the municipality of the problem, for further action on their part.

Depending on the magnitude and characteristics of an illicit discharge into a Water Agency flood control channel, the Water Agency will either respond to the spill on its

own or notify the city or county in whose jurisdiction the spill occurred. If the spill is hazardous, the Water Agency will immediately notify the appropriate city's emergency services or County Emergency Services' Hazardous Materials Team for response. If no other resources are available to respond to a spill, the Water Agency's Hazmat Team could be activated. The Water Agency's Hazardous Materials Team is trained primarily in response to chlorine and caustic soda releases at Water Agency facilities.

These response practices, including target response times, will be formalized during the course of the permit term.

Tracking

A tracking system for public calls and their responses (e.g. illicit discharges and spill response) will be developed by June 2005, which will require the collection of information collected by the 24-hour operator who receives the call or the Water Agency staff person who answers the Channel Maintenance line. This information will include who called, what was the nature of the call, and any follow-up activities, including forwarding the call to another appropriate agency or dispatching a Water Agency crew to the site (or both), or other appropriate responses. All information will be forwarded to the Water Agency staff person coordinating the Water Agency's storm water program and will be included in the Annual Report.

Training

Several staff members that may take part in spill response and illicit discharge response procedures receive training appropriate to the task assigned. The Water Agency's Hazmat team receives quarterly training on response to some spills. In addition, portions of the Water Agency's maintenance staff have received spill response training. Chemists and Environmental Compliance Inspectors receive training on sampling and source identification. The Water Agency will assess its current training practices for those employees that have duties associated with spill response and illicit discharges, and update the training as necessary. The Water Agency's receptionist will also be trained to direct phone calls to the proper staff so that the calls regarding illicit discharges are handled quickly.

<u>Quantifiable Targets/Implementation Schedule</u>

a. Include methods used to advertise spill reporting phone number in Annual Report.
b. List reported spills in each Annual Report and note which were responded to according to protocol.
c. Spill response protocol will be formalized within the Water Agency for spills in the County, Petaluma, and Sonoma/will be included in the first Annual Report.
d. A tracking system for illicit discharges will be developed/in permit year 2005-06.
e. Water Agency staff will review and update training for spill response and illicit discharge response personnel after spill response and illicit discharge response protocol is formalized.
f. Water Agency staff will train Water Agency receptionists on proper contact information/in permit year 2003-04.

3.2 STORM SEWER MAP

The map of the Water Agency-owned channels is shown in Figure 2. This map will be updated as necessary.

3.3 REGULATORY MECHANISM AND ENFORCEMENT

The Water Agency is not a land use authority, and does not have the power to adopt ordinances to prohibit discharges into Water Agency-owned channels. The Water Agency relies on the local ordinances adopted by the cities of Sonoma and Petaluma and the County of Sonoma (County) for the regulatory mechanism to prohibit illicit discharges into Water Agency-owned channels. Sonoma County Code §11-29 prohibits the release of non-storm water discharges to the County's storm water system. The legal authority of the cities of Petaluma and Sonoma to prohibit discharges into the storm drains will be investigated during the first year of the permit.

As stated in 3.1, the Water Agency will formalize its response plan in the course of the permit. A summary of this response plan follows. If the Water Agency is able to identify a party responsible for an illicit discharge into a Water Agency channel, Water Agency staff will try to work with the responsible party to correct the problem. If that is unsuccessful, or the issue is serious, the Water Agency will notify the appropriate local authority or other regulatory agency. The Water Agency works with the appropriate city or with the County Permit and Resource Management Department (PRMD) to terminate illicit connections into Water Agency channels. If others do not correct a problem, the Water Agency will plug illegally installed outlets into Water Agency channels. If other enforcement authorities do not resolve a problem to the Water Agency's satisfaction, the Water Agency may choose to take the responsible party to civil court.

The Water Agency will strive to include (a) the various anticipated violation scenarios, (b) the actions that the Local Program will take for the violations, (c) by whom these actions will be taken, (d) timelines for response actions, and (e) along what paths enforcement will be escalated. However, as the Water Agency does not have police powers, and therefore has limited enforcement authority, much of the enforcement will be conducted by municipalities with jurisdiction.

<u>Quantifiable Targets/Implementation Schedule</u>

a. Formalize response plan during the second permit year.
b. Implement enforcement response plan.
c. Review effectiveness of enforcement response plan in each Annual Report.

3.4 NON-STORM WATER DISCHARGES

Non-storm water discharges (with the exception of the authorized non-storm water discharges noted in Section 3.6, below) will be detected, responded to, and tracked as illicit discharges, as described in Section 3.1, above.

3.5 INFORMATION ON HAZARDS OF ILLEGAL DISCHARGES

The Water Agency's Water Education Program, discussed in detail in Section 1.2, includes information about the consequences of illegal discharges to the environment in its program.

The Water Agency website will be revised to include information on the consequences of illicit discharges.

3.6 AUTHORIZED NON-STORM WATER DISCHARGES

The MS4 General Permit has identified the following as authorized non-storm water discharges:

1. Water line flushing;
2. Landscape irrigation;
3. Diverted stream flows;
4. Rising ground waters;
5. Uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)) to separate storm sewers;
6. Uncontaminated pumped groundwater;
7. Discharges from potable water sources;
8. Foundation drains;
9. Air conditioning condensation;
10. Irrigation water;
11. Springs;
12. Water from crawl space pumps;
13. Footing drains;
14. Lawn watering;
15. Individual residential car washing;
16. Flows from riparian habitats and wetlands; and
17. Dechlorinated swimming pool discharges.

The Water Agency has not found that these authorized non-storm water discharges cause significant contributions of pollutants. The Storm Water Management Plan may be changed in the future if either the Water Agency or the Regional Board Executive Officer determines that any of these categories are significantly contributing to storm water pollution.

As mentioned in the Program Management Section, the Water Agency is a wholesale potable water supplier to over 500,000 people within the counties of Sonoma and Marin. Occasionally, the performance of maintenance activities on the aqueducts or tanks will require that potable water be discharged to a storm water conveyance system. If there is any potential that the discharged water will reach a water of the United States, the Water Agency ensures that it is dechlorinated. Water within the tanks and aqueducts typically has a chlorine residual of 0.4 to 0.7 mg/l. Prior to discharge of this water, either ascorbic acid or sodium bisulfate is added to neutralize the chlorine. Samples of the discharge are taken to ensure that there is less than 0.1 mg/l of chlorine is present in the discharge. Notification of planned discharges is submitted to the Regional Board office prior to the

project. Information about the discharge submitted in this notification will include: the date and time of the planned discharge, the estimated volume, the estimated duration, the location(s), name of nearest receiving water, method of dechlorination, and plan for sampling. Notifications will utilize the form in Figure 4.

Quantifiable Target/Implementation Schedule

a. Notification submitted to Regional Board prior to planned discharge to a storm conveyance system or creek, as specified above.

4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

The MS4 General Permit requires that permittees develop, implement, and enforce a program to reduce pollutants in any storm water runoff from construction activities that result in a land disturbance of greater than or equal to one acre. As stated previously, the Water Agency is not a land-use agency and only has authority to impose such requirements on lands owned by the Water Agency. However, other areas draining to Water Agency channels and not owned by the Water Agency will be covered by storm water management plans prepared by the County of Sonoma, and cities of Petaluma and Sonoma, as required by the Phase II Storm Water Regulations.

The Water Agency currently has a program that requires that *all* private construction projects occurring within Water Agency flood control channels or on Water Agency owned roads obtain a Revocable License from the Water Agency, not just those disturbing more than one acre of land. Examples of construction projects that occur on Water Agency land include construction of bike paths, installation of underground utility lines, and installations of new storm drain outfalls.

The Revocable License program serves as the Water Agency's regulatory mechanism to require erosion controls. Revocable Licenses contain provisions to require the licensee to implement appropriate erosion and sediment control BMPs, and control site waste.

Specifically, these provisions require:

1. Seeding of bank disturbing projects;
2. Installing erosion control mats for trenching work disturbing creek or channel banks if the work occurs after September 1st;
3. Clearing the work area of trash and debris;
4. Prohibiting the storage of material or equipment on Water Agency rights-of-way;
5. Limiting channel work to the timeframe between April 15 and October 15, unless the California Department of Fish and Game (DFG) approves work outside this time period;
6. Prohibiting the placement of trench spoils on channel slopes; and
7. Re-surfacing the affected service roads with gravel or pavement, as applicable.

The General Permit suggests that control of sanitary waste is one of the requirements that permittees should impose on contractors. The Revocable License does not specifically address sanitary waste. Due to the nature of the projects requiring a Revocable License, sanitary facilities are not typically brought to the jobsite. The requirement that Revocable License holders remove all equipment from the Water Agency right-of-way at the end of

each day satisfies the requirement, as it is infeasible to move portable toilets to and from a jobsite on a daily basis. Longer term projects that require sanitation facilities for workers would locate the facilities outside of the Water Agency right-of-way, and would be addressed by the city or county oversight.

The Water Agency also relies on the U.S. Army Corps of Engineers (ACOE), DFG, the County and the Regional Board to issue permits with appropriate conditions for work within the channel.

During key points in a project, Water Agency personnel inspect construction projects that have Water Agency revocable licenses to ensure the project is completed in compliance with the terms of the Revocable License.

As previously stated, the Water Agency does not exercise police power, and relies on the enforcement authority of others, including the cities, County and other regulatory agencies. If Water Agency staff observe a problem on Water Agency property, Water Agency staff usually try to work with the responsible party first to correct the problem. If that is not successful, the Water Agency also can report violations to regulatory agencies and revoke the Revocable License.

The licensee is required to submit a $250 fee, which is refunded when the work is completed in accordance with the Revocable License. If the work is part of a larger construction project permitted by a city or the County, many times the contractor has a refundable deposit with the governing authority. If a licensee does not comply with the provisions in the Revocable License, the Water Agency can withhold the $250 deposit and/or recommend that the city or County retain the deposit until the job is completed to the Water Agency's satisfaction.

In instances where the project includes work within the channel, the licensee is also required to obtain permits from other agencies, including the County, ACOE, DFG and the Regional Board. Each of these agencies has requirements to protect water quality and also has enforcement authority. The Water Agency will notify these agencies and work with their staff if additional efforts are needed to protect water quality.

If a responsible party causes damage to Water Agency property, and the Water Agency is not able to resolve the problem using the enforcement mechanisms mentioned above, the Water Agency is authorized to initiate civil litigation against the responsible party (Agency Act Section 3b).

The Water Agency relies on other agencies, such as Permit and Resource Management Department (PRMD), the ACOE, DFG, and the Regional Board, to consider the potential water quality impacts of site plans.

During working hours, the public can call (707) 521-1845 to report problems, including those caused by work done under a Revocable License. This number is the direct line to the Water Agency's Flood Control Channel Maintenance Coordinator. Additionally, the public can call the Water Agency's number that is staffed 24-hour per day, (707) 523-1070. The Water Agency strives to be responsive to public comments on projects occurring within Water Agency flood control channels.

Quantifiable Targets/Implementation Schedule

a. Incorporating appropriate BMP measures as part of the provisions contained in Revocable Licenses.
b. Inspect 90% of projects which have a Revocable License.
c. Consider inclusion of Revocable License Program in Enforcement Response Plan to be developed as part of 3.3 above.

5. POST CONSTRUCTION STORM WATER MANAGEMENT IN NEW AND REDEVELOPMENT

The Water Agency is not a land use agency and does not have the authority to impose restrictions on projects occurring on land not owned by the Water Agency. For qualifying projects occurring within the flood control channels, within the Permit Boundary, the Water Agency will impose the requirements of the Standard Urban Storm Water Mitigation Plan (SUSMP) implemented by the local municipality.

Because the nature of construction within the Water Agency's flood control channels is rarely considered "development," this program will have limited applicability.

Quantifiable Targets/Implementation Schedule

a. Incorporate SUSMP requirements of the applicable local entity into applicable Water Agency flood control projects when a SUSMP has been adopted by the local agency.

6. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS

The pollution prevention/good housekeeping Mimimum Control Measures (MCM) has been divided into four major categories of the Water Agency's activities, each with its own Best Management Practices (BMPs) and quantifiable targets:

6.1 Flood Control Construction Activities Management.
6.2 Flood Control Channel Inspection and Maintenance.
6.3 Access Road Maintenance.
6.4 Emergency Procedures.

6.1 FLOOD CONTROL CONSTRUCTION ACTIVITIES MANAGEMENT

Only the Water Agency construction projects within its fee-owned flood control channels are subject to this section. Because of the proximity of these projects to surface water, they typically require permits from the Army Corps of Engineers (ACOE), Department of Fish and Game (DFG) and Regional Water Quality Control Board (RWB) These permits include requirements for BMPs to target sediment associated with construction projects. When the Water Agency uses contracted services to perform construction work, the contractor is required to obtain required permits, which include requirements for BMPs. In the event that the Water Agency were to undertake a project in a flood control channel right-of-way that was not subject to a permit, BMPs would still be employed to minimize or eliminate construction-related pollution. The Water Agency conducts few

construction projects on its channels, and it would be rare to conduct a construction project during the wet season. However, any active construction site would be inspected prior to the rainy season to ensure appropriate erosion controls are in place, and after a significant rain (greater than 0.25 inches) to ensure they are effective.

The Water Agency currently files a Notice of Intent (NOI) and complies with the National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit when it undertakes a project that will disturb more than one or more acre of land. The Water Agency completes regular inspections of its construction projects to ensure that BMPs are employed to minimize mobilization of sediment. In addition, the Water Agency maintains and continues to develop in-house expertise on erosion control.

The Water Agency is encouraging personnel to become Certified Professionals in Erosion and Sediment Control (CPESC). Certification requires a four-year degree in a field related to erosion control, six years of experience working with erosion control issues, and the successful completion of a standardized test. The first Water Agency CPESC was certified in March 2003, and the Water Agency intends to retain a CPESC on staff. The CPESC will be available for consultation on the compilation of erosion control plans, design of construction BMPs, and inspection of construction projects.

The Water Agency uses performance bonds as enforcement mechanisms for contracted construction projects. To ensure proper performance of construction contracts, the Water Agency requires its contractors to provide performance bonds, typically at 10% of the total contract price. This money is not released until work is completed to the Water Agency's satisfaction. Additionally, interim payments are normally made at various stages in the project. If storm water BMPs are not properly employed, these payments can be withheld until the work is completed for that stage of the project. In more extreme cases, the Water Agency can terminate the contractor for non-performance.

Quantifiable Targets/Implementation Schedule

a. Review Special Provisions and General Specifications for existing BMPs to determine if they are adequate. If changes are needed, make modifications and report on these changes in the 2005 Annual Report.
b. File NOI for applicable flood control projects, as required.
c. Prior to the rainy season and after every major rainfall event, inspect each Water Agency flood control construction site that is active during the wet season to ensure erosion control measures are in place.
d. Use enforcement mechanisms, including performance bonds, available to the Water Agency for public construction projects when necessary.
e. Assess current education and training practices for Water Agency sponsored construction practices by June 2005.
f. Maintain CPESC on staff.

6.2 FLOOD CONTROL CHANNEL INSPECTION AND MAINTENANCE

The Water Agency maintains a network of open flood control channels, a map of which is shown in Figure 2. There are 150 miles of constructed channels within the county, only six miles of which are within the San Francisco Bay Region. These channels have been significantly altered and improved to achieve ultimate hydraulic capacity. Most

channels have adjacent service roads, which facilitate maintenance access. The Water Agency's channels are inspected annually to assess their condition and determine the required level of maintenance activity. Maintenance can include: clearing of large debris, such as shopping carts, construction materials, or vegetative debris; invasive vegetation removal; bank stabilization; silt removal to maintain channel capacity; fencing repair; landscaping to reestablish native species; and weed control on access roads. In many cases, the Water Agency utilizes Supervised Adult Crews to complete cleanup work.

The Water Agency has adopted BMPs for the maintenance of its flood control facilities. These BMPs provide an alternative range of techniques for accomplishing maintenance tasks, from very low-impact hand labor to the operation of heavy equipment within waterways under certain specified conditions. In 1991, the Water Agency's past practice of total vegetation clearing in flood control channels was abandoned. The Agency's more recent practice is to remove only that vegetation which impedes the flow of water to cause a threat of flooding. The Water Agency has also performed some riparian enhancement activities in cooperation with the DFG on natural creeks and rivers. One of the goals of this program is to create shade canopies over the channels, which reduces plant growth in the channel bottom. Since implementing practices that create shade canopy, there has been a significant reduction in bank failures and a reduced amount of siltation in many channels without any observed increase in frequency or severity of flooding.

The Water Agency does not perform work on channels it does not own or does not have a legal responsibility for maintenance.

The Water Agency has minimized the use of herbicides for maintenance of the flood control channels in favor of using mechanical and manual methods of vegetation control. Rodeo® is the only herbicide still used along the flood control channels. There are only two situations in which Rodeo® is applied. One use is to kill stumps of trees that have been removed. In this case, Rodeo® is applied with a brush to the stumps in a manner that minimizes the potential for fugitive chemicals. The second use of Rodeo® is as a post-emergent spray on the flood control channel access roads to control the vegetation on and bordering the roads. In this case, a licensed contractor performs this spraying once annually in the late spring. A second spraying may occur, but is typically not necessary. The product is used per manufacturer's specifications. No chemicals are applied in the flood control channels. However, because Rodeo® is approved for use as an aquatic pesticide, if some product were to enter the channel, there would be no effect on aquatic life.

If the Water Agency deems it necessary to resume use of aquatic application of herbicide, it will be done in accordance with the General Permit for Discharge of Aquatic Pesticides to Surface Waters.

Brush that has been cleared from flood control channels is chipped and placed as mulch around existing vegetation. Weeds that have been mowed are also used as mulch. Debris is hauled to a landfill for appropriate disposal.

The Water Agency does not store equipment or materials on its flood control channels, nor does it allow such practices for private construction projects. For other types of work, all materials used are stored in such a way to prevent the materials from entering waterways. This serves to limit the possibility of a spill to a flood control channel.

Quantifiable Targets/Implementation Schedule

a Continue with low-impact pesticide management.

b. Continue to limit equipment and material storage in Water Agency's right-of-way.

c. Continue to provide trash cleanup in Water Agency channels, and report quantity removed in Annual Report.

6.3 ACCESS ROAD MAINTENANCE

The Water Agency maintains a network of access roads to its flood control facilities. Public access to these roads is restricted to pedestrian and bicycle use in some areas, and prohibited in other areas. The only vehicles allowed on these roads are emergency vehicles, Water Agency vehicles, or private vehicles working on a construction project with a Revocable License. Thus, the roads are exposed to a minimal amount of vehicular traffic. The majority of these are not paved, though most are graveled to minimize erosion. The Water Agency does not sweep its paved access road within the Permit Boundary, as this road is maintained by the City of Sonoma. The Water Agency does not have any parking facilities within the Permit Boundary, and so will not sweep parking lots as part of this program.

Quantifiable Targets/Implementation Schedule

a. Continue to limit vehicular access to Water Agency roads, where appropriate.

6.4 EMERGENCY PROCEDURES

The Water Agency adopted its most recently revised Emergency Operations Plan in September 1998. This plan helps to manage the Water Agency's critical functions during any emergency and protect the safety of staff and the public. It directs the Water Agency to plan, train, and coordinate with responders from other public and private entities and organizations charged with emergency duties. This plan has been adopted to give clear direction to Water Agency staff to meet the requirements of Standardized Emergency Management System (SEMS) regulations. Any activities requiring emergency repairs of essential public services such as water pipelines and storage tanks, or for responding to natural disasters, are implemented in accordance with federal, state, and local regulations to the extent that such measures do not compromise public health and safety.

The Water Agency's Emergency Operations Plan contains a Hazardous Materials Incident Plan that directs Water Agency staff in the response to a hazardous material spill at any Water Agency facility. The Plan currently addresses chlorine, sulfur dioxide, radiation hazard, anhydrous ammonia, sodium hydroxide and sodium sulfite spills at Water Agency facilities. The Water Agency Hazmat Team typically responds to spills at Water Agency facilities unless the spill is too large to be contained, or the spill is of another type of hazard for which the Water Agency does not have the expertise. In this case, city or County Hazardous Materials Teams are called to respond.

Quantifiable Target/Implementation Schedule

a. Review Emergency Operations Plan by 2005 to evaluate whether an update is necessary.

PART IV

PROGRAM EVALUATION AND MONITORING

PREPARED BY:
COUNTY OF SONOMA
SONOMA COUNTY WATER AGENCY

April 2004

1. PROGRAM EVALUATION

The intent of the Program Evaluation and Monitoring Section is to evaluate the measurable goals, minimum control measures, and overall program for effectiveness. The measurable goals described in the Minimum Control Measure (MCM) section of the Storm Water Management Plan (SWMP) will be used to help establish a baseline against which future progress at reducing pollutants to the Maximum Extent Practicable (MEP) can be measured.

2. WATER QUALITY MONITORING ACTIVITIES

The Sonoma County Water Agency (Water Agency) is currently involved in several of the many monitoring studies currently underway within the Petaluma River and Sonoma Creek watersheds. The activities, which the County of Sonoma (County) and the Water Agency are currently working on or helping to finance, are listed in section 2.1 below. Other important monitoring activities being conducted by other organizations are listed in section 2.2.

In conjunction with this permit, the County and the Water Agency will continue with monitoring activities, as outlined below. Activities, which are funded by sources such as the Water Contractors, which have restrictions on funding uses, cannot be and are not committed to under this SWMP. If and when the County or the Water Agency becomes involved with new monitoring programs, it will be summarized in Annual Reports.

Because of the extensive monitoring that is already underway on the subject watersheds, neither the County nor the Water Agency are proposing to implement any new monitoring at this time. To better focus our limited resources and avoid duplicating effort of other organizations, the County and Water Agency plan to examine the objectives and results of existing monitoring programs during the next two years, with an emphasis on monitoring programs that focus on the land uses and pollutants of concern identified in the SWMP. If the results of the research indicate that there is a need for additional monitoring which would help to evaluate the effectiveness of the SWMP activities, a program could then be devised to accomplish this. Alternative monitoring activities for evaluating overall program effectiveness will also be considered, including telephone surveys and monitoring of specific, measurable goals. Such a proposal would be made in the second Annual Report.

The County and Water Agency will communicate with other Phase 2 communities, including the cities of Petaluma and Sonoma, and the counties of Napa, Solano and Marin, about monitoring activities that are currently underway or in the planning stages.

2.1 MONITORING PROJECTS

Fish Population Study

The Water Agency is helping to fund a watershed-wide fish population study on the Sonoma Creek watershed, undertaken by a partnership between the Sonoma Ecology Center and fisheries biologists and hydrologists from Entrix, Inc. This is the first

comprehensive fish census within this watershed. Summer rearing habitat reaches were surveyed, selected, and mapped. Fish counts began in August 2002 on Sonoma Creek and several tributaries.

A variety of methods were employed to obtain accurate fish counts in summer rearing habitat. These include electro-fishing, snorkeling, and observation from the bank. The study will also include winter out-migration counts. Current funding will allow for 1-2 years of census work. Information obtained from this study will further the understanding of how well the creek systems are functioning, and will also aid in planning for riparian restoration/conservation efforts in the future.

Historical Ecology Project

The Sonoma Valley Historical Ecology Project is focused on creating a detailed ecological picture of Sonoma Valley as it was in the late 18th century, before the impact of European settlement. The Sonoma Valley Historical Ecology Project is a joint endeavor of the Sonoma Ecology Center and the San Francisco Estuary Institute. Funding is provided by the Sonoma Valley County Sanitation District (which is managed by the Water Agency), CALFED and the members of the Sonoma Ecology Center.

Historical ecology combines the natural sciences, historical research and the knowledge of local residents to chronicle environmental change. Historical ecology calls upon a broad spectrum of disciplines including biology, history, geology, anthropology, cartography, linguistics, soil science, and geography. In addition, the Sonoma Valley Historical Ecology project utilizes a variety of historical documents, such as Spanish and Mexican maps, journals of early explorers and residents, Mission records, oral histories of local elders, and old photographs.

The goals of the project are to understand not only the way things were, but also to understand the process of change the Sonoma Valley has experienced since European settlement. The project examines changes in hydrologic patterns, vegetative patterns, species abundance and diversity, and their correlation with human settlement patterns in the valley. Typical questions the project seeks to answer are:

1. Has the water level in local creeks changed?
2. How many trout, steelhead and salmon did our watershed historically support?
3. Has the pattern of flooding changed over the years? If so, what factors have contributed the changing pattern?
4. Have vegetation patterns changed, and in what way? How has this affected our wildlife?
5. What impact has human settlement had on local wildlife?

In seeking the answers to these questions, the Historical Ecology project seeks to compile a description of the watershed prior to European settlement. This information on changes within the watershed will aid in the development of watershed restoration projects.

Adobe Creek Restoration and Monitoring

The Water Agency, in conjunction with National Marine Fisheries Services, United Anglers of Casa Grande, and the County of Sonoma Probation Department and the Department of Transportation and Public Works (TPW) worked to restore a segment of Adobe Creek to allow for fish passage. In 1997, a series of large boulders and log weirs were installed below a culvert that had been a barrier to fish passage due to down-cutting in the channel. The weirs changed the water and streambed elevations, which decreased the jump height required for fish to enter the culvert. The weir directly below the culvert was designed higher than the culvert base to decrease water velocities in the culvert and improve fish passage. Subsequent monitoring of the location revealed the two upper weirs were damaged during the winter of 1998. Additional work was performed to maintain proper functions of the structures. Since the repairs, a visual monitoring program has recorded 80 observations of adult steelhead migration. Although the upper weir has decreased water velocities in the culvert, excessive velocities can still occur during high flow events.

In summer of 2002, TPW, with a grant from the California Department of Fish and Game, installed baffles in the culvert under Adobe Road, upstream of the boulder weirs, to reduce peak velocities and increase depths during low-flow conditions, which would allow salmonid passage year-round. The grant includes a requirement for monitoring, which is being implemented by Sonoma County Permit and Resource Management Department, funded by Sonoma County TPW, to evaluate the effectiveness of the baffles.

Total Maximum Daily Load (TMDL)

Both Sonoma Creek and Petaluma River have been listed as 303(d) impaired waterways. The Sonoma Creek TMDL is in process. The San Francisco Bay Regional Water Board (RWB) is managing a multi-year creek monitoring program and the Water Agency and the County are participating in the process. The Petaluma River TMDL research is expected to begin in spring of 2003.

2.2 MONITORING PERFORMED BY OTHER ORGANIZATIONS

2.2.1 PETALUMA RIVER

San Francisco Estuary Regional Monitoring Program

The San Francisco Estuary Institute (SFEI) monitors a site at the mouth of the Petaluma River as part of a Regional Monitoring Program (RMP). Water, sediment, and bivalve tissue samples are collected from this location and are tested for a variety of constituents. This site has exhibited high levels of trace elements and trace organics. It is unknown whether these high levels are due to the circulation of particulate associated contaminants through San Pablo Bay and deposition and accumulation near the Petaluma River mouth, or if they are primarily coming from the Petaluma River watershed itself. The goals of SFEI include:

1. To describe patterns and trends in contaminant concentration and distribution;
2 To describe general sources and loadings of contamination to the Estuary;

3. To measure contaminant effect on selected parts of the Estuary ecosystem;
4. To compare monitoring information to relevant water quality objectives and other guidelines; and
5 To synthesize and distribute information from a range of sources to present a more complete picture of the sources, distribution, fates, and effects of contaminants in the Estuary ecosystem.

This work will help to form a more complete picture of the challenges facing the watershed. Since its inception in 1993, the SFEI has gathered and disseminated much information about the water quality of the San Francisco and San Pablo Bays. The RMP Annual Report is the main way information from the base program and Pilot and Special studies is collectively reported. Examination of the changes in this data over time will give an indication of trends in watershed health.

Thompson Creek Monitoring
Students from Grant Elementary School are working with AmeriCorps members to develop a monitoring program for Thompson Creek. Students are monitoring for pH, temperature, ammonia, and dissolved oxygen.

Diazinon Monitoring
The Petaluma Tree Planters were granted funding by the Rose Foundation to conduct diazinon testing in at least eight major tributary confluence's along the Petaluma River. Results are available as of July 1999.

2.2.2 SONOMA CREEK

The Sonoma Ecology Center and Sediment
In 2001, the Sonoma Ecology Center launched a suspended sediment and turbidity-monitoring program for Sonoma Creek. The goal of monitoring Suspended Sediment Concentration (SSC) and turbidity in Sonoma Creek is to quantify the duration and magnitude of SSC and turbidity exposures for aquatic organisms in mainstem Sonoma Creek and selected tributaries.

For the first year of monitoring (wet season 2001-2002), the Sonoma Ecology Center conducted intensive testing at a site near the Sonoma Valley Watershed Station on Sonoma Creek. Volunteers collected grab samples of creek water during and after storms. Samplers used Mr. Longarm, an extension-pole device, to dip two sample bottles simultaneously from the shore. Turbidity readings, expressed in Nephelometric Turbidity Units (NTU) were taken in the field using a portable Hach Turbidimeter, and the suspended sediment samples were delivered to the laboratory for processing (for values expressed in milligrams per liter, mg/L).

A Continuous Monitoring Station (Station A) was installed in July 2001and has been electronically logging readings for turbidity, creek depth, and water temperature at ten-minute intervals. The logged information is retrieved using a handheld computer. Later,

the continuous turbidity readings are "cross calibrated" with grab sampling turbidity results collected by Sonoma Ecology Center staff and Stream Stewards.

A laboratory was established for the filtering, oven drying, desiccation, and weighing of water samples for suspended sediment concentration SSC. The lab was set up at the Sonoma Valley Watershed Station following protocols documented in the State Water Resources Control Board (SWRCB) approved Quality Assurance Project Plan.

A Depth-Integrated (DI) device was also used to sample the entire column of water. DI samples of SSC and turbidity will be correlated with those obtained by grab sampling, resulting in a more reliable stream signature than can be ascertained from grab sampling alone. The stage (height of creek) and water velocity was recorded manually each time a sample was collected. With this information a correlation can be drawn between stream discharge and SSC/turbidity levels.

Continuous Monitoring
The Sonoma Ecology Center has electronic equipment that monitors weather and water conditions every 10 minutes on Sonoma Creek. Housed in a weather station named Station A, the electronic monitoring equipment records information on rainfall air temperature, creek water level, creek water temperature, and creek turbidity. Data is downloaded weekly from Station A for comparison with information collected by citizen monitors.

USGS Gauging Station
The United States Geological Survey (USGS) maintains a gauging station on Sonoma Creek at the Agua Caliente confluence, which can be accessed via the internet at:

http://waterdata.usgs.gov/ca/nwis/uv/?site_no=11458500&PARAmeter_cd=00065,00060

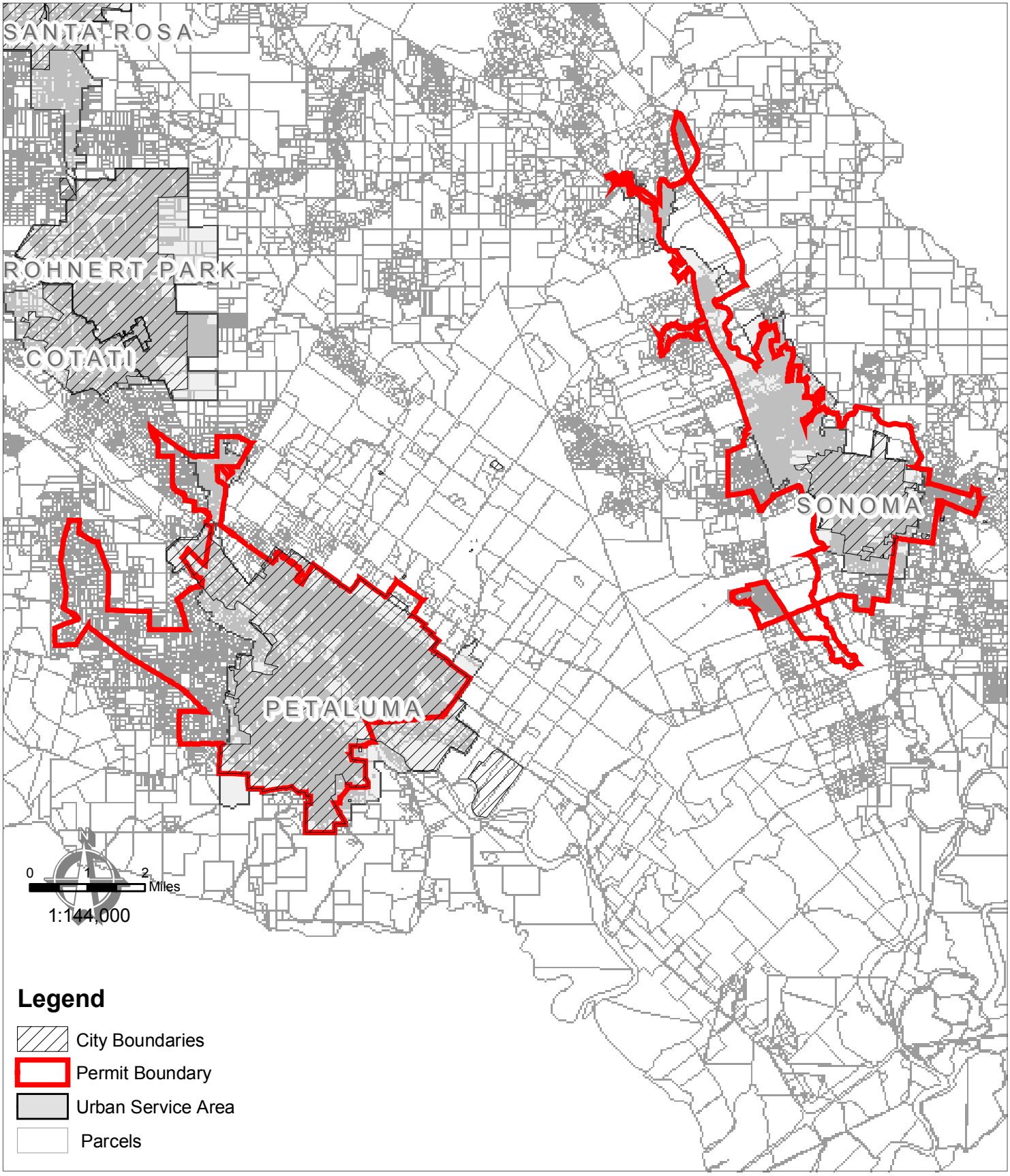
This station reports creek flow in cubic feet per second as well as creek depth. It also allows the public to download the data.

FIGURES

PREPARED BY:
COUNTY OF SONOMA
SONOMA COUNTY WATER AGENCY

April 2004

Sonoma County Phase II NPDES Municipal Storm Water Management Program Boundary
San Francisco Bay Region



Author: PRMD
Cartography: S.Mason
File No.: r:\prmd_base\engineering\\NPDES Phase2 SF Bay Region UA UC Revision.mxd
Date: 12/13/2004

County of Sonoma
Permit and Resource Management Department
2550 Ventura Ave. Santa Rosa, CA 95403
707-565-1900 707-565-1103

Permit and Resource Management Department
DEPARTMENT INFORMATION SYSTEMS
COUNTY OF SONOMA

Figure 1

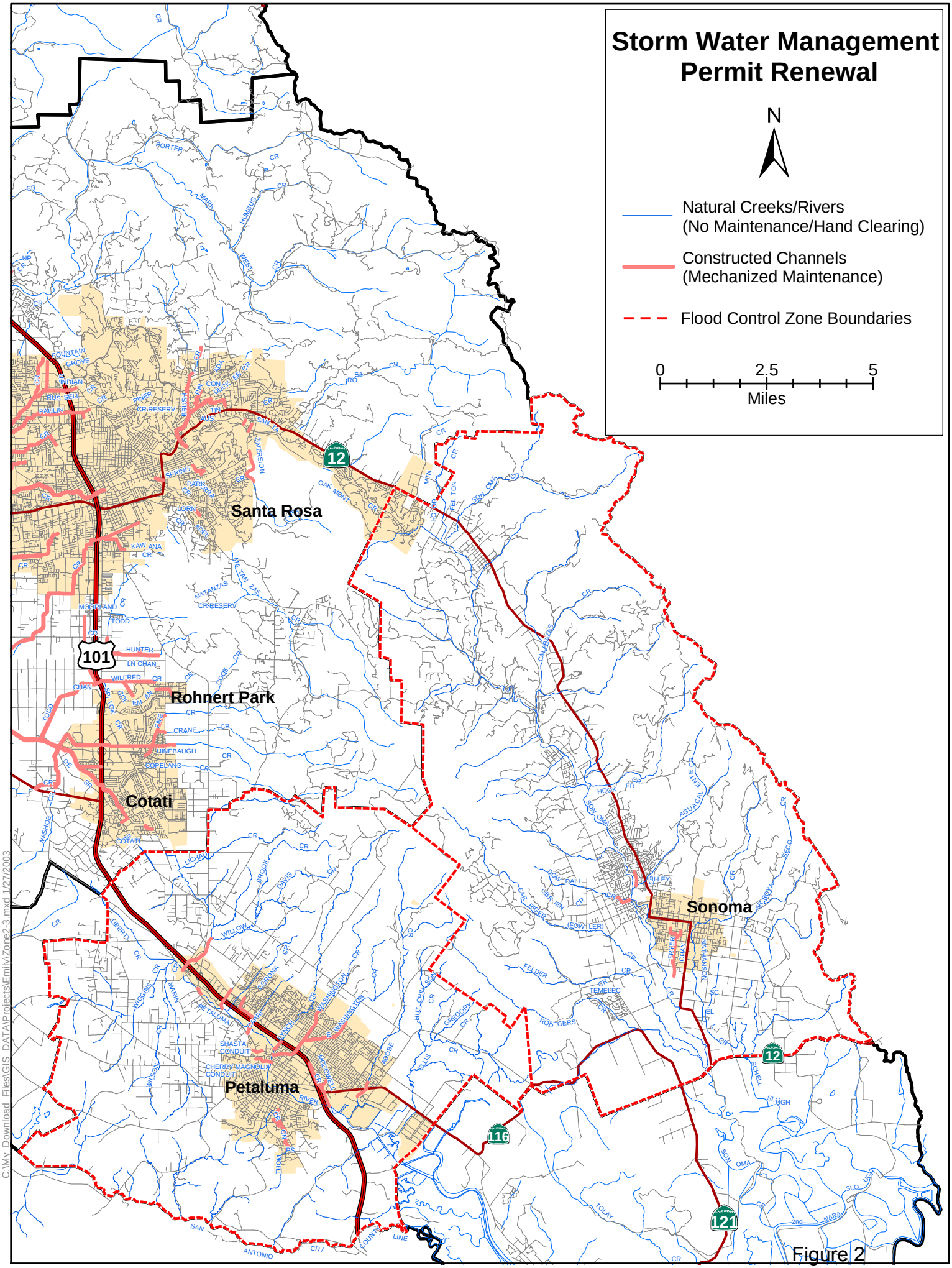
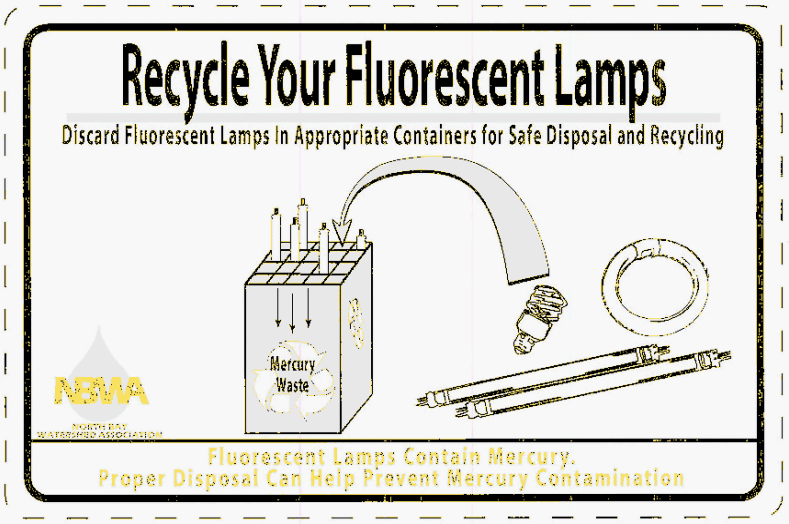

Storm Water Management
Permit Renewal
N
Natural Creeks/Rivers
(No Maintenance/Hand Clearing)
Constructed Channels
(Mechanized Maintenance)
Flood Control Zone Boundaries
0
2.5
5
Miles
Santa Rosa
Rohnert Park
Cotati
Petaluma
Sonoma
101
12
116
121
C:\My Download Files\GIS DATA\Projects\Emily\Zone2-3.mxd 1/27/2003

Figure 2

FIGURE 3


Recycle Your Fluorescent Lamps
Discard Fluorescent Lamps In Appropriate Containers for Safe Disposal and Recycling
Mercury Waste
NBWA
NORTH BAY WATERSHED ASSOCIATION
Fluorescent Lamps Contain Mercury.
Proper Disposal Can Help Prevent Mercury Contamination


Recycle Your Fluorescent Lamps
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Mercury Waste
NBWA
NORTH BAY WATERSHED ASSOCIATION
Fluorescent Lamps Contain Mercury.
Proper Disposal Can Help Prevent Mercury Contamination

FIGURE 4

SONOMA COUNTY WATER AGENCY
POTABLE WATER DISCHARGE NOTIFICATION

DATE:

1. PURPOSE OF THE RELEASE:
2. LOCATION – AQUEDUCT AND STATION
3. DATE RELEASE STARTS
4. TIME RELEASE STARTS
5. DURATION OF RELEASE
6. Cl2 RESIDUAL IN AQUEDUCT OR WELL AT START OF RELEASE
7. WILL PROPERTY OWNERS BE AFFECTED AND HAVE THEY BEEN NOTIFIED?
8. DECHLORINATION METHOD, CHEMICAL
9. DESCRIBE MONITORING METHOD AND CONTROL OF DISCHARGE
10. RELEASE VOLUME, APPROXIMATELY
11. DESCRIBE SAMPLING METHOD FOR CHLORINE RESIDUAL
12. WILL LAB BE USED FOR ANALYSIS
13. ANY EROSION POSSIBLE
14. EROSION CONTROL MEASURES
15. PROXIMITY TO INTERMITTENT DRAINWAY
16. DOES WATER DRAIN TO LIVE STREAMS?
17. WHICH STREAMS?
18. ATTACH CALCULATION FOR DOSAGE RATE AND TOTAL AMOUNT FOR DECHLORINATION CHEMICAL