

**MS4 NPDES Term 2, Annual Report 4
July 1, 2006 – June 30, 2007**

**National Pollutant Discharge
Elimination System Permit for
Storm Water Discharges
from the Santa Rosa Area**

NPDES Permit No. CA0025054

Submitted to:
**California Regional Water Quality Control Board
North Coast Region**

Submitted by:
**City of Santa Rosa,
County of Sonoma, and
Sonoma County Water Agency**

Submitted October 1, 2007

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CERTIFICATIONS

CERTIFICATION CITY OF SANTA ROSA

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

CITY OF SANTA ROSA



R. H. Blanchard

ATTEST:



City Clerk

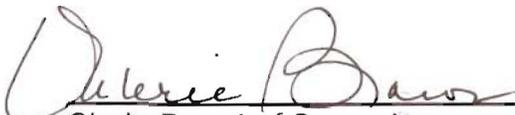
As authorized by City Council Resolution No. 26936 and required by 122.22 Code of Federal Regulations.

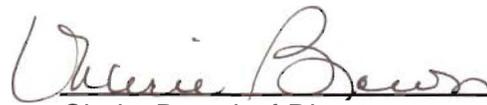
Certification
County of Sonoma and
Sonoma County Water Agency

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

Sonoma County Water Agency


Chair, Board of Supervisors


Chair, Board of Directors

Attest:


Clerk of the Board of Supervisors and Clerk of the Board of Directors
of the Sonoma County Water Agency

As authorized by the County of Sonoma Board of Supervisors and the Sonoma County Water Agency Board of Directors by Resolution No. 07-0808 and required by 122.22 Code of Federal Regulations.

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PART I

PROGRAM MANAGEMENT

**Permit Term 2
Annual Report 4**

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PROGRAM MANAGEMENT

1.0 BACKGROUND

On June 26, 2003, the North Coast Regional Water Quality Control Board (Regional Water Board) adopted Order No. R1-2003-0062, Waste Discharge Requirements and Municipal Separate Storm Sewer System Permit (MS4 Permit) for the City of Santa Rosa, the Sonoma County Water Agency, and the County of Sonoma, as copermittees. This order is National Pollutant Discharge Elimination System (NPDES) Permit No. CA0025054; WDID No. 1B96074SSON.

The NPDES Storm Water permit requires that the copermittees submit an Annual Report documenting the status of all the general programs and individual tasks contained in the Storm Water Management Plan (SWMP), including the Monitoring Plan, by October 1 each year. This Annual Report is a detailed report on the status of implementation of the SWMP and the monitoring plan and includes an evaluation of the control measures, management practices, and other actions and activities described in the SWMP. Unless otherwise noted, this Annual Report covers the period from July 1, 2006 through June 30, 2007.

The emphasis in this second permit term is to use existing staff and programs as much as possible, continue the large number of existing activities that improve storm water quality, and implement new programs as detailed in the SWMP. The most significant change to the SWMP is the area captured within the expanded permit boundary. The new boundary contains approximately 19,840 acres of City jurisdiction area, 132,740 acres of County (unincorporated) area and 2560 acres of Water Agency owned land.

The next significant change to the SWMP is the addition of the Post Construction/Development: Standard Urban Storm Water Mitigation Plan (SUSMP). This plan targets the storm water pollution associated with increasing the impervious area that usually accompanies development.

More specifically, the SWMP describes how pollutants in storm water runoff will be controlled, and explains the BMP's that address the required program areas. Each BMP is listed as an activity. Each activity includes a measurable goal and an implementation schedule for time for completion. Some of the activities are "existing" and most will be continued or enhanced, and some are "new".

The Program Management BMP's, common to all the copermittees, are found in Part 1 of the SWMP and are reported on in this section of the Annual Report. Each copermittee has developed a SWMP that applies to their area of responsibility, and includes BMP's for the remaining eight elements. Part II of the Annual Report reports on the County's program elements, activities, measurable goals, and implementation schedules. Similarly, Part III reports on the City's program elements, and Part IV reports on the Water Agency's program elements. Part V, Monitoring Plan and Part VI, SUSMP, are joint program activities, and are shared by all copermittees.

Section 4 of this Part, “At-a-Glance Storm Water Management Plan,” summaries the implementation of the elements, activities, and goals of the SWMP during July 1, 2006 - June 30, 2007 for this Annual Report.

2.0 COPERMITTEES

The following organization charts for the County of Sonoma, the City of Santa Rosa, and the Sonoma County Water Agency show the organization and responsibilities of the copermittees, as well as contact persons and phone numbers.

Figure I.A
County of Sonoma
Organizational Chart for Storm Water Management Plans

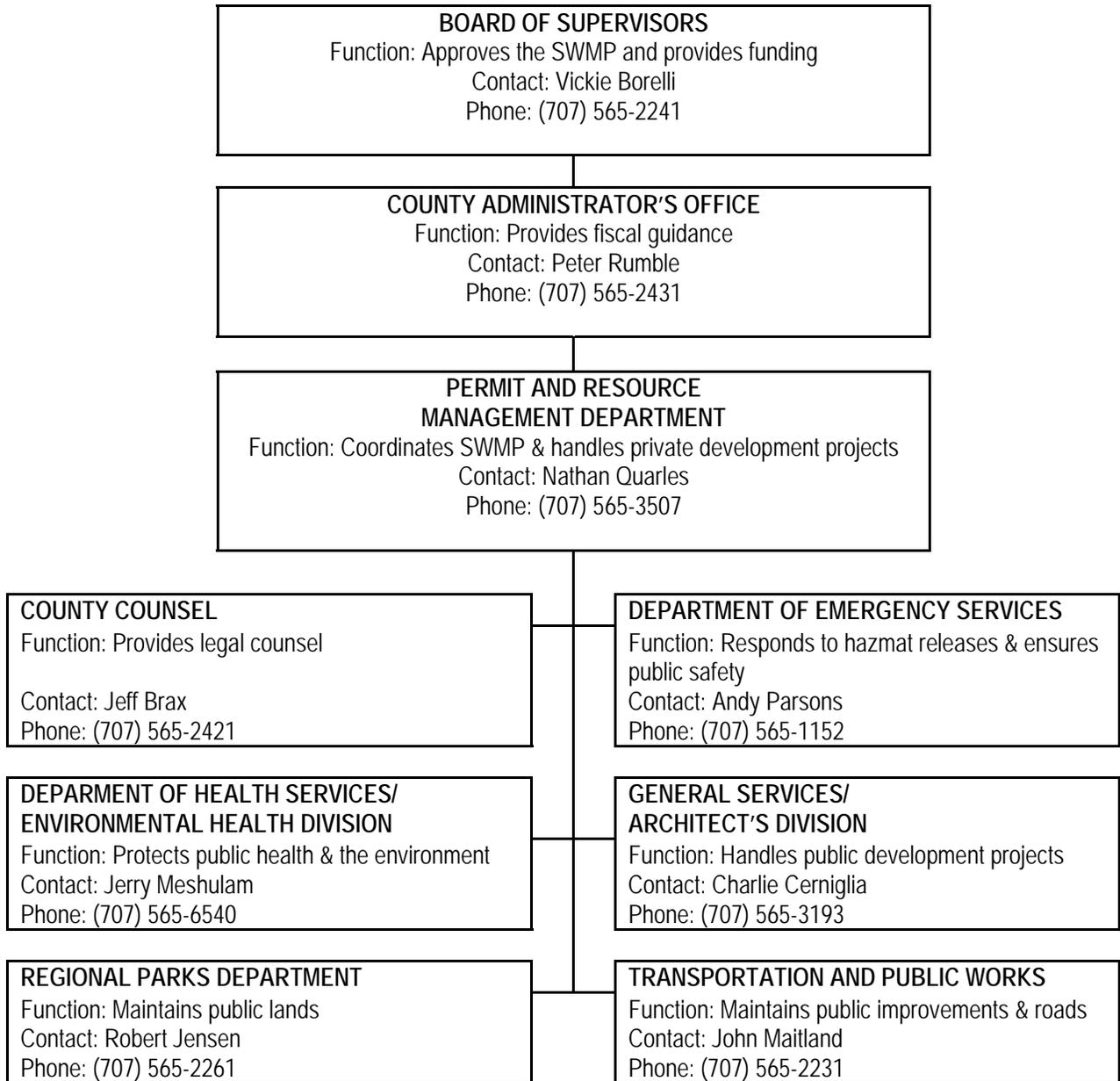
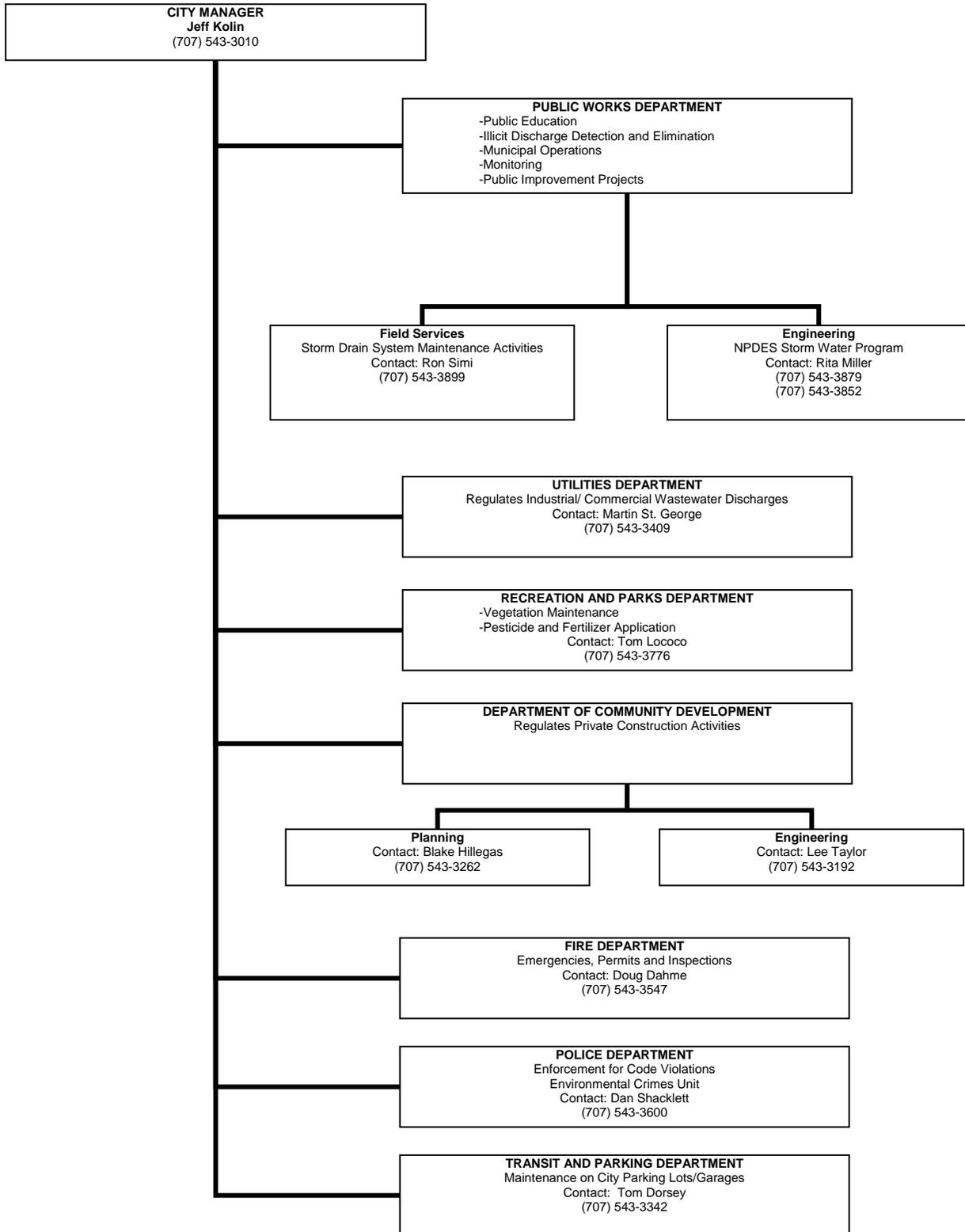
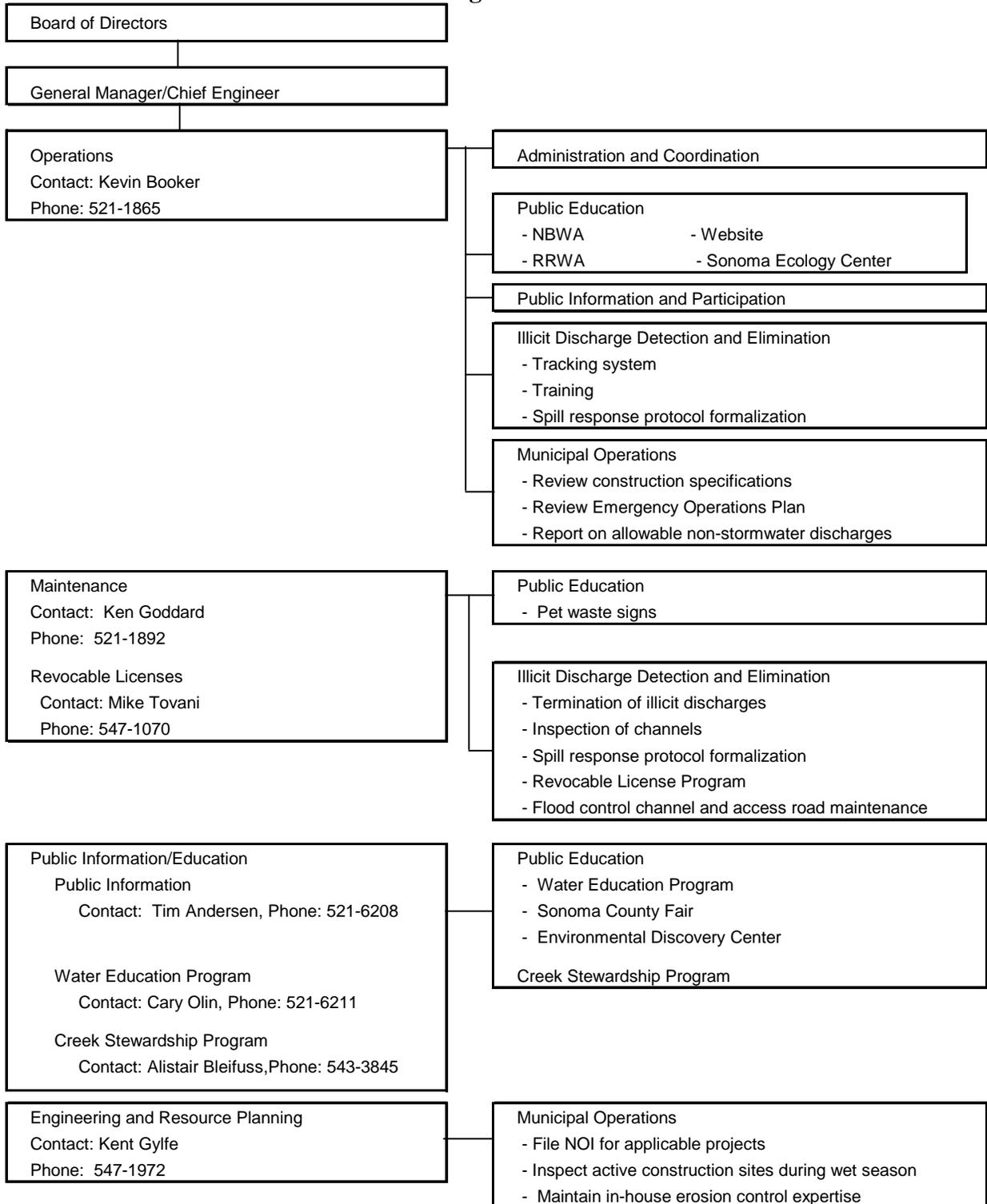


Figure I.B
City of Santa Rosa – Storm Water Management Organization Chart



**Figure I-C
Sonoma County Water Agency
Storm Water Organizational Chart**



3.0 PROGRAM MANAGEMENT BEST MANAGEMENT PRACTICES

The Program Management goals are to: (1) facilitate communication and coordination between the copermittees, Regional Water Board, and other appropriate entities; (2) ensure the SWMP elements are implemented on schedule; and (3) ensure that all requirements of the permit are met.

Monthly coordination meetings are held and attended by City, Water Agency, and County staff. Regional Water Board staff and Caltrans representatives are also invited to attend. These meetings are held to share information on permit activities, to coordinate activities as necessary, and to provide a forum for discussing relevant storm water management topics.

The Permit requires that the copermittees submit Annual Reports documenting the status of the program. The Annual Reports include an evaluation of the activities described in the SWMP.

The copermittees entered into a Cooperative Agreement in December, 2003. The City serves as Lead Agency. The County serves as lead agency for the SUSMP program.

To promote cooperation between Phase I copermittees and Phase II copermittees, and take advantage of potential information sharing opportunities, the copermittees invite City and Town staff from the Phase II communities within the permit boundary to participate in the monthly coordination meetings.

Measurable Goals/Implementation Schedule

- a. Schedule and Conduct monthly Coordination Meetings/Ongoing.
- b. Meet with Regional Water Board staff to discuss and develop preliminary annual work plans/First Quarter, Annually.
- c. Prepare Annual Report and Submit to Regional Water Board staff by October 1/Annually.
- d. As appropriate, enter into a Cooperative Agreement for second permit term/Within six months of permit adoption.
- e. Invite City and Town staff from Phase II communities within the permit boundary to the monthly coordination meetings.

Accomplishments

- a. Scheduled and conducted monthly meetings (See **Appendix I.A**). Preliminary permit reapplication discussion was included in the March, April, May, June and July monthly meetings. In addition, meetings were held on July 18th and July 26th 2007 to identify specific items to include in the Term III permit reapplication.
- b. The City contracted with a consultant to perform the lead agency work for fiscal year 2007-08. The work will include reviewing and compiling Annual Report No. 4 and conducting the monthly copermittee meetings from July 2007 – June 2008. The cost to prepare the Annual Report shall not exceed \$19,862. The cost of monthly meetings from July 2007-June 2008 shall not exceed \$19,368. The total contract amount is not to exceed \$39,230.
- c. Per the Cooperative Agreement, the County and Agency shall each pay one-third of the cost of lead agency work and 3.3% of the total consultant contract cost for contract management.

For fiscal year 2007-08, the amounts paid by each the County and the Agency to the City for lead agency work shall not exceed \$14,371.26.

- d. The Copermittees have continues to invite Phase II copermittees to the monthly coordination meetings. Meeting minutes are presented in **Appendix I.A.**

4.0 AT A GLANCE

The At-a-Glance table on the following pages presents a summary of the achievement of measurable goals during the Term 2 Year 4 permit period by the copermittees. This summary provides a general evaluation of the storm water pollution prevention programs, best management practices (BMP's) and other actions/activities described in the Storm Water Management Plan.

Summary "At a Glance" Storm Water Management Plan – Year 4 Annual Report
Protecting and Enhancing Water Quality by Reducing Storm Water Pollutants to the Maximum Extent Practicable
 City of Santa Rosa, County of Sonoma, and Sonoma County Water Agency
 October 2007

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
Program Management Goal: Facilitate communication and coordination between the copermittees, Regional Water Board and other appropriate entities. Ensure the SWMP elements are implemented on schedule and that all requirements of the Permit are met.			
Copermittees Monthly Coordination Meetings	Schedule and Conduct monthly meetings <i>Continue through Permit term</i> ONGOING, COMPLETED FOR REPORTING YEAR		
Annual Work Plan	Develop preliminary work plan for Regional Water Board staff <i>April Coordination Meeting, Annually</i> <i>Final work plan submitted with each Annual Report</i> ONGOING, COMPLETED FOR REPORTING YEAR		
Annual Report	Submit to Regional Water Board on time <i>October 1, Annually</i> ONGOING, COMPLETED FOR REPORTING YEAR		
Cooperative Agreement	Submit to Regional Water Board on time <i>within 6 months of Permit implementation</i> COMPLETED		
Coordination with Phase II Communities	Invite City and Town staff from Phase II communities within the permit boundary to monthly coordination meeting ONGOING, COMPLETED FOR REPORTING YEAR		
Legal Authority Goal: Effectively prohibit non storm water discharges into the storm drain system and receiving waters.			

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
Review existing codes and propose amendments as required	<p>Propose or demonstrate adequate enforcement authority <i>Within 12 months of Permit implementation</i></p> <p>INITIAL REVIEW COMPLETED DURING 2003-04</p> <p>Amendments will be proposed as required</p> <p>ONGOING</p>	<p>a. Provide a statement from County Counsel demonstrating adequate enforcement authority/In 1st Annual Report COMPLETED</p> <p>b. Review codes for SUSMP construction enforcement, and any other authority/Within permit term COMPLETED</p> <p>c. Consult with Regional Water Board Counsel/12 months of permit implementation COMPLETED</p>	<p>Water Agency relies on enforcement authority of City and County, and has no plans to seek additional authority. The Water Agency will use its existing legal authority as appropriate.</p> <p>ONGOING</p>
Private Construction Element Goal: Reduce construction site related pollutants, especially sediment, to Maximum Extent Possible (MEP).			
Grading Permit Issuance	<p>Continue to implement current approval process.</p> <p>ONGOING</p> <p>Submit list of active grading permits to Regional Water Board <i>in each Annual Report.</i></p> <p>COMPLETED FOR YEAR 4</p>	<p>a. Continue to require Erosion Control Plans for grading-permit ONGOING</p> <p>b. Continue to use local ECP guidelines. ONGOING</p> <p>c. Report number of grading permits issued in Annual Report/Annually. ONGOING</p> <p>d. Meet with Grading Ordinance Work Group and make recommendations to Board of Supervisors related to new Grading Ordinance/2003 ONGOING</p> <p>e. If grading ordinance is approved, review General Plan Resource Conservation Element to support</p>	<p>Under California planning and zoning law, land use is regulated by the City and County, rather than the Water Agency. The Water Agency will continue to review construction plans referred to the Agency by the City and County to ensure adequate downstream channel capacity for site runoff so long as contracts with the Cities remain in effect.</p> <p>ONGOING</p>

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		<p>policy changes/During Permit Term ONGOING</p> <p>f. Establish inspection categories/during Permit term. COMPLETED AHEAD OF DUE DATE</p> <p>g. Create standard Grading Notes for ECP's/2003 COMPLETED</p> <p>h. Create BMP handout for Type A building permits/Within 12 months of Permit implementation. COMPLETED</p> <p>i. Create procedures on pre-construction meeting/Within 36 months of permit implementation. COMPLETED</p> <p>j. Improve related project conditions/During Permit term. ONGOING</p>	
Vineyard Planting/Replanting Compliance	N/A	<p>a. All optional: Continue to require Notifications be filed for Level I, II, and III vineyard sites. ONGOING</p> <p>b. Continue to require ECP's for Level II and III vineyard sites. ONGOING</p> <p>c. Continue to use local ECP guidelines. ONGOING</p> <p>d. Continue to post vineyard</p>	<p>Under California planning and zoning law, land use is regulated by the City and County rather than the Water Agency. Thus, the Water Agency has no authority over vineyard planting or replanting. As such, this section is not applicable. N/A</p>

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		development information to the County website/Monthly. ONGOING	
Private Construction on Public Land	Continue to issue Encroachment Permits that require compliance with California Standard Specifications, Section 7-1.01G "Water Pollution" and the City Storm Water Ordinance ONGOING	<ul style="list-style-type: none"> a. Review/Revise Encroachment Permit Process/Once in Permit Term. DUE 07/08 b. Develop ECP Conditions for Encroachment Permits/Once in Permit Term. DUE 07/08 c. Ensure legal authority for enforcement/During permit term. DUE 07/08 	Incorporate appropriate BMP measures as part of the provisions contained in Revocable Licenses for private construction which occurs on Water Agency flood control channels. Request that cities and County refer project managers to Agency when project includes work on flood control channel. ONGOING
Inspection of Construction and Vineyard Sites	<p>Inspect sites with active grading permits every two weeks and after major storm events ONGOING</p> <p>Submit list of site inspections performed for each grading permit to Regional Water Board <i>in each Annual Report.</i> COMPLETED FOR YEAR 4</p>	<ul style="list-style-type: none"> a. Analyze increased level of plan review and inspection needs, and prepare for BOS consideration. Prepare budget request as appropriate/Within 36 months. COMPLETED b. If (a) approved, hire inspectors/During Permit term. COMPLETED c. Hold pre-construction meetings on significant projects/Once per project. ONGOING d. Inspect activities at significant project sites prior to rainy season/Once per year. ONGOING e. Inspect "sensitive sites" prior to rainy season/Once per year. ONGOING 	Provide at least one inspection for construction projects on agency flood control channels which have been issued a revocable license to ensure compliance with license. ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		f. Continue final grading inspections on all projects/Until construction is completed. Optional: ONGOING g. Inspect Level II & III vineyard sites prior to commencement of any work/Once per project. ONGOING h. Inspect Level II & III vineyard sites in autumn/Once per year ONGOING i. Inspect Level I vineyard sites as required/Until construction is completed. ONGOING j. Report number of vineyard inspections conducted, for Annual Report/Annually. ONGOING	
Enforcement of Non-Compliant Sites	Follow existing protocol and document verbal and written enforcement notices. ONGOING Submit list of sites requiring Third and Fourth Level enforcement actions to Regional Water Board <i>in each Annual Report</i> COMPLETED FOR YEAR 4	a. Continue enforcement protocol. ONGOING b. Consider increasing civil penalties/During Permit term. COMPLETED c. Report non-compliant sites in Annual Report/Annually ONGOING d. Create grading violation procedure/Within 24 months of Permit implementation. COMPLETED	Use the Water Agency's existing program and the enforcement authority of regulatory agencies to ensure projects comply with the conditions stated in the Water Agency-issued revocable licenses. ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
Reporting of Non-Compliant Sites	<p>Notify Regional Water Board verbally within 24 hours and in writing of Third and Fourth Level enforcement actions.</p> <p>ONGOING</p> <p>Submit list of sites requiring Third and Fourth Level enforcement actions to Regional Water Board <i>in each Annual Report</i></p> <p>COMPLETED FOR YEAR 4</p>	<p>See "Enforcement of Non-Compliant Sites" above.</p>	<p>If Water agency becomes aware of non-filer status, agency will refer non-filers to the Regional Water Board within 48 hrs.</p> <p>ONGOING</p>
Training of Targeted Staff	<p>Provide Erosion Prevention and Sediment Control training for new staff, and continue attending and participating in the Regional Water Board's annual Erosion and Sediment Control Workshop.</p> <p>ONGOING</p> <p>Submit list of staff that attend and/or participate in training to Regional Water Board <i>in each Annual Report</i></p> <p>COMPLETED FOR YEAR 4</p>	<p>a. Continue training staff/once per employee. ONGOING</p> <p>b. Continue "Code Corner" meetings. ONGOING</p> <p>c. Additional training for key staff/Once during Permit term. COMPLETED AHEAD OF DUE DATE</p> <p>d. Provide additional training for seniors and supervisors/Annually. ONGOING</p> <p>e. Invite Regional Water Board staff on ride-alongs/Annually. ONGOING</p>	<p>Provide a training session or training materials to the appropriate personnel on the components of the SWMP and new NPDES storm water permit.</p> <p>ONGOING</p>
Industrial/Commercial Element Goal: Reduce the potential for pollutants to contact storm water to the Maximum Extent Possible (MEP).			
Inventory of Facilities	<p>Maintain data base of businesses within City that may be required to file NOI and comply with the terms of State General Industrial Permit.</p> <p>ONGOING</p>	<p>a. Maintain data base of food facilities and closed landfills (EH), and businesses regulated by DES/Annually ONGOING</p>	<p>The City and County, rather than the Water Agency, are authorized by California planning and zoning law to regulate land use. Thus, this section is not applicable to the Water Agency.</p> <p>N/A</p>

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
	Submit in each Annual Report COMPLETED FOR YEAR 4		
Food Facility Inspections	Inspections are performed for wastewater discharge compliance. There are no measurable goals associated with this activity for the municipal NPDES permit.	a. Inspect twice during the 5-year permit term. ONGOING	N/A
Retail Gasoline Outlet and Automotive Service Facilities Inspections	RGO inspection checklist in the first Annual Report COMPLETED RGO outreach materials and distribution list in the second Annual Report COMPLETED Follow up inspection of RGO's and/or enforcement action summarized in the, fourth or fifth Annual Report COMPLETED IN YEAR 4	a. Inspect RGO's annually and ASF's on routine basis. ONGOING b. Enhance inspections to include storm water BMP's/RGO's-2003; ASF's-2004. ONGOING c. Increase inspection frequency/Once every 2.5 years. ONGOING	N/A
Industrial/Commercial Enforcement	1. Follow enforcement protocol for industrial/commercial facilities without industrial waste permits. 2. Report on enforcement activities in each Annual Report view and submit findings to Regional Water Board COMPLETED FOR YEAR 4	a. Use progressive enforcement. ONGOING b. Adopt CalEPA "CUPA" program enhancements, if available/2004. ONGOING c. Report referrals to Regional Water Board/2003. ONGOING	N/A
Interagency Coordination for Industrial/Commercial Facilities Program	Continue to participate in SEQAC meetings ONGOING	a. Participate in monthly permit Coordination meetings. ONGOING	N/A

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		b. Notify Regional Water Board staff of violations/Within 60 days. ONGOING c. Participate in SEQAC discussions. ONGOING	
Training of Targeted Staff	A description of the training provided and a list of participants will be included in each Annual Report. COMPLETED FOR YEAR 4	a. Train Environmental Health inspectors/Annually. ONGOING b. Continue food team meetings and discussions. ONGOING c. Train Emergency Services inspectors on storm water BMP's/2003 COMPLETED	N/A
Municipal Operations Element Goal: Reduce or prevent pollution in storm water runoff from all municipal land use areas, facilities and activities			
Public Construction Activities Management			
Contract Documents	Review special provisions and submit any revisions to the Regional Water Board in the first annual report. COMPLETED IN YEAR 1	a. Continue to reference appropriate BMP's in construction documents. ONGOING b. Review and update construction standard documents to ensure they include the most recent BMP's/Once during Permit term. ONGOING	Review Special Provisions and General Specifications for existing BMP'S to determine if they are adequate. Submit needed changes. ONGOING
Compliance with State General Construction Permit	The City, or contracted consultant on behalf of the City, files a NOI for applicable projects and comply with terms of the State General Permit. Each Annual Report to the Regional	a. Continue to submit NOI's for projects subject to the State General Construction requirement. ONGOING	File NOI for applicable projects, as required. ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
	Water Board includes a list of the projects that have complied with the terms of the State General Permit COMPLETED FOR YEAR 4		
Inspection	Perform each working day on active projects ONGOING	a. Continue to inspect public construction sites during construction activities. ONGOING	Continue to inspect active construction sites. ONGOING
Enforcement	Continue to implement progressive enforcement procedures. Continue through 2 nd permit term ONGOING	a. Continue to enforce construction documents regarding failure to carry out orders or contract provisions. ONGOING	Take action for non-compliance based on contract specifications. ONGOING
Training of Targeted Staff	Continue to discuss storm water quality requirements during pre-construction conference for public improvement projects. <i>Provide Annually</i> ONGOING	a. Continue to provide training to all applicable employees. ONGOING b. Provide annual training to key personnel, to enhance BMP knowledge/Annually. ONGOING	Assess current education and training practices for construction practices. <i>Permit Year 1</i> COMPLETED Update, if necessary.
Landscape and Recreational Facilities Management			
Pesticide management	Continue to keep pesticide use below the levels used prior to the implementation of the Integrated Pest Management Program ONGOING	a. Continue to follow chemical use, storage, disposal and reduction practices. ONGOING b. Continue native vegetation and water conservation practices. ONGOING c. Develop database for staff training certification regarding these practices. COMPLETED d. Develop written guidelines regarding	Continue with low-impact pesticide management. ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		these practices/During Permit term. DUE 07/08	
Fertilizer management	Develop a Fertilizer Management Plan and training program and provide in the first Annual Report COMPLETED PLAN ONGOING IMPLEMENTATION	See "Pesticide Management".	Continue to utilize recycled water for irrigation which offsets the need for fertilizer at the Water Agency's West College facility. ONGOING
Native vegetation	None are proposed for this permit term.	See "Pesticide Management".	Continue to incorporate retention and planting of native vegetation in design projects on flood control facilities. (See also, Public Outreach)
Disposal of landscape waste	Continue to grind and reuse waste materials as compost and mulch ONGOING	a. Continue to follow practices as noted in Plan. ONGOING b. Develop guidance documents for practices/During Permit term. DUE 07/08	Continue to use chipped brush and weeds as mulch around existing vegetation at Water Agency Channels. ONGOING
Recreational water bodies	Continue to implement existing activities. ONGOING	a. Continue to follow practices as noted in Plan. ONGOING b. Develop guidance documents for practices/During Permit term DUE 07/08	County manages Spring Lake Park for agency. Continue to limit equipment and material storage in Water Agency's flood control channel right-of-way. ONGOING
Swimming pool discharge	Continue to implement existing activities ONGOING	See "Recreational Water Bodies"	N/A
Storm Drain System Operation and Management			
Source Identification- Drainage system mapping	Existing storm drain system complete. Continuously update ONGOING	a. Develop Regional Parks priority system for pipe inventory/Year 2. COMPLETED b. Inventory "high priority" Regional Parks' pipe systems/Year 3. COMPLETED	Review existing mapping. <i>Permit Year 3</i> Modify maps, as needed, by the end of Permit Year 5. MODIFIED – CHANNELS MAPPED INTO GIS IN PERMIT YEAR 1.

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		c. Inventory "low priority" Regional Parks' pipe systems/Years 4 and 5. d. Inventory and map Public Works' Larkfield/Wikiup and Airport Business Park pipe systems/2005. COMPLETED e. Inventory and map other Public Works' systems in urban areas/2006.	
Clean and inspect storm drain pipe and inlet structures	Continue to clean and inspect 130,000 feet of storm drain pipe and 1200 structures. <i>Annually</i> 154,910 l.f. storm drain pipe and 7,742 storm drain structures were cleaned and inspected. ONGOING	a. Continue cleaning and inspection of problem inlets/Annually. ONGOING b. Develop program to pro-actively clean closed pipe systems/2005. COMPLETED	Pipes through City treated as open channel, see below. ONGOING
Flood control channel or road side ditch inspection and maintenance	Continue to inspect and remove debris for flood control purposes <i>Annually</i> ONGOING	a. Continue to inspect and remove debris for flood control purposes/Annually. ONGOING	Continue to provide trash cleanup in Water Agency channels, coordinate with local law enforcement when possible. <i>Annually, as needed</i> ONGOING
Storm drain labeling	Label 80% of curb opening inlets within the City ROW By the end of first year of permit term Continue labeling program. City records show that 83% of the City's catch basins have been labeled. ONGOING	a. Develop Parks Department program/Year 1. COMPLETED b. Develop Parks Department guidelines, procedures and database/Year 5. c. Label 10 Regional Parks inlets per year/Begin year 2. ONGOING d. Label 100 Public Works inlets per year in Larkfield/Wikiup and Airport	Label and maintain labels at storm drains within the West College Facility. <i>Six months of permit implementation.</i> COMPLETED

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		Business Park/Annually. MODIFIED e. Install labels on all new inlets in urban areas. ONGOING	
Streets and Roads Maintenance			
Street sweeping frequency	Priority A <i>three times per week</i> . Priority B <i>twice a week</i> Priority C <i>once a week</i> Priority D <i>monthly</i> City records show that 16,513 curb miles were swept during Year 4. ONGOING	Starting in Year 3 of Program: a. Industrial and Commercial Areas in the expanded permit boundary six (6) times a year/Annually. ONGOING b. Urbanized residential areas in boundary-3x/year/Annually. ONGOING c. Rural roads within boundary-2x/year/Annually. ONGOING d. Various streets, intersections, and other including Regional Parks' parking lots-upon request. ONGOING	Water Agency does not maintain public roads. No sweeping planned. Maintain shale layer on Water Agency-owned roads. ONGOING Continue to require reshaling of road in revocable licenses, where appropriate. ONGOING Continue to limit vehicular access to Water Agency roads. ONGOING
Material management	Continue to properly recycle or dispose of materials. ONGOING	a. Continue good housekeeping practices. ONGOING	Continue to limit equipment and material storage in Water Agency's ROW. ONGOING
Training of targeted staff	Continue to provide training annually ONGOING	a. Continue to provide training to key Regional Parks and Public Works staff. ONGOING b. Continue bi-weekly road crew tailgate meetings. ONGOING	Provide informal road maintenance BMP training. <i>As-needed</i> ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		c. Review current practices. ONGOING d. Complete draft road maintenance standards manual, collaborating with other counties/2003. COMPLETED e. Analyze draft manual and present to Board of Supervisors for policy direction/2004 COMPLETED	
Parking Facilities Management			
Sweeping	Continue to sweep City Transit and Parking sites (5 garages and 9 lots) <i>weekly</i> , pressure wash such garages <i>Annually</i> During years 3 and 4, the number of lots to be swept was decreased from 9 to 8 due to Hwy 101 construction. ONGOING	See "Streets and Road Maintenance, Street Sweeping Frequency" above	Sweep two employee and one visitor parking lot at West College facility. <i>Annually between August 15 and October 15</i> COMPLETED
Spill clean up	Respond immediately to priority reports/ within one business day for non urgent small spills ONGOING	a. Continue to clean up and dispose of spills as required. ONGOING	Respond in a timely manner. Use spill response protocol for hazardous or unmanageable spills. ONGOING
Emergency Procedures			
Emergency Operations Plan	Continue to implement the Emergency Operations Plan. ONGOING	a. Continue to implement Emergency Operations Plan. ONGOING b. Update Area Plan/2003. COMPLETED c. Update Emergency Operations Plan/2005.	Review existing Water Agency emergency operations plan for appropriate changes. <i>Permit Year 3</i> COMPLETED

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		<p>ONGOING</p> <p>d. Update Spill Plan/2003. COMPLETED</p> <p>e. Report Plan updates in Annual Report/Annually. ONGOING</p> <p>f. Continue interagency emergency coordination. ONGOING</p>	
Illicit Discharge Detection and Elimination Element Goal: Detect and minimize illegal non storm water discharges			
Spill Response	Continue existing illicit discharge detection and elimination activities. ONGOING	<p>a. Continue existing illicit discharge detection and elimination activities. ONGOING</p> <p>b. Report activities in Annual Report/Annually. ONGOING</p>	Implement current program. ONGOING
Private sanitary septic systems	Follow up on reported problems until resolved ONGOING	<p>a. PRMD to make referral to City of Santa Rosa with 24 hours for failed septic, or other source. ONGOING</p> <p>b. Continue to investigate illicit septic system discharges and report number of spills in the annual report. ONGOING</p> <p>c. Develop policies and procedures within 24 months of permit adoption. COMPLETED</p>	Notify City, County or Regional Water Board if a problem with a private sanitary septic system is discovered and not immediately corrected by land owners. ONGOING
Enforcement Procedures	Follow written enforcement procedures-update as needed ONGOING	a. Continue to pursue enforcement actions for violations. Report in Annual Report ONGOING	Water Agency works with responsible party, City, County, and other regulatory agencies to correct the problem. <i>Continue with existing program.</i>

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		b. County agencies will implement existing enforcement procedures in the expanded NPDES Boundary. County agencies will develop policies and procedures. ONGOING	ONGOING
Record Keeping and Documentation	Continue to update database as complaint response and inspections are completed Document illicit discharge detection and elimination activities and summarize in each Annual Report. ONGOING	a. Continue to practice recordkeeping by Public Works, Environmental Health, Emergency Services, and PRMD. ONGOING b. Report number of illicit discharges in the annual report/Annually. ONGOING	Ensure phone number to report a spill is listed in phone book. <i>Permit Year 1</i> COMPLETED Develop tracking system. <i>Permit Year 2</i> List reported spills in annual report. ONGOING
Illicit Connections	Document field inspection results from storm drain cleaning crew ONGOING	a. Continue illicit connection investigation and enforcement protocol. ONGOING	Investigate the sources of illicit discharges within flood control channels. Notify and provide support to appropriate municipality for discharges originating outside of channels. ONGOING
Disposal of used oil and toxic materials	Continue to utilize services provided by Integrated Waste Management ONGOING	a. Continue to implement existing used oil and toxic materials programs. ONGOING b. Report amounts collected in the annual report/Annually. ONGOING	Rely on existing programs by others. Provide outreach material developed by others where appropriate. ONGOING
Training of targeted staff	Training provided annually, documented, and summarized in each Annual Report. COMPLETED FOR YEAR 4	a. Continue to provide training to key staff. ONGOING	Review and update training for spill response personnel. <i>1 yr of permit implementation</i> MODIFIED Provide current contact info to receptionist. <i>6 mo of permit implementation</i> COMPLETED

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
			Provide annual review of contact info. COMPLETED
Public Education and Outreach Element Goal: Increase the community's knowledge of MS4 and the impacts of urban storm water run off, encourage behavioral changes thereby reducing pollutant release to the MS4			
General Public/Residents			
Storm drain inlet decal program	Continue to provide decal kits to volunteer groups ONGOING	See "Municipal Operations, Storm Drain System Operation and Management Section - Storm Drain Labeling"	Provide key Water Agency staff with contact numbers for storm drain labeling programs. <i>Permit Year 1</i> MODIFIED Evaluate efficacy of incorporating storm drain labeling program into creek stewardship program. <i>Permit Year 2</i> ONGOING
Ecology/Environmental column in local newspaper	The Press Democrat is not able to accommodate an "Ecology Column" at this time. However, the copermittees, in coordination with the RRWA, have established a monthly "Environmental Column" with several local news-papers. Articles are planned to be published on a monthly basis. COMPLETED FOR YEAR 4	The copermittees will contact newspapers within 24 months of permit adoption and report on status in Annual Report. COMPLETED	The copermittees will make first contact with the Press Democrat within 18 months of permit implementation and with Sonoma West within 24 months of permit implementation. The status will be reported in the corresponding annual report. COMPLETED
Web site	Update to include street sweeping schedule by address <i>Within first permit year</i> Street sweeping schedule viewing option is available from Basic Map pulldown menu located on the City's GIS Map page at http://imaps.ci.santa-rosa.ca.us/	See "Hazardous Waste Disposal".	Include info on creek stewardship program. <i>Permit Year 3.</i> ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
	COMPLETED		
Creek Stewardship	N/A	<p>a. Conduct survey of horse facilities adjacent to major creeks within boundary/2005 COMPLETED</p> <p>b. Provide horse owners with prepared materials as part of (a) above/2005. COMPLETED</p>	<p>Work with groups to develop Creek stewardship program and signs. <i>Permit Year 1.</i> COMPLETED</p> <p>Conduct outreach. <i>Permit Year 2.</i> Incorporate one creek per year. <i>Permit Years 3-5.</i> Provide half of funding required for project coordinator. <i>2005-2006</i></p>
Pet waste signs	<p>10 signs will be posted at major access points to the Santa Rosa Creek Trail, subject to approval by the Water Agency and City's Waterways Advisory Committee. <i>Within the first year of the permit term.</i> MODIFIED</p> <p>25 "Clean Up After Your Pet" signs will be posted at access points each year of the permit term. 155 signs installed to date. No additional signs are needed except to replace existing signs when damaged. COMPLETED</p>	<p>a. Continue to install pet waste signs at Regional Parks' facilities/ Ongoing. ONGOING</p>	<p>10 signs will be posted at major access points to creeks, subject to approval by the Water Agency and City's Waterways Advisory Committee. <i>Within the first year of the permit term.</i> COMPLETED</p> <p>10 signs yearly thereafter ONGOING</p>
Public Events	<p>Continue to pursue opportunities to participate in general outreach events. Report in each Annual Report COMPLETED FOR YEAR 4</p>	See "Hazardous Waste Disposal."	<p>Participate each year in Sonoma County Fair. Distribute outreach materials at fair. <i>Annually</i> ONGOING</p>
Hazardous Waste Disposal	<p>Continue to use services provided by County Waste Management Agency ONGOING</p>	<p>All Optional: a. Publish and distribute Sonoma County Recycling Guide/Annually. ONGOING</p>	County Waste Management Agency

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		b. Operate Eco-Desk hotline. ONGOING c. Maintain Sonoma County Waste Management Agency website. ONGOING d. Encourage oil and filter recycling via annual campaign. ONGOING e. Continue campaign for curbside oil and filter recycling ONGOING f. Continue Household Toxics collection publicity. ONGOING g. Continue to provide "No Toxics" garbage can stickers. ONGOING h. Provide Integrated Pest Management workshop for county employees. ONGOING i. Provide booth at Sonoma County Fair and the Harvest Fair re: Household Hazardous Waste Management. ONGOING	
Illicit discharge	Material distribution numbers will be reported each year in Annual Report. COMPLETED FOR YEAR 4	a. Conduct public outreach alternative options for the disposal of swimming pool water containing chlorine and biocides/Within 36 months of permit implementation. COMPLETED	Post storm water pollution prevention message on the Water Agency's Highway 101 billboard for 3 months per year. ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		b. Continue to distribute prepared materials during normal inspections (see Section 5 for more details of this activity). ONGOING	
Private septic system	Material distribution and workshop attendance numbers will be included in the <i>first Annual Report</i> . COMPLETED IN YEAR 1	a. Develop and distribute storm water quality BMP information to non-standard septic system owners, annually, and to all others upon request/2004. ONGOING	N/A
Food Facility Outreach	Continue to distribute prepared materials to the following industries: Automotive, Food, Cleaning, Building and Construction ONGOING	a. Continue to educate and assist food facility operators/owners implement effective BMP's. Distribute "Storm Water Pollution Prevention Guidelines for Food Handling Facilities" to owners/ operators during inspections. ONGOING	
Industrial/Commercial	Continue to distribute prepared materials to the following industries: Automotive, Food facilities, Cleaning, Building and Construction ONGOING	a. Begin first inspections within 12 months of permit adoption and provide operator/owner with pollution prevention guidelines. ONGOING b. Make a presentation to the Food Industry Advisory Forum about the storm water management plan and changes for food facilities between Term 1 and Term 2 permits. Make presentation within 24 months of permit adoption. COMPLETED c. Distribute additional material at the beginning of the 3 rd quarter 2003, or soon after. COMPLETED	N/A

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		<p>d. Discuss compliance issues with owner/operators and provide materials to assist with questions. Include storm water pollution prevention BMP's. Continue to encourage ASF's to receive Sonoma Green certification/2003.</p> <p>ONGOING</p>	
Landscape and Agriculture Industries	<p>The Master Gardeners were not interested in renewing their annual contract for 2006-2007. Consequently, the City contracted with Annie Joseph to implement the "Our Water Our World," a public outreach program, to promote the reduction of pesticide use and encourage/educate local nurseries and hardware stores to offer less toxic products and provide Integrated Pest Management Fact (IPM) Sheets to the public.</p> <p>ONGOING</p>	<p>a. Continue to give information to pesticide users with permits and annual registration.</p> <p>ONGOING</p> <p>b. Continue to offer junior college courses for state mandated continuing education for pesticide user licenses.</p> <p>ONGOING</p>	NONE
Building and Construction	<p>Refer to SUSMP for measurable goals.</p>	<p>a. Develop prepared materials/First half of Permit term.</p> <p>COMPLETED</p> <p>b. Distribute prepared materials/Second half of Permit term.</p> <p>COMPLETED</p> <p>c. Develop combined City/County SUSMP site design guidelines or requirements for developers (source controls) within 24 months of permit adoption.</p> <p>COMPLETED</p>	N/A

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
		d. Provide workshop to the development community on planning procedures, policies, design guidelines and BMP's for storm water pollution prevention within 24 months of permit adoption. COMPLETED	
School Education			
Water Education Program	N/A	N/A	Although no measurable goal is included, as this program is independent of storm water funding, it is anticipated that the current program will continue. ONGOING
High School Aquatic Macroinvertebrate Bioassessment Program	Continue to solicit program participation from the 6 public high schools. Year 4 Bioassessment Program completed with participation from 5 Santa Rosa area high schools. COMPLETED FOR YEAR 4	N/A	N/A
Spring Lake Environmental Discovery Center	Continue to sponsor and participate in storm water related displays- Annually ONGOING	a. Continue to operate and manage EDC. ONGOING b. Continue to seek sponsorship of EDC. ONGOING c. Continue to contribute funding to EDC provide storm water, water conservation, and endangered species act displays. ONGOING	Provide financial support through fiscal year 2007/2008 ONGOING

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
Effectiveness Evaluation			
Formal Evaluation	Evaluations will be included in each Annual Report. COMPLETED FOR YEAR 4	a. Compare goals in SWMP to actual work; develop work plan with Regional Water Board staff/Annually. ONGOING b. Document (a) in Annual Report/Annually. ONGOING c. Increase coordination of activities agency-wide, by hiring Storm Water Coordinator/2002. COMPLETED	Continue to track program elements through direct and indirect indicators. <i>Annually</i> ONGOING <i>Summary Report Permit Year 5</i>
Public Education and Outreach	Resurvey community awareness (Data trends) <i>To be performed during Year 5</i>	a. Based on Special Study (below), consider outreach to improve stream quality. ONGOING	Voluntary include feedback mechanisms in water Education Program. ONGOING
Monitoring Program	Evaluations will be included in each Annual Report. COMPLETED FOR YEAR 4	a. See Special Study (below), related to sediment.	Review monitoring data for trends. <i>Permit Year 5</i>
Special Studies	A retrofit treatment special study will be conducted by the City not to exceed \$35,000. <i>Complete by the end of Term II.</i> MODIFIED Special Study on Toxicity on Colgan Creek COMPLETED during Year 3. Additional outreach to Colgan Creek watershed residents planned for Year 5.	a. Continue to collect data at C3 station and evaluate for sediment levels. MODIFIED b. Begin data collection and establish background levels of bacteriological activity at C3 station/Annually via 3 grab samples. ONGOING c. Report data in Annual Report. ONGOING	None

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
Fiscal Analysis			
Financial Analysis of Program Activities	Include in Annual Report COMPLETED	a. Report program expenditures and funding sources in Annual Report ONGOING b. Develop new reporting structure/Within 12 months of permit implementation. COMPLETED c. Seek new revenue sources/During permit term. ONGOING d. Include discussion of fiscal resources in work plan meetings/Annually ONGOING	Include discussion of fiscal resources in work plan meetings/Annually ONGOING Report program expenditures and funding sources in Annual Report. ONGOING
Monitoring Plan Goal: Assess the receiving water quality to direct resources toward local pollutants of concern			
Chemical Monitoring	N/A	a. Collect samples for first flush and 3 representative storms/Annually ONGOING b. Review "representative storm" criterion and propose changes in work plan/During permit term. c. Report chemical monitoring results from prior year in Annual Report. ONGOING d. Review all chemical monitoring results of first two permit terms/Last year of permit term.	Collect samples for first flush and three representative storms. <i>Annually</i> ONGOING Include results and proposed changes to program in annual reports. Analyze data for trends. <i>Permit Year 5.</i> Added new monitoring locations on Mark West Creek.
Bioassay	Bioassay samples will be collected for the first flush and one	N/A	N/A

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
	representative storm at eight sites within the permit boundary. Data will be reported in annual reports. COMPLETED		
Aquatic Macroinvertebrate	Samples will be collected at six sites within the permit boundary and analyzed to level 3. Data will be reported in professional approved supplement reports. Professional samples were collected during 2006/07 rainy season. COMPLETED FOR YEAR 4	N/A	N/A
SUSMP Goals: Minimize storm water pollution, limit storm water peak flows, and conserve natural areas to MEP from new and redevelopment. (Requirements adopted by Regional Water Board in June 2003.)			
Waiver	Waiver granted with Regional Water Board approval. Place fees in project fund		
Determine if legal authority exists	Report findings in first Annual Report COMPLETED		N/A
Establish legal authority if required	Propose/amend ordinance within 12 months of Program implementation COMPLETED		N/A
Review applicable codes	Report findings in Annual Report within 12 months of Program implementation COMPLETED		N/A
Review General Plan	Complete within 9 months of Program implementation and report findings in second Annual Report COMPLETED	Report findings in Annual Report COMPLETED	N/A
Revise environmental review process	Complete within 12 months of Program implementation and report findings in second Annual Report COMPLETED		N/A
Update special provision general specifications for City/County contracts	Complete revisions on schedule within 3 months of Permit adoption COMPLETED	Complete revisions within 12 months of Program implementation COMPLETED	N/A

Storm Water Management Plan	Measurable Goals and Implementation Schedule: July 1 2006-June 30, 2007		
	City	County	Water Agency
Develop combined City/ County site design guidelines	Complete on schedule within 20 months of Program implementation COMPLETED		
Develop guidance on long term funding, inspection, reporting procedures for BMP maintenance	Complete on schedule within 20 months of Program implementation COMPLETED		
Develop/Modify City design standards for conformance with SUSMP requirements	Complete on schedule within 27 months of Program implementation IN PROCESS	N/A	N/A
Provide training to staff	Train targeted staff within 22 months of Program implementation COMPLETED		
Provide workshop to the development community	Prepare and conduct workshop within 24 months of Program implementation COMPLETED		
Implement SUSMP measures on City / County capital improvement projects	Design applicable projects with SUSMP measures <i>Upon Permit Adoption</i> ONGOING	Design applicable projects with SUSMP measures within 12 months of Program implementation ONGOING	Design applicable Zone 1A flood control projects with SUSMP measures, January 2004. ONGOING
Encourage applicants to implement SUSMP measures on projects	Require storm drain labeling on all projects <i>Upon Permit Adoption</i> ONGOING	Continue to discuss with development community as part of SUSMP public outreach ONGOING	N/A
Implement SUSMP measures on applicable projects within Urban Growth Boundary within Permit Boundary	Condition, plan check and inspect projects to meet SUSMP requirements <i>within 24 months of Program implementation</i> ONGOING		

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PART II

COUNTY OF SONOMA

**Permit Term 2
Annual Report 4**

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COUNTY OF SONOMA ANNUAL REPORT

The County of Sonoma prepared the following report to document the implementation of the Storm Water Management Plan (SWMP). The report includes highlights of program accomplishments for fiscal year 2006-2007 and, where appropriate, explanations of modification of measurable goals. The program accomplishments include continuous and/or ongoing measurable goals from previous years and one-time measurable goals from the current fiscal year. Related accomplishments that were not required by the SWMP appear under the heading "Additional Accomplishments." See the At-a-Glance table in Part I-4 for a quick reference including the status of all the measurable goals

2.0 PRIVATE CONSTRUCTION

Goal: Reduce construction site-related pollutants, especially sediment, to the Maximum Extent Practicable (MEP).

2.1 Grading Permit Issuance

Measurable Goals/Implementation Schedule

- a. Continue to require erosion control plans for grading permitted projects. Ongoing.
- b. Continue to use guidelines that are encouraged for local use by North Coast Regional Water Quality Control Board (Regional Water Board, RWB). Ongoing.
- c. Report the number of grading permits issued and the publication used to review and approve the erosion control plans, in Annual Report. Annually.
- i. Develop written policy and procedure for determining when pre-construction meetings will be required. Complete within 36 months of Permit adoption.

Accomplishments

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): PRMD staff has continued to require erosion control plans for grading permitted projects. From July 1, 2006 through June 30, 2007, there were 98 grading permits issued within the permit boundary. All grading permits had erosion control plans.

Measurable Goal (b): PRMD staff continues to use guidelines that are encouraged for local use by the North Coast Regional Water Quality Control Board. PRMD staff uses the following publications to review and approve the erosion control plans:

Erosion and Sediment Control Field Manual by the San Francisco Bay Regional Water Quality Control Board
Manual of Standards for Erosion & Sediment Control Measures by the Association of Bay Area Governments
Construction Site Best Management Practices Manual by Caltrans
Storm Water Best Management Practice Handbook by the California Storm Water Quality Association

Measurable Goal (c): Table II.1 below presents grading permit data within the MS4 permit boundary.

Table II.1
Grading Permit Data within the Permit Boundary

Grading Permit Information	7/1/06 – 6/30/07
New grading permits issued	98
New grading permits finalized	19
Total grading permits active	330
Total grading permits finalized	34

The information presented in Table II.1 is predicated on the project triggering a criterion some time during the fiscal year. For example, “active” means the permit was in “issued” status at some point during the fiscal year, either by being issued or rolling over from the previous fiscal year. “Finaled” means the permit status was changed to “final” status during the reporting period. Fifty four (54) of the “active” permits were “finaled” during the year and are not considered “active” from a current or future workload sense.

Measurable Goal (i): A Policy and Procedure for establishing when pre-construction meetings will be held has been developed and was approved on September 6, 2006. This policy was implemented prior to the 2006-2007 winter season. A copy of the Policy and Procedure can be found in **Appendix II.A.1**. The goal is to conduct pre-construction meetings on all grading permits in the MS4 permit boundary. However, a priority system is established in the policy should staffing resources prevent staff from meeting this goal. The two top priorities are projects having an acre or more of land disturbance and those less than an acre, but are adjacent to or in close proximity to a stream.

2.2 Vineyard Planting/Replanting Compliance

Measurable Goals/Implementation Schedule (optional)

- a. Continue to require Notifications be filed for Level I, II, and III vineyard sites. Ongoing.
- b. Continue to require Erosion Control Plans for Level II and III vineyard sites. Ongoing.
- c. Continue to use Erosion Control Plan guidelines that are for local use. Ongoing.
- d. Continue to post to the County web-site, relevant information regarding vineyard development Notifications received. Update web-site monthly.

Accomplishments

➤ **Agricultural Commissioner (Ag Comm)**

Measurable Goal (a): The Agricultural Commissioner’s Office continues to require notifications be filed for Level I, II, and III vineyard sites. From July 1, 2006 through June 30, 2007, the Agricultural Commissioner’s Office received 143 notifications for Level I vineyard sites and 28 notifications for Level II/III vineyard sites for planting or replanting of vineyards within the permit boundary.

Measurable Goal (b): The Agricultural Commissioner’s Office continues to require Erosion Control Plans for Level II and III vineyard sites. From July 1, 2006 through June 30, 2007, 28 Level II/III vineyard sites required Erosion Control Plans for planting or replanting of vineyards within the permit boundary.

Measurable Goal (c): The Agricultural Commissioner’s Office continues to use the following Erosion Control Plan guidelines for local use:

Erosion and Sediment Control Field Manual by the San Francisco Bay Regional Water Quality Control Board

Vineyard Management Guidelines by the Southern Sonoma Resource Conservation District

Fish Friendly Farming by the Sotoyome Resource Conservation District

Measurable Goal (d): The Agricultural Commissioner’s Office continues to post relevant information regarding vineyard development notifications received onto the County’s website.

2.3 Private Construction on Public Land

Measurable Goals/Implementation Schedule

- a. Review/revise Encroachment Permit Issuance Process and identify process improvements. During Permit Term.
- b. Develop Erosion Control conditions for Encroachment Permits. During Permit Term.
- c. Ensure legal authority for enforcement of Encroachment permit violations exists. During Permit Term.

Accomplishments

- **Permit and Resource Management Department (PRMD)**
Measurable Goal (a), (b) and (c): Not due this reporting period. The measurable goals in Section 2.3 are to be completed during the permit term and will be reported upon completion.

2.4 Inspection of Sites Requiring Erosion Control Plans

Measurable Goals/Implementation Schedule

- c. Continue to hold pre-construction meetings with grading personnel, on “significant projects”. Once per project (PRMD), Ongoing
- d. Continue to conduct BMP Verification inspection, subsequent to the pre-construction meeting, at “significant projects”. Once per project (PRMD).
- e. Continue to inspect grading permit activities on “sensitive sites” prior to rainy season, for erosion control plan compliance. Once per year (PRMD).
- f. Continue to conduct Final Grading inspections, for all grading permits. Ongoing (PRMD).
- g. Inspect Level II & III vineyard sites prior to commencement of any work. Once per project (Agricultural Commissioner).
- h. Inspect Level II & III vineyard sites in autumn. Once per year (Agricultural Commissioner).
- i. Inspect Level I vineyard sites as required. Ongoing (Agricultural Commissioner).
- j. Report number of construction inspections conducted, for Annual Report (PRMD), and the number of vineyard inspections conducted, for Annual Report (Agricultural Commissioner).

Accomplishments

- **Permit and Resource Management Department (PRMD)**
 In the current SWMP, the County uses the term “significant projects” which are projects in the Flood Prone Urban Area; in a Flood Hazard Zone; to legalize a grading violation; that are

engineered grading (5000 or more cubic yards); or designated by staff. After using this definition for several years it is apparent this definition is out of date and too narrow in some respects. For example, grading violations typically are for starting work early or without a permit or exceeding the scope of a grading permit. These types of grading violations may or may not include a storm water concern. Since the drafting of the current SWMP, PRMD has created a storm water violation activity type that is used to track storm water violations specifically. Using grading permits that legalize a grading violation is not an appropriate criterion.

Another example is the California Building Code definition of engineered grading is grading in excess of 5000 cubic yards of cut and fills volumes. Some staff thought that if an engineer stamped a set of grading plans then the project was engineered grading and therefore a “significant project.” This has led to extra time teasing out the data.

To simplify the reporting for this year we’ve assumed that all grading permits are “significant projects” and that there are no “sensitive sites.” These definitions will be re-evaluated in the permit re-application. We are considering using land disturbance, square footage of new impervious surfaces, proposals for new storm drain outfalls and the above approach that all grading projects are significant.

Please refer to **Table II.2** for a summary of the Erosion Control Inspections conducted by PRMD staff during the FY06-07 reporting period.

Measurable Goal (c): PRMD staff continues to hold pre-construction meetings with grading personnel on “significant projects.” PRMD staff conducted forty-four (44) pre-construction meetings this fiscal year. Bear in mind this figure is relative to the number of new or issued grading permits (98) this fiscal year, not the total number of significant projects (330). Also consider that not all of the issued grading permits started work during the fiscal year. It is estimated that at least 50% of the issued grading permits received a pre-construction meeting this fiscal year.

Measurable Goal (d): PRMD staff continues to conduct BMP verification inspections at grading projects PRMD staff conducted 218 BMP verification inspections this fiscal year.

Measurable Goal (e): See the above discussion regarding “sensitive sites” not being used as a defined project type.

Measurable Goal (f): PRMD staff continues to conduct Final Grading inspections for all grading permits. In addition, PRMD Storm Water Section staff conducts a storm water final inspection that focuses on storm water concerns. PRMD conducted eighty (80) storm water final grading inspections. **Table II.2** only presents the storm water final inspections. Prior to April 2007 (the re-assignment date of the grading program to Engineering) Storm Water inspectors conducted final inspection and reviewed the project relative to storm water pollution concerns only. After April 2007, Engineering inspectors conduct final grading inspections that cover all grading concerns: California Building Code standards as well as storm water concerns

Measurable Goal (j): PRMD staff inspected approximately one hundred seventy-nine (179) construction sites during the FY 06-07 reporting period. The total number of inspections conducted on these 179 sites include 44 pre-construction meetings, 218 BMP verification inspections, 80 final inspections, 12 site investigations and 28 re-inspections to follow up on compliance issues for a total of 382 inspections. The raw numbers would indicate that inspections were conducted on roughly 54% (179/330) of the “active” grading permits. However, this is a minimum percentage as there are “active” permits that did not start operations within the fiscal year and there are older “active” permits that have been completed but not finalized in our database.

➤ **Agricultural Commissioner (Ag Comm)**

Measurable Goal (g): All level II and III vineyard sites (11 sites totaling 277.45 acres) were inspected prior to the commencement of any work. See **Table II.2** for Erosion Control Inspections data County-wide.

Measurable Goal (h): All Level II and III vineyard sites were inspected in the Fall of 2005.

Measurable Goal (i): All Level I vineyard sites (143 sites totaling 1,157 acres) were inspected and required to have a cover crop to prevent erosion and sedimentation. Inspection of these sites is not mandatory under the erosion and sediment control ordinance. See **Table II.2** for Erosion Control Inspections data County-wide.

Measurable Goal (j): The total number of vineyard site inspections conducted is reported within **Table II.2**. Erosion and Sediment Control site plans are reviewed in conjunction with a Certificate of Inspection to make sure the plans are complete and approved. No violations of the county ordinance were noted.

Table II.2
Erosion Control Inspections Data within the Permit Boundary

	7/1/06 – 6/30/07
“Significant projects”	330
Pre-construction meetings held with grading personnel on “significant projects”	44
BMP verification inspections conducted at “significant projects”, subsequent to the pre-construction meeting	382
“Sensitive sites” inspected for erosion control plan compliance prior to rainy season	NA
Final Grading inspections conducted	80
Level II and III vineyard sites inspected prior to the commencement of any work	28
Level I vineyard sites inspected	143
Total number of vineyard site inspections	171

Additional Accomplishments:

➤ **Permit and Resource Management Department (PRMD)**

Starting in April 2007, the grading program was re-assigned from the Building Division to the Engineering Division at PRMD. Prior to this re-assignment, flooding, local drainage and storm water pollution review played a supporting role in plan review and inspection. Currently, the Engineering Division is the lead plan reviewer and is responsible for all aspects of grading: building code issues (compaction, setbacks, slopes, etc.), flooding concerns (fill in flood plains, potential for increasing the base flood elevation, etc), localized

drainage concerns (hydrology, hydraulics, culvert sizing, erosion potential, etc) and storm water pollution concerns. Consolidating the grading program in one division will increase efficiencies in plan review and make for a more holistic review. Further, the engineering plan review staff conducts this holistic review on all grading permits, not just in the MS4 permit boundary.

Similarly for inspections, all grading inspections, except for American Disability Act requirements, are being conducted by the Engineering Inspection Section. PRMD staff (the Storm Water Section inspectors and engineering plan reviewers) have trained our engineering inspectors in storm water pollution concerns and BMP installation and maintenance. We have consolidated the two Storm Water inspectors into the Engineering Inspection Section.

In response to the re-assignment, the Engineering Division created a division wide tracking system for all engineering related inspections. Inspections vary from trenches (water and sewer mains and storm drains) to compaction testing for grading to storm water BMP's and span sewer, encroachment, grading and drainage permits. See **Appendix II.B** for a copy of the Scantron form used for data entry. Basically a client calls for a specified inspection(s) on a permit using an automated phone in system (Selectron). The Selectron system prints out a pre-printed form for staff. After the inspection, staff bubbles in the appropriate inspection status (approved, partial, etc). The form is then scanned in and the inspection data is uploaded to our department database. Management then has the ability to review the inspection data and create reports.

Staff have also created an Engineering Job card. The job card is part of the package that is given to the permit holder. The job card alerts permit holders to the inspections required by the Engineering Division. One of the required inspections will be a pre-construction meeting. In the past, the Storm Water section relied on the job card and required inspections generated by the Building Division. With the grading program being re-assigned to the Engineering Division, the expectation is there will be an increase in the percentage of pre-construction meetings relative to newly issued grading permits. The Engineering Job card rounds out the plan review/inspection process. Engineering now has a complete process for receiving and reviewing grading projects, requiring specific inspections, an automated phone-in inspection request system, an automated inspection data entry system and outreach material to communicate the required inspections.

The Engineering Division is actively cleaning up data relative to older "active" permits. Many permits exceed the three year permit life and remain in issued status. We are conducting outreach and giving permit holders an opportunity to "final" their permit if desired. If the project was not started, as happens in a percentage of the cases, or if we don't get a response in a reasonable time frame, the permits will be expired. This effort will improve our data integrity and assist in program effectiveness evaluation.

2.5 Enforcement and Reporting of Non-Compliant Construction Sites

Measurable Goals/Implementation Schedule

- a. Continue enforcement protocol. Ongoing.
- c. Report information on the non-compliant sites to the RWB, in the Annual Report. Annually.
- d. Create a policy and procedure for grading violations. Complete within 24 months of Permit adoption.

Accomplishments➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): PRMD staff continues to follow the enforcement protocol for non-compliant construction sites as noted in the SWMP and in Annual Report 2.

Measurable Goal (c): Information regarding non-compliant sites is reported within **Table II.3**. The data presented in Table II.3 is only relative to storm water pollution concerns and/or complaints received by the Storm Water Section. The Storm Water Section received nine complaints/violations. There are other grading violations (grading without a permit, exceeding the scope of a grading permit, not compliant with slopes or not compliant with cut/fill slope property line setbacks for example) that are not being reported here. Four of the nine complaints/violations received were not related to storm water pollution concerns and were referred internally to our Code Enforcement Division. The other five were inspected and were either resolved or are still open cases.

PRMD informally informed the Regional Water Board staff, via the telephone or e-mails, of several enforcement cases we were working on, but zero cases were formally referred to the Regional Water Board for action.

During this fiscal year, PRMD did not encounter any repeat non-compliant sites. There were cases that needed several site visits to achieve compliance, but no repeated violations on the same project. The enforcement program is effective in achieving compliance once an issue is identified and in preventing further violations.

Table II.3
Non-Compliant sites data within the permit boundary

Non-Compliant Sites Information	7/1/06 – 6/30/07
New grading/storm water complaints/violations	9
Active grading/storm water violations/non-compliant sites	27
Resolved or closed grading/storm water violations	26
Ongoing/unresolved violations	1
Repeat non-compliant sites	0
Referrals of complaints (internal to County)	4
Referrals of non-compliant sites to Regional Water Board	0
Referrals of non-filers	6

Measurable Goal (d): The Construction Site Storm Water Violation and Compliance Policy and Procedure was approved and implemented during the 2006-2007 winter season. A copy of the Policy and Procedure can be found in **Appendix II.A.2**

➤ **Agricultural Commissioner (Ag Comm)**

Measurable Goal (a) and (b): All of the Level II/III projects were inspected in the fall of 2006. The projects were found to be in compliance with the engineered plans with the exception of three that had erosion control products improperly installed and one that was doing ground disturbance in December.

During the fall inspections of 2006, there were three projects in which erosion control products were not properly installed. All three erosion control products were installed by the same installer, who was from Napa, and had not attended Ag Comm workshops. The installer mentioned that Napa County does not have the hands-on field workshops like Sonoma County. The installer was issued a warning and given one day to reinstall the erosion control products properly. The projects were re-inspected and found to be in compliance.

The project in which ground disturbance was done in December was red-tagged and a stop work order was issued. The project manager was given two days to spread seed and straw over the entire disturbed areas. The maximum fine and penalty was applied. The manager and owner of the project complied with the requirements and the fine was paid.

Additional Accomplishments

➤ **Permit and Resource Management Department (PRMD)**

Although not a measurable goal, Provision C.14.c of the municipal storm water permit requires PRMD staff to identify non-filers of the General Construction Permit. All non-filers are to be referred to the Regional Water Board. During fiscal year 2006-2007 PRMD staff referred six (6) non-filers to the North Coast Regional Water Quality Control Board.

PRMD staff participates in the interagency Enforcement Task Force meetings held approximately six (6) times a year at the North Coast Regional Water Quality Control Board.

2.6 Training of Targeted Staff

Measurable Goals/Implementation Schedule

- a. Continue to provide training to staff, once per employee. Ongoing (PRMD & Agricultural Commissioner).
- b. Continue to provide trainees time at staff meetings and Code Corners to encourage discussion of Erosion Control current practices. Ongoing.
- d. Provide annual training to the Supervisors and Seniors in the Engineering Division, Operations Division, Building Division, and Code Enforcement Division. Annually (PRMD).
- e. Invite Regional Water Board staff to ride along with inspectors. Annually

Accomplishments

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): Staff continues to receive training on BMP's and storm water quality issues. During the 06-07 reporting period, PRMD staff trained eighty-eight (88) County

employees on the County's MS4 Permit requirements, the County's responsibility to implement the storm water program implementations, and BMP's implementations. See **Appendix II.C** for more information on training.

Measurable Goal (b): PRMD Staff continues to be allotted time at staff meetings and Code Corners to discuss current erosion control practices.

Measurable Goal (d): Annual training was provided to the Supervisors and Seniors in the Engineering Division, Building Division, Well & Septic Division, and Code Enforcement Division on March 21 through March 23, 2007. The Operations Division no longer exists and has been replaced by the Building and Well & Septic Divisions. See **Appendix II.C** for more information on training.

Measurable Goal (e): PRMD storm water inspectors invited the Regional Water Board to ride along on inspections 4 times during FY 06-07. Each ride-along consisted of visiting several sites for compliance and a discussion on the techniques utilized for soil stabilization. Regional Water Board staff commented that the overall site inspections conducted by PRMD storm water inspectors were complete and acceptable.

➤ **Agricultural Commissioner (Ag Comm)**

Measurable Goal (a): Ag Comm staff attended engineering workshops on new erosion control products, road construction, and dust management training conducted by North American Green in the Spring of 2007.

3.0 INDUSTRIAL/COMMERCIAL SOURCES

Goal: Reduce the potential for pollutants to contact storm water to MEP

3.1 Inventory of Facilities

Measurable Goals/Implementation Schedule

- a. Maintain database of retail food facilities and closed landfills (EH) and businesses regulated by DES, within permit boundary. Update annually.

Accomplishments

➤ **Environmental Health (EH)**

Measurable Goal (a): EH maintains an inventory in the Division's Dataease database for retail food facilities in the City of Santa Rosa and the unincorporated areas of the permit boundary to track business compliance and program performance for the following types of food facilities that are to be inspected twice during the five-year permit:

- Prepare food or drinks
- Restaurants
- Markets
- Bars with food preparation
- Bakeries

As of June 30, 2007, the inventory included 586 retail food facilities within the City of Santa Rosa and 203 retail food facilities within the unincorporated area of the county.

A current list of closed landfills is maintained by the Division's Local Enforcement Agency in the Division's Dataease database as mandated by the California Integrated Waste Management Board.

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): DES currently regulates 576 CUPA sites within the Phase I boundary. DES continues to maintain its CUPA DMS database of these sites. The database, CUPA DMS, has been in use for several years, and is used to track storm water inspections. These activities meet the requirements of Provision 15(a) of Order No. R1-2003-0062.

3.2 Retail Food Facility Inspections

Measurable Goals/Implementation Schedule

- a. EH staff will inspect all retail food facilities within new expanded NPDES permit boundary twice during the 5-year permit term. The first inspections will begin within 12 months of permit adoption, and there will be a minimum interval of one year between the first compliance inspection and the second compliance inspection.

Accomplishments

➤ **Environmental Health (EH)**

Measurable Goal (a): During FY 06/07, staff conducted 366 BMP inspections in Santa Rosa and fifty three (53) BMP inspections in unincorporated area.

3.3 Retail Gasoline Outlet and Automotive Service Facilities Inspections

Measurable Goals/Implementation Schedule

- a. Continue to inspect RGO's on an annual basis and ASF's on a routine basis. Ensure that the sites are complying with regulations.
- b. Continue to include review of storm water BMP's at RGO's and ASF's.

Accomplishments

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): There are thirty-one (31) RGO's within the Phase I boundary, and DES conducted fifty-two (52) inspections at these sites during FY 06/07 (many of them required reinspections). There are sixty-seven (67) ASF's within the Phase I boundary, and DES conducted twenty-three (23) inspections at them during FY 06/07.

Measurable Goal (b): Storm water BMP's are routinely discussed during RGO & ASF inspections conducted by DES. During FY 06/07, DES conducted 52 RGO & 23 ASF inspections.

3.4 Industrial/Commercial Facilities Enforcement

Measurable Goals/Implementation Schedule

- a. Use progressive enforcement approach to issues for non-compliant facilities. Ongoing.
- b. Cal EPA is in the process of developing an administrative enforcement process that will encompass all CUPA programs. If this is successful, DES will actively pursue adopting such a program. DES adopted a revised administrative enforcement order process in September 2006.
- c. Continue to make referrals as necessary to the Regional Water Board.

Accomplishments➤ **Department of Emergency Services (DES)**

Measurable Goal (a): Progressive enforcement is a routine procedure in the ongoing inspection work done by DES. In FY 06/07, DES inspectors noted 348 violations within the Phase I boundary, resulting in three (3) enforcement actions, two (2) of which remain unresolved.

Measurable Goal (b): DES adopted a revised administrative enforcement order process in April 2006. It was used successfully with Ace Marine in March 2007 because of repeated violations, including several related to storm water releases.

Measurable Goal (c): DES notifies the Regional Water Board as necessary. DES also participates in the Sonoma County Environmental Crimes Task Force, which meets periodically at the Regional Water Board office and serves as a forum on environmental crimes issues.

➤ **Environmental Health (EH)**

Measurable Goal (a): Sixteen (16) BMP re-inspections were conducted for routine inspection violations at retail food facilities in Santa Rosa with 100% compliance during FY 06/07.

Measurable Goal (b): No referrals were made during the FY 06-07 reporting period.

3.5 Interagency Coordination for Industrial/Commercial Facilities**Measurable Goals/Implementation Schedule**

- a. EH inspectors will continue to participate in the monthly copermittee coordination meetings.
- b. EH staff will notify the Regional Water Board within 60 days of retail food facilities that receive a third violation notice.
- c. DES staff attends SEQAC or other roundtable discussion. Begin 2003.

Accomplishments➤ **Environmental Health (EH)**

Measurable Goal (a): EH staff attended monthly copermittee coordination meetings as well as monthly coordination meetings among County Department staff.

Measurable Goal (b): None reportable in the FY 06-07 reporting period.

➤ **Department of Emergency Services (DES)**

Measurable Goal (c): DES continues to be an active participant in the Sonoma Environmental Quality Assurance Committee, attending its quarterly meetings in FY 06/07. The last meeting was held on 5/23/07.

3.6 Training of Targeted Staff

Measurable Goals/Implementation Schedule

- a. Train EH inspectors at least annually on procedures, policies, and BMP's for storm water pollution prevention and control. Distribute to EH inspectors' appropriate educational and training materials on inspection procedures, record keeping and enforcement/referral procedures.
- b. EH staff will discuss storm water pollution issues at retail food facilities during bi-weekly Retail food Team staff meetings and discuss non-hazardous storm water pollutant discharges during quarterly Emergency Response Team staff meetings.

Accomplishments

➤ **Environmental Health (EH)**

Measurable Goal (a): 15 out of 15 (100%) staff attended storm water training for Environmental Health Services on February 7, 2007 (See **Appendix II.C**). In addition, EH staff discusses inspection procedures, record keeping and enforcement/referral procedures during its quarterly Standby Team meetings

Measurable Goal (b): EH staff discusses storm water related retail food facilities issues during monthly Retail Food Team staff meetings and discusses illicit discharge policy and procedure during quarterly Standby Team meetings.

4.0 MUNICIPAL OPERATIONS

The purpose of this section is to document the goals, existing activities, and proposed activities associated with Municipal Operations. For purposes of this document, Municipal Operations includes the following activities:

- 4.1 Public Construction Activities
- 4.2 Landscape and Recreational Facilities Management
- 4.3 Storm Drain System Operation and Maintenance
- 4.4 Streets and Road Maintenance
- 4.5 Parking Facilities Management
- 4.6 Emergency Procedures.

4.1 Public Construction Activities

Goal: *The goal of the Public Construction Activities section is to incorporate Best Management Practices (BMP's) to reduce the discharge of pollutants in storm water runoff, especially sediment, from public construction sites.*

4.1.1 Contract Documents

Measurable Goals/Implementation Schedule

- a. Continue to reference appropriate BMP's in construction documents for public construction projects. Ongoing.
- b. Review and update Construction Standard Documents to ensure they include the most recent BMP's. Complete during Permit Term.

Accomplishments

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW continually reviews and updates project documents as they are developed during a project environmental and design phase. Special Provisions for each project consider individual site requirements and construction practices that may impact storm water quality.

Measurable Goal (b): DTPW will continue to review the latest BMP's and incorporate the applicable BMP's into design and construction documents.

➤ **General Services**

Measurable Goal (a): General Services will continue to reference the appropriate BMP's in construction documents for public construction projects. During the reporting period, there were no relevant construction projects underway. At the next appropriate project, the County Architect will review consultant's construction documents to ensure reference to appropriate BMP's are made. Consultants are also expected to be familiar with PRMD's requirements for construction documents.

Measurable Goal (b): GS will continue to work with PRMD's Storm Water Section to ensure that the most recent and appropriate BMP's details and specs are included in municipal project construction document packages.

➤ **Regional Parks**

Measurable Goal (a): Regional Parks had three (3) active projects under construction within the permit boundary during the reporting period, and continued the practice of referencing appropriate BMP's in the construction documents for these public projects. Environmental documents, design plans, and construction documents incorporate customized measures to address site-specific issues including potential impacts to storm water. See **Appendix II.D** for project details and summary matrix.

Measurable Goal (b): Regional Parks continued the practice of reviewing and updating Construction Standard Documents to ensure they include the most recent BMP's. See **Appendix II.D** for project details and summary matrix

4.1.2 Compliance with State General Construction Permit

Measurable Goals/Implementation Schedule

- a. Continue to submit NOI's for projects subject to the State General Construction Permit requirement throughout the Permit Term.

Accomplishments**➤ Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW continues to submit NOI's for projects subject to State General Construction Permit requirements through the term of the permit.

➤ General Services

Measurable Goal (a): With the completion of the two major projects in 2005, current projects do not reach the threshold of requiring NOI's. Some projects in the planning stage may require compliance with the state general permit. However, staff is trained annually in the best management practices to be observed on all public construction projects regardless of size.

➤ Regional Parks

Measurable Goal (a): Regional Parks had one new project subject to coverage under the State General Construction Permit and submitted a NOI for the project. See **Appendix II.D** for project details and summary matrix.

4.1.3 Inspection**Measurable Goals/Implementation Schedule**

- a. Continue to inspect public construction sites during construction activities on an ongoing basis.

Accomplishments**➤ Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW construction inspection staff continues to monitor and enforce standard specifications and special provisions in the contract documents related to water quality. DTPW construction staff utilizes Caltrans' Construction Site Best Management Practice (BMP) Field Manual and Trouble Shooting Guide as a resource for construction monitoring and reporting. DTPW has assembled a field inspector's binder containing Caltrans Division of Construction Storm Water Management Enforcement Guidance Manual and Storm Water Quality Handbooks. In addition, a construction site inspection form (checklist) has been created for field inspection purposes. This new form is included as **Appendix II.E**.

➤ General Services

Measurable Goal (a): Continue to inspect public construction sites during construction activities on an ongoing basis. There are currently no active projects subject to the requirement of the general permit.

➤ Regional Parks

Measurable Goal (a): Regional Parks continued the practice of inspecting its public construction sites during construction activities. Construction site reports are generated on a

nearly daily basis throughout the course of the project. See **Appendix II.D** for project details and summary matrix.

4.1.4 Enforcement

Measurable Goals/Implementation Schedule

- a. Continue to enforce the construction documents including the provisions set forth regarding failure to carry out orders given or to perform the provisions of the contract.

Accomplishments

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW construction inspection staff continues to monitor and enforce standard specifications and special provisions in the contract documents. DTPW construction staff utilizes Caltrans Construction Site Best Management Practice (BMP) Field Manual and Trouble Shooting Guide as a resource for construction monitoring and reporting. See previous comments in Section 4.1.3. See previous comments in Section 4.1.3.

➤ **General Services**

Measurable Goal (a): General Services will continue to enforce the construction documents including the provisions set forth regarding failure to carry out orders given or to perform the provisions of the contract. The County Architect's office continues to monitor all capital projects and enforces appropriate BMP's. No violations have occurred.

➤ **Regional Parks**

Measurable Goal (a): Regional Parks continued to enforce construction documents including special provisions for its three active projects. Through the General Conditions set forth in the Contract Specifications, Regional Parks may 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. See **Appendix II.D** for project details and summary matrix.

4.1.5 Training of Targeted Staff

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.

Accomplishments

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): See comments in Section 4.1.5(b) for training provided to DTPW staff.

Measurable Goal (b): Fifty-one out of (51/120 or 42.5%) of DTPW staff attended trainings and seminars related to storm water quality, erosion and sediment control, and BMP's. The numbers were down from last year because of the one time training for the Fishnet 4C manual and the PRMD Storm Water Course has been attended by almost all of the

maintenance workers involved with maintenance activities that affect storm water in the past two years. Seminars or training courses attended:

<u>Course</u>	<u>Date</u>	<u>Staff Attendance</u>
Current Issues In Storm Water Regulations in California	8/18/06	1
ASCE Presentation by Regional Water Board – SUSMP	9/13/06	5
Filtterra Company BMP's (Hwy 12)	10/12/06	4
EPA Webcast – Construction SWPPP's	1/10/07	5
SCWA NPDES/SWPPP Basics	3/29/07	7
SCWA Erosion/Sediment Control/Storm Water Mgmt	3/29/07	3
PRMD Yearly SUSMP Training Class	4/25/07	18
“ “ “ “ “	4/26/07	17

➤ **General Services**

Measurable Goal (a): General Services will continue to provide training to all applicable staff involved in public construction projects. Appropriate staff members have attended SWMP workshops when offered. In addition, a SWMP library has been established in the County Architect's office and is updated as new materials are received. A list of websites is maintained for staff use.

Measurable Goal (b): Key personnel will continue to be provided with annual training to enhance construction BMP knowledge. All projects managers have attended SWMP workshops when offered.

➤ **Regional Parks**

Measurable Goal (a): The Regional Parks Storm Water Management Field Technician attended a *Salmonid Restoration Federation Conference*, March 7-10, 2007, to learn current practices for riparian habitat restoration, erosion control and bank stabilization for instream construction projects. A Regional Parks Planner received certification as a Pervious Concrete Technician on June 13, 2006.

A total of three planning and maintenance staff members attended a Fish Passage Design & Engineering Workshop February 27-March 1, 2007.

Eight key staff members received Storm Water Pollution Prevention Plan (SWPPP) training at a seminar on March 29, 2007. The Storm Water Field Technician also viewed an EPA web cast on SWPPP's on January 10, 2007.

Measurable Goal (b): A total of forty-five (45) key Regional Parks' staff received annual County-wide NPDES training directed toward enhancing construction BMP knowledge. A training session was held on January 31, 2007 by the Storm Water Coordinator to educate staff of effective BMP methods to prevent erosion and water pollution. See **Appendix II.C.** for a list of attendees. Additionally, the Regional Parks Storm Water Management Field Technician attended a PRMD sponsored BMP training seminar on March 22, 2007. This

staff member also viewed a Department of Transportation and Public Works presentation and a Regional Parks Storm Water PPT presentation on February 23, 2007.

The Storm Water Management Coordinator and Environmental Specialist also attended an Association of Environmental Professionals (AEP) storm water seminar on September 20, 2006.

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a) and (b): Alex Rosas and Janice Gilligan of Sonoma County's PRMD gave a NPDES presentation to the County Department of Transportation and Public Works (DTPW) on April 25 and 26, 2007. The topic was NPDES rules and regulations and storm water runoff, including a question and answer period. The total number of DTPW staff attending the presentation was thirty-five (35). See **Appendix II.C** for more information on training.

4.2 Landscape and Recreational Facilities

Goal: Incorporate Best Management Practices (BMP's) to minimize the discharge of pollutants in storm water run-off from existing landscape and recreational facilities. This section focuses on chemical (pesticides, herbicides, and fertilizers) use, storage, disposal, and reduction as well as proper disposal of vegetation and other debris and minimizing pollutants from entering permittee-owned recreational water bodies.

4.2.1 Pesticide Management

See 4.2.3

4.2.2 Fertilizer Management

See 4.2.3

4.2.3 Native Vegetation

Measurable Goals/Implementation Schedule

- a. Continue to implement the chemical use, storage, disposal, and reduction practices outlined above. Ongoing.
- b. Continue to follow the current practices regarding retention and planting of native vegetation and water conservation. Ongoing.

Accomplishments

➤ **Regional Parks**

Measurable Goal (a): Regional Parks' staff continued to implement chemical use, storage, disposal, and reduction practices in accordance with the strategies outlined in the SWMP for the current permit term. The department complied with standardized protocol for chemical application and related regulatory requirements and continued to conduct quarterly

inspections in storage areas. Regional Parks' staff prepared Pesticide Use Reports on a monthly basis and records were submitted in accordance with regulatory requirements.

Regional Parks continued the policy of prohibiting the use of copper-based pesticides as part of the Spring Lake Aquatic Vegetation Control Program. As an alternative, the U.S. EPA and the State of California approved Aquatic Herbicide Sonar AS (fluridone) was used at Spring Lake to control Mosquito fern (*Azolla spp*) (Clean Lakes Report, 2007).

To further pesticide reduction practices, pesticide use in West County Parks was discontinued completely as of June 1, 2007. Chemical usage at all other Regional Parks was limited to products that carry regulatory "Caution" labels. The use of pesticides at Helen Putnam and Tolay Lake Parks was suspended in compliance with a Federal court order and EPA injunction which restricts pesticide use in California Red-legged Frog habitat.

The Regional Parks Storm Water Field Technician was trained on pesticide use, application and reduction practices on April 26, 2007. Twelve key Regional Parks' staff attended a Pesticide Seminar on October 25, 2006. The Regional Parks NPDES Coordinator also attended an Integrated Pest Management (IPM) conference in San Jose on November 14, 2006.

Measurable Goal (b): Regional Parks continued to follow current practices relating to retention and planting of native vegetation and water conservation, as outlined in the storm water management plan for the current permit term.

The department utilized volunteer assistance to reduce the populations of non-native plant species such as French Broom, Fennel, Blackberry, and Pampas grass at facilities within and beyond the permit boundaries. During the current reporting period, 944 hours of volunteer labor were reported for non-native plant removal at nine Regional Parks' facilities.

Regional Parks advanced in its Water Conservation Project at the County Administration Center, which has improved water conservation, community education, and aesthetics. This project is being cosponsored with the Sonoma County Water Agency and City of Santa Rosa and is phased over a three-year period. Phase one has been completed, which includes the administration building. This phase replaces the existing turf and shrubs with walking paths and drought-resistant perennials and trees, all of which contribute to the creation of a demonstration garden. The demonstration garden serves as an active example of aesthetically pleasing water conservation techniques. Broadcast irrigation was also replaced with drip irrigation throughout the Center.

Phase one reduced the turf area from 47,000 square feet down to 10,000 square feet, nearly an 80% reduction (see **Appendix II.F**). Sonoma County Permit and Resource Management Department also participated by contributing storm water management devices and BMP demonstration features as part of the project.

4.2.4 Landscape Waste Disposal

Measurable Goals/Implementation Schedule

- a. Continue to implement the current practices regarding proper disposal of landscape waste. Ongoing.

Accomplishments**➤ Regional Parks**

Measurable Goal (a): Regional Parks continued to comply with known regulatory provisions relating to proper disposal of landscape waste as outlined in the County's SWMP. The vast majority of vegetative clippings, weeds and other landscape waste products were disposed of at the central Sonoma County landfill site, utilizing the County's green waste recycling program to the greatest extent feasible during the reporting period. Special care was taken to ensure Sudden Oak Death material was disposed of properly in the county landfill.

In addition, tree debris larger than four inches in diameter was processed for utilization as firewood in Regional Parks' campgrounds. On-site chipping of landscape debris was also conducted at park facilities, for utilization of the material as organic mulch.

4.2.5 Recreational Water Bodies

See Section 4.2.6 below.

4.2.6 Swimming Pool Discharge**Measurable Goals/Implementation Schedule**

- a. Continue to implement the current practices regarding management and monitoring of recreational water bodies and swimming pools. Ongoing.

Accomplishments**➤ Regional Parks**

Measurable Goal (a): Regional Parks continued to implement the current practices outlined in the storm water management plan related to management and monitoring of recreational water bodies. Routine Department of Health Services Water tests for Coliform and E. coli were performed at Spring Lake and the lagoon on a weekly basis. Additionally, daily readings for Chlorine and PH were taken at the Spring Lake swimming facility. The test results are recorded in Specimen Reports, in accordance with regulatory requirements.

Regional Parks met State requirements pertaining to application of aquatic pesticides under the Aquatic Pesticide Application Plan and water quality monitoring program for Spring Lake, in compliance with Water Quality Order No. 2004-0009-DWQ. See section 4.2.1-3a for further details

4.3 Storm Drain System Operation And Maintenance

Goal: *The goal of the Storm Drain System Operation and Maintenance section is to remove the load of pollutants prior to their reaching waterways*

4.3.1 Drainage System Mapping

Measurable Goals/Implementation Schedule

- a. Conduct inventory of “high” priority storm drain systems during Year 3 of the Permit (Regional Parks).
- c. Conduct inventories of lower priority storm drain systems during Years 4 and 5 of the Permit (Regional Parks).
- e. Complete inventory of closed conduit system for another urbanized area (possibly south Santa Rosa Avenue area) by June 2006 (DTPW).

Accomplishments

➤ **Regional Parks**

Measurable Goal (a): Regional Parks completed its inventory of “high” priority storm drain systems during the current reporting period. These facilities include County-owned and affiliate-owned grounds in urbanized areas under Regional Parks maintenance jurisdiction. See **Appendix II.G** for inventory results.

Measurable Goal (c): Regional Parks began its inventory of “low” priority storm drain systems during the current reporting period. “Low” priority storm drain systems are defined as County-owned parks within the permit boundaries. Regional Parks will continue to inventory all Parks and facilities over the remainder of the current permit term.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (e): During the FY 06/07, only small areas of south Santa Rosa area were worked on due to lack of field staff available. Temporary staff already hired this year will allow for completion of mapping in boundary. Most areas are county islands within or are small areas around incorporated area.

4.3.2 Clean and Inspect Storm Drain Pipes and Inlet Structures

Measurable Goals/Implementation Schedule

- a. Continue annual inspection of problem inlets and clean as necessary.
- b. Develop program to pro-actively clean closed pipe systems/2005.

Accomplishments

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW has inspected inlets in Airport and Larkfield/Wikiup/ Areas for sediment during its GIS inventory and mapping work. GIS maps have been produced indicating the sediment loads at the inlets in the storm drain system. DTPW maintenance crews are scheduled to clean the inlets and pipes prior to winter of 2006. Inlets and pipes that caused flooding were cleaned or opened during storm events.

See Section II.4.3.2 (b) also.

Measurable Goal (b): The inventory and mapping of the Airport and Larkfield/Wikiup areas has been completed. In addition to mapping the closed conduit system, sediment levels at the inlets within the storm drain system have been estimated and mapped. These maps were provided by engineering which indicated areas where storm drains had sediment accumulation. County maintenance crews and contract hydrovac services began cleaning closed storm systems in the Airport business area and the in Wikiup mostly residential area in the fall of 2006 prior to the onset of heavy winter rains. The work lasted approximately seven (7) weeks. The approximate amount of sediment removed was estimated between twenty five (25) to thirty (30) cubic yards. The work done represented more than 20% of the urban Phase I Area.

Based on the procedures instituted for the storm drain cleaning of the Airport/Wikiup Areas, a reporting mechanism and work method/procedures will be established for this coming years storm drain cleaning effort.

A written program is not in-place at this time. A draft outline of all the components and procedures has been done. Utilizing the information from the first widespread cleaning effort, a written procedures plan and reporting forms will be developed.

DTPW has reorganized some of its road maintenance staff and assigned responsibilities to a supervisor for cleaning of the storm drains as part of his regular duties.

➤ **Regional Parks**

Measurable Goal (a) and (b): Regional Parks' staff continued the standard practice of performing annual inspection and clearing of known problem storm drain inlets within the permit area, prior to the onset of the first substantial rains during the reporting period. Subsequent monitoring and clearing occurred as necessary during the rainy season. Temporary sediment control devices were installed as necessary at select locations, to prevent debris from entering storm drains. Storm Water Inspection Reports were completed by Park Maintenance and Operations staff to document problem drain inlets

4.3.3 Open Channel or Roadside Ditch Inspection and Maintenance

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.

Accomplishments

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): TPW will continue to remove trash, debris, etc, from plugged areas and will clean ditches to minimize and in response to flooding.

DTPW crews picked up approximately 100 tons of trash and debris within the Phase 1 Area.

➤ **Regional Parks**

Measurable Goal (a): Regional Parks Maintenance and Operations staff continued with the standard practice of inspecting roadside ditches under departmental jurisdiction during the reporting period. Trash and debris was removed as necessary in order to prevent or minimize

flooding and erosion. Trash and woody debris was also removed adjacent to creek areas in parks located within the permit area, as well as beyond the current permit boundary.

4.3.4 Storm Drain Labeling

Measurable Goals/Implementation Schedule

- c. Label 10 existing storm drain inlets per year beginning in Year 2 of the Permit until all inlets are labeled. This number will be re-examined after an inventory is completed. (Regional Parks).
- d. Label 100 existing storm drain inlets per year until all inlets are labeled in the Larkfield/Wikiup and Airport Business Park urban areas (DTPW).
- e. Label new storm drain inlets in the Larkfield/Wikiup and Airport Business Park urban areas during installation (DTPW).

Accomplishments

➤ Regional Parks

Measurable Goal (c): Regional Parks installed 20 storm drain labels during the current reporting period. These results are consistent with the priorities identified for its inventory of closed storm drain systems.

➤ Department of Transportation and Public Works (DTPW)

Measurable Goal (d): Labeling of almost all storm drain inlets has been installed in the Airport Business Park and Larkfield/Wikiup urbanized areas. Labeling on other missed areas within the Phase I boundary will coincide with GPS/GIS inventory work.

Through the Waste Management Agency funding, an outside vendor expended \$6,731 on labor for placing previously purchased labels in Cloverdale, Sebastopol, Cotati, Sonoma, and the unincorporated county areas.

Measurable Goal (e): DTPW has installed hundred's of labels within the Airport and Larkfield/Wikiup areas. New construction will continue through these areas into the future. Labeling for the new inlet structures will occur when inventorying or inspections take place.

4.4 Streets and Road Maintenance

Goal: Reduce the impact of street and road operations and maintenance on storm water quality. Streets and roads may collect litter and debris from nearby activities, as well as from vehicular traffic. They also require routine maintenance, which may generate waste materials.

4.4.1 Street Sweeping Frequency

Measurable Goals/Implementation Schedule

- a. Industrial/Commercial areas within boundary – sweep 6 times per year (DTPW) starting in year 3 of the program.

- b. Urbanized Residential Areas within boundary - sweep 3 times per year, starting in year 3 of the program (DTPW).
- c. Rural Roads within boundary - sweep 2 times per year, starting in year 3 of the program (DTPW).
- d. Various/Intersections/Other (DTPW and Regional Parks)/sweep upon request.

Accomplishments

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW continues to concentrate on sweeping within Industrial/Commercial areas. Not all roads are swept 6 times a year. Roads that have active construction going on are swept more than 6 times a year. Also, roads that are close to the Santa Rosa Yard, where the sweepers are stationed, receive more attention because of proximity. Lists of roads swept and frequency are on-file.

The sweeping program for the entire road system removed 442 tons of sweeping material and 100 tons of litter picked up and disposed of that would have presumably washed in to the storm drain system.

Measurable Goal (b): DTPW is sweeping within the urbanized residential boundary. Listings of roads swept along with frequency have been produced and are on file. Not all roads are swept three times; however, some roads have been swept more than three times. The amount of sediment within urban residential areas fluctuates depending upon the amount of active development and terrain. Judgment is applied by the operator as to what areas generate more road sediment and on which roads to concentrate.

In the long run, collection of sediment data will concentrate sweeping efforts to the areas that need them instead of having blanket requirements that treat entire areas as the same problem.

Measurable Goal (c): DTPW continues to sweep based on priority levels established in the permit and as operations and maintenance activities affect the sweeping program. It is inaccurate to say that every rural road is swept two times per year. The main sweeping effort is within the industrial, commercial and residential areas where organized, closed storm drain systems exist. The sweeping of rural roads should be re-considered in the next permit update. Often, these roads drain into grassy ditches or into fields. It would make sense to inventory the rural roads and make decisions as to the overall benefit of sweeping. Given the overall sweeping efforts throughout the boundary area, it may make sense to concentrate sweeping resources to other areas. At least, a discussion should take place using existing roads as examples may lead to better allocation of resources. This issue should be discussed in the light of residential areas that have no closed conduit storm drain systems. The emphasis on the word "municipal" within the permit indicates the thought process was built around "city" conditions. Most of the county is not "municipal" in nature and does not have the same conditions.

See comments in 4.4.1 (b).

Measurable Goal (d): DTPW will be available if sweeping needs arise.

➤ **Regional Parks**

Measurable Goal: Regional Parks' staff did not receive any requests for sweeping of roads and parking areas within its jurisdiction or at contracted sites during the current reporting period. A logbook is kept to track the amount of oil or contaminants that are picked up within facilities maintained by Regional Parks. Although not requested, Regional Parks Maintenance staff spend hundreds of hours conducting regular sweeping of roads and parking areas to prevent issues from occurring..

4.4.2 Materials Management

Measurable Goals/Implementation Schedule

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

Accomplishments

➤ Department of Transportation and Public Works (DTPW)

Measurable Goal (a): DTPW will continue to implement good house keeping practices regarding materials management. Training received on the FishNet 4-C Guidelines emphasized BMP's materials in Section 9 of the manual and BMP Tool Box of the Appendix.

4.4.3 Training of Targeted Staff

Measurable Goals/Implementation Schedule

- a. Continue meetings to discuss streets and road maintenance activities throughout the Permit Term. (Parks)
- b. Continue biweekly road-crew tailgate meetings to discuss streets and road maintenance activities throughout the Permit Term. (DTPW)
- c. Review current streets and road maintenance practices, including BMP's related to materials management, on an ongoing basis throughout the Permit Term.

Accomplishments

➤ Regional Parks

Measurable Goal (a): Regional Parks Maintenance and Operations staff representatives held weekly Ranger/Maintenance coordination meetings (R3M3 meetings) to discuss street and road maintenance issues and activities. Meeting minutes were routinely recorded.

Measurable Goal (b): Regional Parks' staff researched and reviewed current published road maintenance BMP's during the reporting period. Storm water management staff attended a Fish Net 4C meeting regarding the development of a programmatic permit for road maintenance activities and discussed related BMP practices on April 5, 2007.

Regional Parks is working to produce a quick-reference Sediment Control and Erosion Prevention Manual for use by field staff. Intended for use at the job site, the manual will be laminated for durability and small enough to remain in all Regional Parks vehicles. The

manual will feature techniques for selecting, installing, and maintaining BMP's as well as other erosion prevention practices.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): The FishNet 4-C guidelines were finally published by the FishNet 4-C organization and adopted by the Board of Supervisors. Training was provided to road maintenance personnel on the guidelines by consulting staff hired by FishNet 4-C.

Measurable Goal (b): Tailgate meetings are not held every two weeks as specified, but on a project-by project basis. Since the inception of this measurable goal maintenance personnel have received regular SUSMP training, as well as, the FishNet-C guidelines training.

Measurable Goal (c): DTPW will continue to review procedures, methods, and practices related to BMP's materials management. Training on materials management was part of the FishNet 4-C training seminars conducted on June 5 and 6, 2006.

See Section II.4.1.5 (b) for attendance figures.

4.5 Parking Facilities Management

Goal: Reduce the discharge of pollutants to storm drain systems due to street and road maintenance, with a focus of maintaining debris-free parking facilities and minimizing excessive oil buildup.

4.5.1 Sweeping

See Section 4.4.1: Street Sweeping Frequency

4.5.2 Spill Clean-up

Measurable Goals/Implementation Schedule

- a. Continue to clean up and dispose of spills in paved parking areas within Regional Parks Department jurisdiction in accordance with current practices.

Accomplishments

➤ **Regional Parks**

Measurable Goal (a): No spills occurred in paved parking areas during the current reporting period in any Regional Parks facilities within the permit boundaries.

4.6 Emergency Procedures

Goal: 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 BMP's into emergency response activities.

4.6.1 Emergency Operations Plan

Measurable Goals/Implementation Schedule

- a. Follow Area, Emergency Operations and Spill Plans. The Area Plan is currently being used for emergency response procedures. The Emergency Operations Plan and Spill Plan are also currently being used for emergency planning and response.
- c. Review and update Emergency Operations Plan in November 2005. Include information about Plan updates in Annual Reports.
- e. Include information about Plan updates in Annual Report.
- 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.

Accomplishments

➤ Department of Emergency Services (DES)

Measurable Goal (a): Procedures in the Area, Emergency Operations and Oil Spill Plans are currently being followed. The Emergency Operations Plan was heavily used during the flooding along the Russian River in January 2006. The Area Plan is routinely used in hazardous materials incident response activities. There were no major oil spills in navigable waterways in Sonoma County that would have triggered activation of the Oil Spill Response Plan.

Measurable Goal (c): The Emergency Operations Plan was updated October 2006.

Measurable Goal (e): The process of updating the Area Plan began in FY 06/07. Copies were distributed to various agencies, comments were received and incorporated into the Plan, and it went through another review by its stakeholders. It was sent to County Counsel at the end of June 2007, with the goal of obtaining approval by the Board of Supervisors in August 2007.

Measurable Goal (f): DES has led the Sonoma County Hazardous Materials Response Team since 1994. It includes six (6) full-time fire inspectors and approximately 15 volunteers. The team trains frequently with various fire and law enforcement agencies, as well as others involved with emergency response to hazardous materials incidents. In FY 06/07, DES conducted a boom deployment drill with the Russian River Fire Department and Level A drill with the Windsor and Rincon Valley Fire Departments.

5.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Goal: *The goal of the illicit discharge program is to detect and eliminate non-storm water discharges (except those that are exempt or conditionally exempt) from entering the storm drain system and to reduce pollutants from such discharge to the maximum extent practicable. Spills due to vehicular accidents and unintentional discharges are also included under this section.*

5.1 Spill Response Investigation/Inspection and Follow-up Procedures, Including Public Reporting

Measurable Goals/Implementation Schedule

- a. County agencies will continue to investigate illicit discharges during inspections, complaint follow-ups and emergency response activities.
- b. Report the number of spills investigated in the Annual Report.

Accomplishments

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): Investigating illicit discharges is a routine part of our CUPA inspections, complaint follow-ups & emergency response activities.

Measurable Goal (b): In FY 06/07, DES investigated three (3) illicit discharges within the Phase I boundary. In the 1st incident, the diesel release at the Fairgrounds in August 2006 was contained and later investigated. Release response procedures and related training at the Fairgrounds were improved to avoid a repeat event. In the 2nd incident, used oil & battery acid were cleaned up by the property owner. In the 3rd, DES confirmed that gasoline had been released onto the homeowner's property. Since it did not present an immediate hazard to public health & safety, the property owner was advised to hire a contractor to complete the cleanup and to seek redress thru the legal system.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW assists other County Departments with collecting discharged materials and arranging for their disposal.

Measurable Goal (b): DTPW works together with Environmental Health (EH), Department of Emergency Services (DES), etc., on responding to spills and other illicit discharges. DTPW performs traffic control at sites, removes contaminated and hazardous materials from the site after the materials are deemed safe to handle, and stores the materials at the Santa Rosa Yard for removal at a later date. Spill numbers and investigations are reported by other responding departments. DTPW collected approximately 305 gallons of hazardous sludge/liquid and 1450 pounds of solid hazardous materials and stockpiled the material at the Santa Rosa Yard for off-site hauling by a licensed contractor.

➤ **Environmental Health**

Measurable Goal (a): EH staff continues to coordinate with other County Departments in responding to and mitigating referrals and illicit discharges.

Measurable Goal (b): EH investigated five (5) complaints of illicit discharges in Santa Rosa and five (5) complaints of illicit discharges in the unincorporated area of the NPDES permit boundary during FY 06/07. See Section 5.3(a) below regarding complaint enforcement and resolution.

Additional Accomplishments:

➤ **Permit and Resource Management Department (PRMD)**

PRMD has coordinated efforts to establish written spill response procedures for all types of non-storm water discharges.

5.2 Private Sanitary Septic Systems

Measurable Goals/Implementation Schedule

- a. PRMD's goal is within one business day to make referrals to the City of Santa Rosa agency 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 trailer.
- b. Continue to investigate illicit septic system discharges and report the number of spills in the Annual Report.

Accomplishments

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): PRMD continues to work with the City of Santa Rosa concerning referrals of failed septic systems within the city limits. All failed septic systems, grey water and trailer related issues are referred to the city within 24 hours.

Measurable Goal (b): PRMD received reports of twenty (20) failed septic systems within the permit boundary in 2006-2007. These reports were not necessarily illicit discharges related to the storm drainage system because some failures did not result in liquid waste entering waterways/drainage ways. One hundred percent (100%) of the twenty reports were responded to by PRMD staff in accordance with the procedures described in the SWMP. PRMD staff has been involved with fifty (50) complaints during this reporting period. Staff involvement includes conducting an initial investigation, sending a notice of violation, sending a notice and order and/or closing the complaint. A total of sixty-two (62) properties remain in violation pending the installation or repair of the existing septic system or connection to a municipal sewer system. A site-specific report is available upon request.

5.3 Standardize Enforcement Procedures

Measurable Goals/Implementation Schedule

- a. County agencies will continue to pursue current enforcement actions to obtain compliance for illicit discharge detection and elimination. Report the number of enforcement actions in the annual report. 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.
- b. County agencies will continue to implement existing enforcement procedures in the expanded NPDES permit boundary. County agencies will develop policies and procedures during the Permit Term.

Accomplishments

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): In FY 06/07, DES inspectors documented 348 violations of CUPA regulations in the Phase I boundary. Three enforcement actions were initiated in that period, two of which remain unresolved. Settlements in the two unresolved cases are still being negotiated by the parties involved.

Measurable Goal (b): DES has been using existing enforcement procedures in the expanded permit boundary. A new SOP on Administrative Enforcement Orders (AEO's) was approved by the DES Director in April 2006. It was used successfully in March 2007 in a case against a marine vessel repair shop.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): DTPW did not detect any illicit connections to storm drain systems in 2005-06. However, the ability to detect illicit connections could increase with use of new storm drain camera purchased in late June of 2006 for use in storm drain sediment inspections.

Measurable Goal (b): DTPW construction inspection staff continues to monitor and enforce standard specifications and special provisions in the contract documents.

DTPW has assembled a field inspector's binder containing Caltrans Division of Construction Storm Water Management Enforcement Guidance Manual and Storm Water Quality Handbook. In addition, a construction site inspection form (checklist) has been created for field inspection purposes.

Construction inspection staff typically reviews the following materials prior to commencement of construction activity related to this permit:

- Notice of Intent (NOI) (if applicable)
- Soils/Geotechnical report
- Materials reports for identification of hazardous materials
- Drainage reports
- Regulatory guideline documents, specifications and details
- Specific BMP's detailed in the PS&E's
- SWPPP plan review

➤ **Environmental Health**

Measurable Goal (a): Of the five (5) illicit discharges investigated in Santa Rosa during FY 06/07, none required enforcement action. Of the five (5) illicit discharges investigated in the unincorporated areas of the NPDES boundary during FY 06/07, two (2) were referred to PRMD for enforcement action, one (1) was referred to the District Attorney's Office for enforcement action, one (1) required sending a notice of violation, and one (1) required no enforcement action.

Measurable Goal (b): During FY '05-'06, EH worked with other County Departments to initiate a formal illicit discharge policy and procedure. This policy and procedure was implemented during FY 06/07.

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): PRMD investigates private septic system complaints which are a subset of illicit discharges. Please see section 5.2(b) for PRMD's discussion of septic system complaints and investigations.

Measurable Goal (b): PRMD continues to implement existing enforcement procedures in the expanded NPDES permit boundary. PRMD staff is currently working with other County departments to develop enforcement policies and procedures.

5.4 Record Keeping and Documentation

Measurable Goals/Implementation Schedule

- a. County agencies will continue to implement current record keeping activities that are used for input to the Annual Report.
- b. Report number of illicit discharge in the Annual Report. Annually.

Accomplishments

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): Illicit discharge record keeping is accomplished through written reports, which are completed during each inspection, in complaint follow-up reporting, and in emergency response documentation. Further, violations of environmental regulations are recorded in our CUPA database (CUPA DMS).

Measurable Goal (b): DES investigated three (3) illicit discharges within the Phase I boundary during FY 06/07.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): No illicit discharges reported by DTPW, but DTPW responds to illicit events through Fire Services and/or Public Health which are lead departments during such events. Illicit connections in the future will be facilitated through the use of a recently acquired sewer pipe inspection camera. DTPW will document all findings in conjunction with storm sewer inspections.

Measurable Goal (b): DTPW had no illicit discharges within boundary area during the FY 06-07 reporting period.

➤ **Environmental Health**

Measurable Goal (a): EH findings are written on a “Food Facility Storm Water Inspection Report” and attached to the routine inspection report as an addendum. A copy of this report is provided to and discussed with the food facility owner/operator. A copy of this report is stored in the Environmental Health Division’s food facility files for a five-year period. Records of sewage spill investigations are kept in the division’s Dataease database and in the “Standby Phone Calls” file in the division’s S-drive transfer.

Measurable Goal (b): EH investigated five (5) complaints of illicit discharges in Santa Rosa and five (5) complaints of illicit discharges in the unincorporated area of the NPDES permit boundary during FY 06/07.

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): PRMD continues to practice the record keeping activities stated in the SWMP.

Measurable Goal (b): PRMD staff has been involved with fifty (50) complaints during this reporting period. See Section 5.2(b) above.

5.5 Illicit Connection Investigation

Measurable Goals/Implementation Schedule

- a. County agencies will continue to investigate illicit connections and pursue enforcement action or refer to the appropriate agency for follow-up. Ongoing.

Accomplishments

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): DES staff inspects storm drain systems during their inspections of RGO's & ASF's, as well as their other, routine hazardous materials inspections. No illicit connections were found by DES during the FY 06/07 reporting period

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): Illicit connections are referred to PRMD's Well and Septic or Code Enforcement Divisions for investigation and enforcement. No illicit connections were found by DTPW during the FY 05-06 reporting period.

➤ **Environmental Health**

Measurable Goal (a): EH Staff reported finding no illicit storm drain connections during routine inspections and received no complaints of illicit storm drain connections.

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): Code Enforcement investigates illicit discharges referred by other County departments or agencies for investigation or enforcement. Where discharges violate County regulations, enforcement is conducted until compliance is regained.

5.6 Public Reporting

The activities and goals to accomplish this are included in Section 5.1 "Spill Response Investigation/Inspection and follow-up Procedures, including Public Reporting."

5.7 Disposal Of Used Oil and Toxic Materials

Measurable Goals/Implementation Schedule

- a. County agencies will continue to implement their programs for disposal of used oil and toxic materials. Ongoing.
- b. DTPW will continue to submit the amounts collected in the annual report. Annually.

Accomplishments

➤ **Department of Emergency Services (DES)**

Measurable Goal (a): DES routinely assists the County Roads Department in the identification of wastes contained in abandoned containers that are discovered by the roadside. DES distributed information on the Household Hazardous Waste and Conditionally

Exempt Small Quantity Generator Programs to residents and business owners within the Phase I boundary during FY 06/07.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (b): The Sonoma County Waste Management Agency, of which Sonoma County is a member, provides household hazardous waste (HHW) management services for the cities and the County. These services include a permanent toxics collection center at the Central Disposal Site, free to residents, operating three days per week (Thursday through Saturday), free Community Toxics Collections events (up to 60 participants by appointment) held once per week at various locations throughout the County, and a Toxic Rover program which, for a fee, will go to individual houses on an appointment only basis.

The Sonoma County Department of Transportation and Public Works Integrated Waste Division owns and operates five public disposal sites throughout the County, where garbage can be disposed, other materials are recycled and used oil is collected.

Used oil is also collected as a part of the curbside refuse collection service for most of the incorporated cities and the unincorporated areas of the County

Statistics on the quantities of used oil and household toxics collected by these programs are included in **Table II.4** below.

Table II.4
Summary of Hazardous Waste Collection Programs

	FY 03-04	FY 04-05	FY 05-06	FY 06-07
Program	Pounds of Waste	Pounds of Waste	Pounds of Waste	Pounds of Waste
Household Toxics Roundups	846,627	143,539	166,376	201,115
Household Toxics Facility	Not open	600,524	300,563	1,074,180
Load Check at Disposal Sites	78,173	61,572	78,569	59,571
Recycle Only Drop-Offs	596,066	547,332	471,675	354,449
E-waste Recycling	732,162	967,727	997,776	1,596,447
Curbside Oil Recycling	83,545	201,235	125,239	62,027
Vendor Recycling	775,854	669,638	644,827	457,779
Total	3,112,427	3,191,567	2,785,025	3,805,568

5.8 Training of Targeted Employees

Measurable Goals/Implementation Schedule

- a. Continue to train staff who are responsible for identification, investigation, termination, cleanup, and reporting of illicit discharges and connections. Ongoing.

Accomplishments➤ **Department of Emergency Services (DES)**

Measurable Goal (a): DES inspectors also attend frequent training on topics related to environmental regulations, which are often closely related to storm water issues. In February 2007, five DES employees attended the CUPA Conference in Anaheim, CA.

➤ **Department of Transportation and Public Works (DTPW)**

Measurable Goal (a): Fifty-one out of one hundred twenty (51/120 or 42.5%) of DTPW staff attended trainings and seminars related to storm water quality, erosion and sediment control, and BMP's. The numbers were down from last year because of the one time training for the Fishnet 4C manual and the PRMD Storm Water Course has been attended by almost all of the maintenance workers involved with maintenance activities that affect storm water in the past two years. Seminars or training courses attended:

<u>Course</u>	<u>Date</u>	<u>Staff Attendance</u>
Current Issues In Storm Water Regulations in California	8/18/06	1
ASCE Presentation by Regional Water Board – SUSMP	9/13/06	5
Filtterra Company BMP's (Hwy 12)	10/12/06	4
EPA Webcast – Construction SWPPP's	1/10/07	5
SCWA NPDES/SWPPP Basics	3/29/07	7
SCWA Erosion/Sediment Control/Storm Water Mgmt	3/29/07	3
PRMD Yearly SUSMP Training Class	4/25/07	18
“ “ “ “ “	4/26/07	17

➤ **Environmental Health**

Measurable Goal (a): Fifteen (15) out of fifteen (15) staff attended storm water training for Environmental Health Services on February 7, 2007 (See **Appendix II.C**). EH staff discusses storm water related retail food facilities issues during monthly Retail Food Team staff meetings and discusses illicit discharge policy and procedure during quarterly Standby Team meetings.

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): Code Enforcement staff attended a PRMD Storm Water training on illicit discharge on April 25, 2007. The training included information on spill response, illicit discharge identification, reporting, investigation, and agency referrals. See **Appendix II.C** for training information.

6.0 PUBLIC EDUCATION AND OUTREACH***Goals***

- a. Make the public aware of the significance of the non-point source/storm water pollution problem in the Laguna de Santa Rosa watershed.

- b. Explain what non-point source and storm water pollution are, and describe sources, pathways, and impacts.
- c. Make the public aware of the regulatory requirements faced by the copermitees and the community, and the results of noncompliance.
- d. Develop a sense of community ownership of the storm water/non-point source pollution problem and promote cooperative source control as the community's response to the problem.
- e. Emphasize the importance of individual action and responsibility in controlling storm water/non-point source pollution.
- f. Coordinate with other agencies, which are involved in environmental education throughout the watershed to maximize the effectiveness of all of the programs.

6.1 Storm Drain Labeling

Note: Storm Drain Labeling Program information and performance standards are including in the Municipal Operations chapter within Section 4.3.4.

6.2 Ecology/Environmental Newspaper Column

See **Appendix II.H**, 2006-07 Russian River Watershed Association Storm water Activities, for a summary of the environment newspaper column published this fiscal year.

6.3 Website

Additional Accomplishments

PRMD continues to utilize the internet to promote the Sonoma County SWMP.

6.4 Creek Stewardship

See **Appendix II.H**, 2006-07 Russian River Watershed Association Storm water Activities, for a summary of the creek cleanups, various forums and environmental programs.

6.5 Pet Waste Signs

Measurable Goals/Implementation Schedule

Continue to provide pet waste signs at Regional Parks' facilities.

Accomplishments

➤ Regional Parks

Measurable Goal (a): An inventory of pet waste signs was conducted during the current reporting period. All relevant Regional Parks facilities within the permit area have pet waste signs posted, as follows:

Colgan Creek Trail	2
Crane Creek Regional Park	2
Foothill Regional Park	2
Tom Schopflin Fields	2
Spring Lake Park	13
Joe Rodota/West County Trail	28
Hood Mountain Regional Park	3
Healdsburg Veterans Memorial Beach	3
Maddux Ranch Regional Park	3
Shiloh Ranch Regional Park	3
Hunter Creek Trail	2
Ragle Ranch Regional Park	8

6.6 Public Events

See Section 6.2, "Hazardous Waste Disposal" for a description of activities and goals related to public events.

6.7 Hazardous Waste Disposal

Additional Accomplishments

See **Table II.5** for description of accomplishments.

➤ **Department of Transportation and Public Works (DTPW)**

The Sonoma County Waste Management Agency (SCWMA), of which Sonoma County is a member, provides household hazardous waste (HHW) management services for the cities and the County. These services include a permanent toxics collection center at the Central Disposal Site, free to residents, operating three days per week (Thursday through Saturday), free Community Toxics Collections events (up to 80 participants by appointment) held once per week at various locations throughout the County, and a Toxic Rover program which, for a fee, will go to individual houses on an appointment only basis. The SCWMA also provides collection services, through these same programs, for Sonoma County businesses that qualify as Conditionally Exempt Small Quantity Generators under California H&SC Title 22.

In addition to the above mentioned collection programs, The Sonoma County Department of Transportation and Public Works Integrated Waste Division owns and operates five public disposal sites throughout the County, where garbage can be disposed, other materials are recycled and used oil is collected. All five disposal sites also have load-check programs to capture hazardous waste disposed of in the solid waste stream. The load check program includes an extensive screening and educational effort to inform landfill users of the proper disposal options available.

Used oil is also collected as a part of the curbside refuse collection service for most of the incorporated cities and the unincorporated areas of the County

Lastly, there are 55 businesses and government-sponsored centers that accept oil from the public. Forty-seven of those oil recycling centers also accept oil filters and fourteen accept antifreeze. **Table II.5** summarizes the hazardous waste collected in fiscal year 2006-2007.

Approximately \$265,800 was spent by the Waste Management Agency on education for the fiscal year 2006-2007. Some of these costs are reflected in **Table II.5**.

**Table II.5
Household Hazardous Waste Programs Educational Efforts**

Program Description	Reach	Budget
Sonoma County Recycling Guide		
<p>The Sonoma County Waste Management Agency produces an annual 28-page Recycling Guide that provides information for residences and businesses about proper disposal of toxins including: 1) Information about the Agency's permanent Household Toxics Facility and related Community Toxics Collections and Toxics Rover Pick up service; 2) Information about curbside recycling of motor oil and filters; 3) Used oil/filter recycling drop-off options for do-it-yourselfers; 4) Business information about managing hazardous waste, including managing empty plastic pesticide containers; 5) Drop-off recycling for batteries (auto & household), electronics, fuel, fluorescent lamps & ballasts, lead, medications, paint, photo chemicals and syringes/needles.</p> <p>The Guide is primarily distributed printed and bound into the AT&T Yellow Pages phone book and AT&T Yellow Pages Mini phone book. In addition, extra stand-alone copies of the Guide are printed for distribution at grocery stores, fairs, real estate offices, chamber of commerce, etc.</p>	<p>541,000 combined distribution (341,500 AT&T Yellow Pages phone book residential and business customers/ 175,500 AT&T Yellow Pages Mini Phone books - 24,000 extra stand-alone copies)</p>	<p>\$59,370 (not including staff time)</p>
Eco-Desk Hotline		
<p>The Sonoma County Waste Management Agency operates an Eco-Desk telephone information line answering questions from the public about recycling, toxics disposal and other disposal issues. The Eco-Desk voice tree is comprised of 21 English language voice mail boxes that give detailed information about hazardous waste disposal, oil recycling, electronics, paint and other information. After the callers listen to the pre-recorded information, they have the opportunity to leave a message. Call are returned by the next working business.</p> <p>The Spanish Eco-Desk is operated as a pilot project (10/06-3/08) by a contractor to the Sonoma County Waste Management Agency. When Spanish speaking callers to the Eco-Desk press option #2, they are transferred to a bi-lingual person familiar with all of the Agency's programs.</p>	<p>2,741 call and email inquiries in 2006. (This does not include calls received at the Spanish Eco-Desk)</p>	<p>\$1,600/month in phone and voice boxes (not including staff time)</p>
Sonoma County Waste Management Agency Website		
<p>The Sonoma County Waste Management Agency maintains an extensive web site at www.recyclenow.org. The web site includes a searchable Access Eco-Desk database which includes all the information in Recycling Guide and more. In addition, there are 15 downloadable .pdf fact sheets on Integrated Pest Management.</p>	<p>2,819,228 web site hits in 2006, representing 211,763 users.</p>	<p>\$495/year for domain name and site hosting (not including staff time)</p>
Oil and Filter Recycling Campaign		
<p>The Sonoma County Waste Management Agency receives annual grant monies to encourage and support oil and filter recycling. A wide spectrum of campaigns have been conducted and continue to be conducted utilizing this funding. There is approximately \$140,000 available annually. Generally 50% of those funds are used to conduct educational/publicity campaigns.</p>	<p>Varies by campaign</p>	<p>\$140,000/yr</p>
Household Toxics Collections Publicity		
<p>The Sonoma County Waste Management Agency publicizes all of its Household Hazardous Waste Collection Programs including: Community Toxics Collections, Toxics Rover Pickup Service, and the permanent Household Toxics Facility located at the Central Disposal Site. 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.</p>	<p>Countywide</p>	<p>\$7,000 - \$25,000/yr</p>

Fair Booths		
The Sonoma County Waste Management Agency participates as a vendor in a number of events throughout the year. Displays reflect annual topics: "2007-Compost Your Veggies", "2006-Recycle Electronics", "2005-Toxics Disposal". Events include Health & Safety Fairs, 2-week long Sonoma County Fair, Harvest Fair, Earth Day events, etc.	At least 408,000 (based on attendees at the Sonoma County Fair and Harvest Fair in 2006)	\$8,000/year for temporary staff, materials and registration fees (not including Agency staff time)
NO Toxics Garbage Can Stickers		
The Sonoma County Waste Management Agency applies "No Toxics" stickers to residential garbage cans throughout the county. The stickers inform residents that oil, oil filters and other hazardous waste can not go in the garbage, and provide the Eco-Desk Hotline phone number. This sticker project has been completed in Cloverdale, Sebastopol, Healdsburg, and Santa Rosa. Stickers continue to be placed on garbage cans in Petaluma, Sonoma, Cotati, and the unincorporated County.	∇Residents of Santa Rosa, Cloverdale, Sebastopol, Healdsburg, Cotati, Sonoma, Petaluma, and the unincorporated County	\$ 39,140 (labor cost only)
Catch Basin Markers		
There is an ongoing project to place labels next to storm drains to inform people that the water going into the drains goes directly into a waterway. The project is funded with Used Oil Block Grant funds because a major pollutant is oil from roadways or people using the drains to dispose of used oil from their motor vehicles. To date, the labeling project has been used on public streets at the curb inlets. The catch basin markers are placed in residential neighborhoods.	∇Residents of Santa Rosa, Cloverdale, Sebastopol, Healdsburg, Cotati, Sonoma, Petaluma, and the unincorporated County	\$ 6,731 (labor cost only – markers previously purchased)
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. Since the launch of a renewed campaign in July 2002, the Agency has promoted curbside recycling of oil and filters through the use of bus stop benches, billboards, newspaper ads, newsletters, door-to-door solicitation, doorhangers and postcards with a hotline number for calls.	Residents of Healdsburg, Cloverdale, Cotati, Petaluma, Sonoma, and unincorporated areas of the County.	\$19,250 (postage, printing, and labor to answer calls)

6.8 Illicit Discharge Educational Materials Disseminated at Spill Sites

Measurable Goals/Implementation Schedule

- b. 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.

Accomplishments

➤ **Environmental Health (EH)**

Measurable Goal (b): EH continues to distribute “Food Facilities Storm Water Pollution Quick Reference” Guide during inspections and investigation of complaints, and responding to releases of non-hazardous materials.

➤ **Department of Emergency Services (DES)**

Measurable Goal (b): DES inspectors distribute educational materials related to environmental compliance during the course of their routine inspections and, when appropriate, while conducting investigations of and responses to releases of hazardous

materials. Examples include written inspection reports, which include information on how to bring facilities into compliance; flyers from the Sonoma County Waste Management Agency on hazardous waste recycling; and the information sheets, "What Retail Gas Stations Need to Know About Sewers and Storm Drains" and "Retail Gas Station Site Cleanup."

6.9 Private Septic Systems

Measurable Goals/Implementation Schedule

- a. Develop and distribute storm water quality BMP information to non-standard system owners annually and others upon request.

Accomplishments

- **Permit and Resource Management Department (PRMD)**
Measurable Goal (a): PRMD staff developed and distributed a handout of storm water BMP's for owners of septic systems.

6.10 Industrial/Commercial Outreach as Part of Inspections

Measurable Goals/Implementation Schedule

- a. Continue to educate and assist food facility operators/owners to implement effective BMP's to control pollutants from reaching storm water drainage systems.

Accomplishments:

- **Environmental Health**
Measurable Goal (a): Staff continues to educate and assist food facility operators/owners to implement effective BMP's to control pollutants from reaching storm water drainage systems through routine storm water inspections at retail food facilities and distribution of "Food Facilities Storm Water Pollution Quick Reference" guides.

Industrial/Commercial Facility Outreach:

Measurable Goals/Implementation Schedule

- d. Discuss compliance issues with owner/operators and provide them with applicable materials to assist with answering their questions include storm water pollution BMP's. Continue to encourage ASF's to receive Sonoma Green certification/2003.

Accomplishments:

- **Department of Emergency Services (DES)**
Measurable Goal (d): DES discusses storm water compliance issues with ASF owner/operators during its routine inspections of these sites. DES distributes two fact sheets - "What Retail Gas Stations Need to Know About Sewers and Storm Drains" and "Retail Gas Station Site Cleanup." Because ASF's face similar issues to RGO's in terms of storm water pollution prevention, DES also distributes these materials to ASF's. DES continues to encourage ASF's to participate in the Sonoma Green program.

6.11 Landscape and Agricultural Industries

Measurable Goals/Implementation Schedule

- a. Continue to provide pesticide users with oral and written information when they apply for permit or register annual registration. Ongoing.
- b. Continue to instruct SRJC courses for State mandated continuing education for pesticide user licenses.

Accomplishments**➤ Agricultural Commissioner (Ag Comm)**

Measurable Goal (a): The Ag Comm office receives monthly summary pesticide use reports from the City, County, and Water Agency regarding the use of pesticides in Sonoma County. The 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 Commissioner's office.

The Ag Comm office continues its annual 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 storage and waste is discussed during these office visits. The Ag Comm office also gives out the documents and brochures pertaining to pesticides and hazardous materials during these office visits.

Measurable Goal (b): The Ag Comm staff conducted a two-hour pesticide laws and regulation, weed management, and endangered species update workshop in December 2005, which was attended by approximately 341 growers who needed continuing education hours in order to maintain their Private Applicator Certification. Additionally, Ag Comm staff has continued to instruct the ten-hour continuing education for license and certificate holders training sessions at the Santa Rosa Junior College.

Education of the general public occurs when they contact the Ag Comm office, and at the numerous seminars the Ag Comm staff attends as speakers. Four recycling days in the spring and fall are held for plastic pesticide/chemical containers.

The Ag Comm office continues to conduct inspections as scheduled, and the staff continues to respond to all complaints concerning pesticides.

6.12 Spring Lake Environmental Discovery Center

See the At-a-Glance table (Part I, Section 4.0) for the status of this topic.

Measurable Goals/Implementation Schedule

- 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.
- c. Continue to contribute funding to the Environmental Discovery Center to promote public education of storm water pollution prevention.

Accomplishments**➤ Regional Parks**

Measurable Goal (a): The Environmental Discovery Center (EDC) continued operating during the current reporting period, utilizing funding contributions from regional Parks and other sources. The EDC provides public outreach to school and community groups, bringing messages of environmental stewardship and responsible resource use to students, families and individuals.

The “Down the Drain” program relays messages about storm water pollution prevention to students and members of the public. This program ran from January 24 - June 10, 2007:

- Total visitors during the exhibit: 5,700
- Total students participating during the exhibit: 2,880

In addition to the regular storm water school program, Regional Parks added two new environmental education programs during the reporting period which include storm water awareness modules, with recorded participation as follows:

- Rockin’ -n- Recycling and Weather or Not: 2,330 participants

Measurable Goal (b): The Environmental Discovery Center (EDC) received support for its operation from the following organizational contributors during the current reporting period:

- City of Santa Rosa, Public Works Department
- Sonoma County Water Agency
- County of Sonoma Department of Health Services - Environmental Health Division
- County of Sonoma Transportation and Public Works Department - Integrated Waste Division
- County of Sonoma Regional Parks Department
- Sonoma County Agricultural Preservation and Open Space District
- Agilent Technologies
- North Bay Corporation
- Sonoma County Fish and Wildlife Commission

Measurable Goal (c): Regional Parks continued to contribute funding to the Environmental Discovery Center (EDC), to promote public education of storm water pollution prevention during the current reporting period. Approximately 50% of the total EDC education program funds were applied toward the “Down the Drain” and the “Science in the Parks” programs.

Additional Accomplishments:**➤ Permit and Resource Management Department (PRMD)**

PRMD storm water staff developed a picture board with captions on erosion prevention and sediment control measures for construction sites that is on display in the PRMD lobby. Two photographs of the picture board are included in **Appendix II.I**. It was felt that a visual

example of these requirements could be very effective and would be able to reach a large number of people who come through the department.

PRMD continues to provide handouts in the lobby to the construction industry with information regarding construction site storm water pollution prevention.

SUSMP Guidelines are available at PRMD and free to the public at the Storm Water public station. Approximately twenty (20) hard copies of the guidelines were given to the public during this reporting period. The SUSMP Guidelines are also available at the PRMD web site. Many engineering firms have been directed to download the guidelines from this site (hosted by the City of Santa Rosa).

7.0 EFFECTIVENESS EVALUATION

Goal: Provide an assessment of the County's program implementation and permit compliance.

7.1 Formal Evaluation

Measurable Goals/Implementation Schedule

- a. Compare Measurable Goals listed in the SWMP to actual work completed, and work with Regional Water Board staff and copermittees on developing work plan elements. Annually.
- b. Document this information in the Annual Report. Annually.

Accomplishments

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (a): Refer to the At-a-Glance table in Part I.4 for a full report on Measurable Goals completed, ongoing and modified. All Storm Water Management Plan activities will continue.

Measurable Goal (b): See Measurable Goal (a) above.

7.2 Work Plan for FY 2007/2008

Measurable goals for implementation during FY 2007-2008 include only ongoing measurable goals stated in the SWMP. PRMD 2.1(e), (f), (j); 2.3(a), (b), (c); 2.5(b); 8(c). Regional Parks 4.2.3(c),(d); 4.2.4(b); 4.2.6(b); 4.3.4(b). measurable goals are due in FY07/08

7.3 Special Studies

Measurable Goal: Sonoma County Water Agency provides data evaluation in Section V of this Annual Report

8.0 FISCAL ANALYSIS

Goal: Provide a financial accounting of the County's Storm Water Management Plan

Measurable Goals/Implementation Schedule

- a. Continue to report on expenditures and sources of funding for work related to the NPDES Phase I permit as part of each Annual Report. Annually.
- c. Seek new revenue sources for storm water program, including fees related to those projects subject to SUSMP requirements. To be continued during permit term.
- d. Include discussion of fiscal resources in work plan meeting with Regional Water Board staff. Annually.

Accomplishments

Measurable Goal (a): See **Table II.6** for categorized expenditures for each department with responsibilities under the MS4 permit. An outline of the reporting categories is as follows:

Program Management - County portion of lead agency costs, storm water coordinator, management of budget and staff, Annual Report.

Private Construction - All activities by PRMD except department coordination, Illicit Discharge, Public Education & Outreach, SUSMP.

Industrial Commercial - Activities of Emergency Services and Environmental Health except spill response.

Municipal Operations - All activities of Transportation and Public Works except spill response, storm drain labeling, Waste Management Agency, SUSMP and monitoring activities, Regional Parks activities except storm drain labeling, pet waste signs and Environmental Discovery Center.

Illicit Discharge Detection and Elimination - response, follow-up and enforcement by Transportation and Public Works, Environmental Health, Emergency Services, PRMD

Public Education and Outreach - Transportation and Public Works storm drain labeling, PRMD construction outreach activities. Regional Parks storm drain labeling, pet waste signs and Environmental Discovery Center activities.

SUSMP - PRMD, Transportation and Public Works, Regional Parks: all measurable goals under this chapter of storm water management plan. Expenditures include the County's portion of the EOA Consulting contract and the development and presentation of a SUSMP workshop/training for the development community.

Monitoring - Transportation and Public Works monitoring program and PRMD monitoring coordination including annual chemical monitoring and special study.

Permit Costs - Fees only. (This fiscal year's permit fee of \$7,653.00 is included in various expenditures reported by PRMD below.)

Table II.6
MS4 Expenditures for County Departments

	Department of Health Services/Environmental Health Division								
	Department of Transportation and Public Works								
	Permit and Resource Management Department								
	General Services/Architect's Division								
	Department of Emergency Services								
	Agricultural Commissioner's Office								
	Regional Parks Department								
	CAO								TOTAL
Program Management/ Effectiveness Evaluation	\$7,139	\$50,556	\$177,482	\$0	\$0	N/A	\$56,840	\$0	\$292,017
Private Construction	\$0	\$0	\$209,673	\$0	\$0	N/A	\$0	\$0	\$209,673
Industrial/Commercial Source	\$9,853	\$0	\$0	\$0	\$19,951	N/A	\$0	\$0	\$29,804
Municipal Operations	\$0	\$547,125	\$0	\$0	\$0	N/A	\$64,540	\$0	\$611,665
Illicit Discharge Detection & Elimination	\$1,441	\$0	\$1,648	\$0	\$13,300	N/A	\$0	\$0	\$16,389
Public Education & Outreach	\$749	\$0	\$84,116	\$0	\$0	N/A	\$39,091	\$0	\$123,956
SUSMP	\$0	\$0	\$1,980	\$0	\$0	N/A	\$949	\$0	\$2,929
Monitoring	\$0	\$0	\$3,069	\$0	\$0	N/A	\$0	\$0	\$3,069
TOTAL	\$19,182	\$597,681	\$477,968	\$0	\$33,251	N/A	\$161,420	\$0	\$1,289,502

➤ **Permit and Resource Management Department (PRMD)**

Measurable Goal (c): PRMD implemented a SUSMP Program Development Fee on all parcels that initiate development on their property. This fee started in FY04-05 initially at \$22.00 and has increased to \$26.00 in FY06-07. This fee is assessed only one time on a parcel.

Measurable Goal (d): During our on-going meetings with Regional Water Board staff. Annually.

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PART III

CITY OF SANTA ROSA

**Permit Term 2
Annual Report 4**

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CITY OF SANTA ROSA ANNUAL REPORT

1.0 LEGAL AUTHORITY

Goal: Effectively prohibit non storm water discharges into the storm drain system and receiving waters.

The legal authority required to implement and enforce the municipal storm water management plan is provided in the Federal Clean Water Act, California Water Code, Fish and Game Code, Health and Safety Code and Penal Code. The California Environmental Quality Act and Subdivision Map Act provide municipalities the legal authority to establish conditions on development projects. The City of Santa Rosa has adopted local ordinances to supplement Federal and State legal authority to fulfill the National Pollutant Discharge Elimination System for storm water discharge (NPDES) requirements and implement the Storm Water Management Plan (SWMP).

The City of Santa Rosa has legal authority to effectively implement the elements of the storm water management plan which was developed to reduce pollutants in storm water discharge to the maximum extent practicable (MEP) within its jurisdiction.

Measurable Goals:

A statement will be included in Term 2, Annual Report 2 that the City's legal counsel has reviewed the City'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.

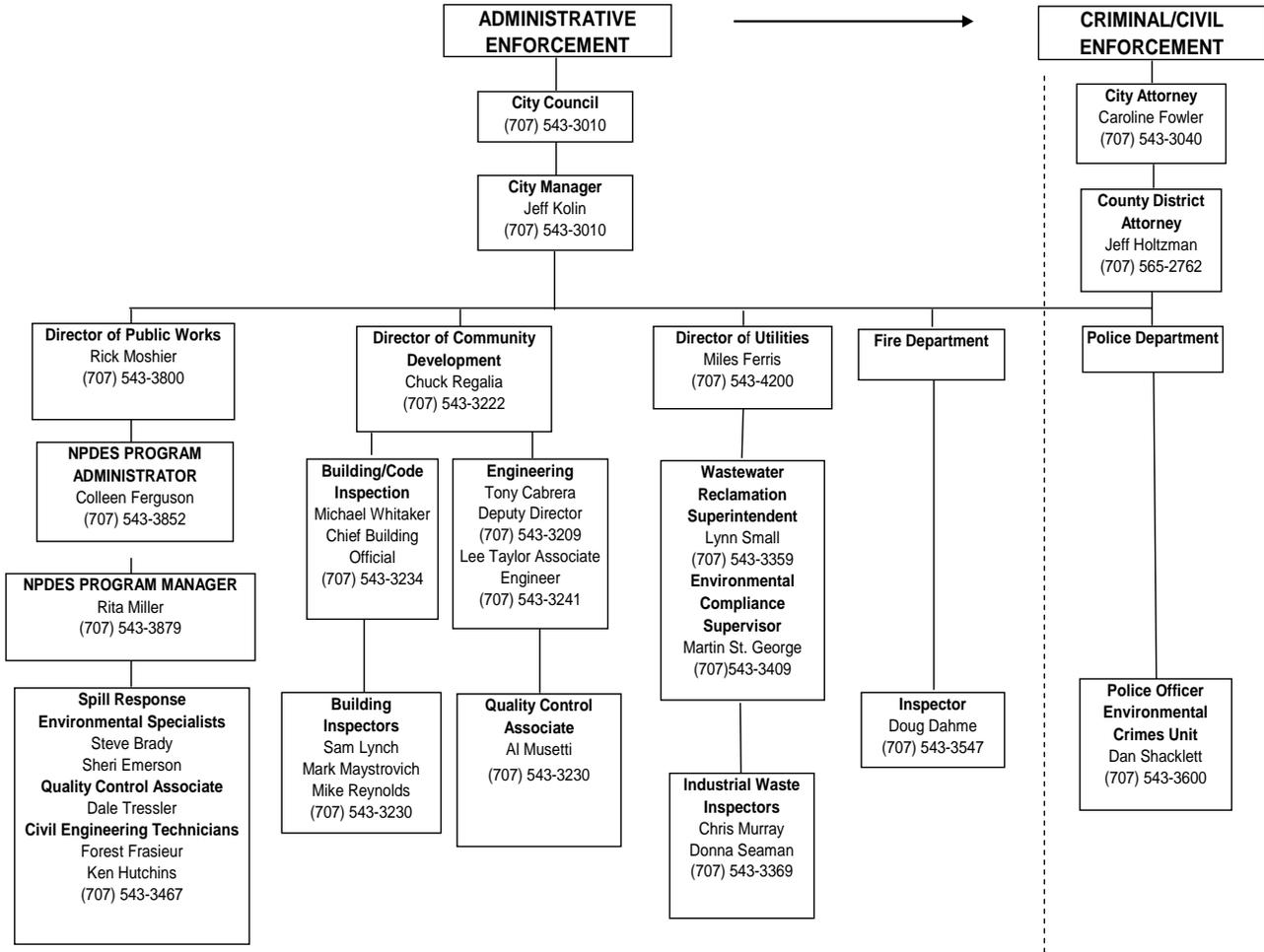
Accomplishments:

The City of Santa Rosa (City) certifies that it has adequate legal authority to implement and enforce each of the requirements contained in 40 C.F.R. 122.26(a)(2)(i) (A-F) and Permit No. CA0025052, as modified and effective on June 26, 2003. The City's legal authority is summarized in Part III Section 1.0 (Legal Authority) of the City's Storm Water Management Plan. The signed certificates can be found in Term 2, Annual Report 1.

Figure III.A identifies key City personnel involved in the enforcement of storm water regulations.

Figure III. A

**City of Santa Rosa
Organization Chart for Enforcement of Storm Water Regulations
Prepared by the City of Santa Rosa July 2007**



Beyond Compliance:

Public Works Department (PW) Staff responsible for storm water inspections were trained in the City's Administrative Hearing Process during Year 4. This process provides an additional tool that the inspectors can use to promote compliance with the City's Storm Water Ordinance. If responsible parties do not cease illicit discharges or clean up spills a timely manner, then the threat of financial penalty from the Administrative Hearing process should encourage compliance. The process will also be used to apply penalties in addition to cost recoveries when City crews are forced to clean up spills. This will hopefully reduce the number of clean ups that City crews perform so that cleaning activities can continue without interruption from spill calls.

2.0 PRIVATE CONSTRUCTION

Goal: Reduce or eliminate the potential for private construction generated pollutants to enter the City storm drain system to the MEP.

Storm water discharges from construction-related activities are considered to have the potential to be significant contributors of pollution to the municipal storm water system. The program goal to reduce or eliminate the discharge of pollutants into the City storm drain system from construction activities will be achieved through education, plan review and grading permit issuance, construction inspection, and enforcement of the City's Storm Water Ordinance at private development construction sites.

2.1 Grading Permit Issuance

The Community Development Engineering Division (CD-Engineering) and the Building Division (CD-Building) are responsible for the issuance of Grading Permits for the City of Santa Rosa. Grading Permits are a specific type of Building Permit.

Measurable Goals:

- Erosion Control Plans are reviewed and updated as needed, prior to issuance of the Grading Permits
- Issue Grading Permits after required documentation is received.
- Submit a list of active grading permits to the Regional Water Board in each Annual Report.

Accomplishments:

CD-Engineering and CD-Building continue to process Grading Permits. Prior to issuing Grading Permits, Erosion Control Plans are reviewed (and updated as needed) and supporting permits are received. A list of 74 Active Grading Permit locations is included in **Appendix III.A**.

2.2 Private Construction on Public Lands

PW and CD-Engineering staff are responsible for the issuance of Encroachment Permits for private construction within City right-of-way.

Measurable Goals:

Continue to issue Encroachment Permits that require compliance with California Standard Specifications, Section 7-1.01G “Water Pollution” and the City Storm Water Ordinance.

Accomplishments:

PW staff continue to issue Encroachment Permits and CD-Engineering staff continue to provide storm water inspections for private construction in the City right-of-way on development projects where grading permits are issued.

2.3 Inspections of Construction Sites

CD-Engineering and CD-Building staff are involved with inspection of private construction sites. CD-Engineering performs grading and storm water inspections. CD-Building performs structural inspections.

Measurable Goals:

- Maintain and document daily diaries and inspection forms
- Inspect sites with active grading permits every two weeks and after major storm events
- Submit a list of site inspections performed for each grading permit to the Regional Water Board in each Annual Report.

Accomplishments:

CD-Engineering has two full-time grading inspectors that are assigned to perform storm water inspections for private development construction sites. Daily diaries and inspection forms are maintained, and sites with active grading permits are inspected. The list of Active Grading Permits presented in **Appendix III.A** includes the number of site inspections for each location. Grading Permits issued after the winter season are shown with zero site inspections. Grading Permits with only a few site inspections are projects that were near completion with limited potential for erosion.

- Number of Active Grading Permits: 74
- Number of site inspections for grading permit sites: 1,911
- Number of site inspections for sites without grading permits: 780
- Total Number of NPDES SWMP Site Inspections in Year 4: 2,691

2.4 Enforcement of Construction Sites

Construction sites with inadequate erosion/sediment controls are given verbal or written notice of the inadequacies, according to the City’s enforcement procedures, and followed up with action(s) commensurate with the risk of pollutants entering municipal storm drains or waterways. Written notices and follow up actions are tracked and summarized in the City’s Annual Report to the Regional Water Board.

Graduated levels of enforcement are as follows:

- First Level - (Non-compliance Notification) Verbal warning or written correction notice.
- Second Level - NPDES Inspection Citation written.

- Third Level - Notice of Violation written.
- Fourth Level - Criminal and/or Civil Action such as administrative orders and injunctions through the City Attorney's office.

Measurable Goals:

- Document verbal and written enforcement notices
- Submit a list of sites requiring Third and Fourth Level Enforcement actions to the Regional Water Board in each Annual Report (see Section 2.5 below).

Accomplishments:

CD-Engineering continues to document verbal and written enforcement notices. There were no Third and Fourth Level Enforcement Actions during the period of this Annual Report (Year 4, Term 2).

2.5 Reporting of Non-compliant Sites

Construction sites with inadequate erosion/sediment controls are given verbal or written notice of the inadequacies as outlined in Section 2.4 above. The Regional Water Board is typically not notified of First Level and Second Level enforcement actions. Third Level enforcement letters are copied to the Regional Water Board. In addition, the Regional Water Board will be notified in writing of Fourth Level enforcement actions.

Measurable Goals:

- Notify Regional Water Board in writing of Third and Fourth Level enforcement actions
- Submit a list of sites requiring Third and Fourth level enforcement actions to the Regional Water Board in each Annual Report.

Accomplishments:

CD-Engineering continues to document verbal and written enforcement notices as outlined under Existing Activities. There were no Third and Fourth Level Enforcement Actions during the period of this Annual Report (Year 4, Term 2).

2.6 Education of Targeted Staff

CD-Engineering provides training in Erosion Prevention and Sediment Control to new staff members. Training in the past has included courses offered by the Association of Bay Area Governments, as well as attending local seminars. In addition, CD-Engineering's construction inspection staff attends, and typically participates in, Erosion & Sediment Control seminars presented by the Regional Water Board. New City staff and City inspectors are advised of the latest construction-related storm water pollution prevention techniques and BMP's from experienced staff.

Measurable Goals:

- Document training obtained by targeted staff.

- Submit a list of staff that attend and/or participated in training to the Regional Water Board in each Annual Report.

Accomplishments:

In Year 4, the Russian River Watershed Association (RRWA) coordinated a storm water training session titled “Preventing Storm Water Pollution from Construction Sites and Proper Installation of Construction BMP’s” for its member agencies in an effort to provide a consistent regional storm water training program and to provide for effective cost-sharing, better outreach, and technology transfer on common issues. The May 10, 2007 training session was designed to include an indoor “classroom” portion followed by an “outdoor” field portion. A list of the twenty-two City staff members who attended the training is included in **Appendix III.B**. Those participating from the City included staff members from the PW, CD, and Utilities Departments.

3.0 INDUSTRIAL/COMMERCIAL SOURCES

Goal: Reduce or eliminate the potential for Industrial/Commercial generated pollutants to contact storm water runoff to MEP.

3.1 Introduction

Storm water discharges from industrial and commercial related activities are considered to have the potential to be significant pollutant contributors of pollution to the municipal storm water system. The program goal to reduce or eliminate the discharge of pollutants into the City storm drain system from industrial and commercial activities will be achieved through education, inspection and enforcement of the City’s Sewer and Storm Water Ordinances.

The Industrial/Commercial element will continue to emphasize operational activities to ensure that wastewater is properly pretreated and discharged into the sanitary sewer system. The City of Santa Rosa’s Pretreatment Program Enforcement Response Plan (PPERP) outlines the operational procedures intended to ensure that commercial and industrial dischargers to the sanitary sewer system are permitted and monitored. The Environmental Compliance (EC) Section of the City Utilities Department is responsible for implementation of the PPERP.

3.2 Inventory of Facilities

The development of the Industrial User Inventory (IUI) was designed to maintain and update a database of industrial and commercial facilities which are required to obtain a Wastewater Discharge Permit. The inventory is maintained for the entire sub-regional service area which includes the Cities of Santa Rosa, Cotati, Rohnert Park, and Sebastopol, as well as the South Park County Sanitation District. The IUI was initiated at the same time as the Pretreatment Program approval in 1983. The IUI continues to be updated from the information supplied by the City of Santa Rosa and the sub-regional partners. The sources are listed below.

- Business tax certificate applications are forwarded to EC on a monthly basis
- Building permit application are forwarded to EC on a monthly basis.
- CD Department staff forward use permits to EC on a monthly basis.

- Utilities Engineering staff represent EC in the Zoning Administration Review Committee (ZARC) which meets bi-weekly.
- Regular inspections for new business operations.

Measurable Goals:

Continue to include in each Annual Report an updated list of businesses with Standard Industrial Classification (SIC) codes that may be required to file a Notice of Intent (NOI) and comply with the terms of the State General Industrial NPDES permit.

Accomplishments:

Copies of the following lists are in **Appendix III.C:**

- Businesses in the City's 2007 database of business licenses with SIC codes that may be required to obtain a State General Industrial NPDES Permit;
- Dischargers in the City's Environmental Compliance 2007 database of permitted industries with SIC codes that may be required to obtain a State General Industrial NPDES Permit;
- Dischargers listed on the State Water Board database with a filed Notice of Intent to obtain a State General Industrial NPDES Permit.

3.3 Food Facility Inspection

County of Sonoma Department of Health Services, Environmental Health Division is responsible for all health code inspections related to food facilities within the City and County. See Part II, County of Sonoma Storm Water Management Plan Annual Report Section for details.

The EC Section issues permits and provides inspections of food facilities that have an active wastewater permit to discharge industrial wastewater to the City of Santa Rosa's sanitary sewer collection system.

Inspection of food facilities for wastewater discharge permit compliance is performed with a range frequency that varies from twice a year to once every five years, The majority of facilities, approximately 95%, are inspected a minimum of once every two years. Reporting of inspections is accomplished as required under the terms of the NPDES Permit No. CA0022764 Waste Discharge Requirements for the City of Santa Rosa, Laguna Subregional Wastewater Treatment, Reuse, and Disposal Facilities.

Measurable Goals:

There are no measurable goals are associated with this activity.

Accomplishments:

The number of grease related sanitary sewer flows are evaluated with respect to this aspect of the SWMP. In Year 4, there were no public sanitary sewer overflows to the storm drain system.

3.4 Retail Gasoline Outlet and Automotive Service Facility Inspection

EC issues permits and provides inspections of nonresidential auto repair/body facilities with an active permit to discharge industrial wastewater to the City of Santa Rosa's sanitary sewer collection system.

Inspections of automotive service facilities for wastewater discharge permit compliance are performed with a frequency that varies from twice a year to once every five years. The majority of facilities, approximately 67%, are inspected a minimum of once every two years. Reporting of inspections is accomplished as required under the terms of the NPDES Permit No. CA0022764 Wastewater Discharge Requirements for the City of Santa Rosa, Laguna Subregional Wastewater Treatment, Reuse, and Disposal Facilities.

During Year 2 of Term 2, outreach materials were developed and distributed to retail gasoline outlets (RGO) within the City limits. The outreach materials focused on proper house-keeping practices and storm water BMP's.

Measurable Goals:

- The RGO outreach materials and distribution list were provided in Annual Report 2.
- Follow-up RGO inspections are required for the 4th or 5th year of Term 2.

Accomplishments:

The 39 RGO's within the City limits were identified and the required follow-up inspections performed in June 2007, Year 4. In general, the RGO's were clean and staff were trained not to wash any material to the street gutter or storm drain system. Staff were also trained to use dry-clean methods to clean up spills in a timely manner. A copy of the inspection form and a list of facilities inspected are included in **Appendix III.D**.

Beyond Compliance:

During the annual RGO inspections performed by the Fire Department, the use of recommended BMP's is reinforced by Fire Dept. inspectors.

3.5 Industrial/Commercial Outreach

During the first permit term, significant outreach was undertaken for food facilities, automotive service, cleaning, landscape, building, and construction industries. Brochures and educational materials, including posters and videos, were created and distributed during inspections or by mail. These materials continue to be reprinted for distribution

Measurable Goals:

RGO outreach and measurable goals are described in the Section 3.4 Retail Gasoline Outlet and Automotive Service Facility Inspection.

Accomplishments:

Outreach to the automotive, cleaning, food service, and landscape industries continued during Year 4 as requested by businesses, through EC (Pretreatment) Inspections or during spill

response situations. Educational materials were provided to interested parties upon request. The number of materials distributed can be found in Section 6.1.8 Public Outreach, **Table III.3**.

3.6 Industrial/Commercial Enforcement Protocols

A description of the City's enforcement protocols can be found in past Annual Reports 1, 2, and 3, Term 2. (Note: Enforcement response for facilities with wastewater discharge permits is conducted by EC and is not required by the storm water permit).

Industrial/Commercial Facilities Without Waste Permits

The enforcement actions initiated on industrial and commercial facilities without wastewater discharge permits are typically the result of an illicit discharge to the storm drain system. Refer to Section 5, Illicit Discharge Detection and Elimination for enforcement protocol.

Measurable Goals:

- Follow enforcement protocol for industrial/commercial facilities without industrial waste permits
- Report on enforcement activities in each Annual Report

Accomplishments:

- The EC Section continues to issue permits and provide inspections of industrial/commercial and food facilities that have active wastewater discharge permits that allow discharge of industrial wastewater to the City of Santa Rosa's sanitary sewer collection system. Reporting of inspections is accomplished as required under the terms of the NPDES Permit No. CA0022764 Waste Discharge Requirements for the City of Santa Rosa, Laguna Subregional Wastewater Treatment, Reuse and Disposal Facilities. The following is a summary of EC inspections and enforcement actions of facilities with active wastewater permits and is included for information purposes only. The total number of new permits issued is also noted:

New Permits Issued	281
Inspections:	1,453
Notice of Violations:	38
Cease and Desist:	4
Notice of Termination:	1
Written Warnings	4

- Enforcement activities on facilities without wastewater discharge permits are included in Section 5 Illicit Discharge Detection and Elimination information (5.4 Record Keeping and Documentation).

3.7 Interagency Coordination for Industrial/Commercial Facilities

Staff from EC, PW, CD-Building and CD-Engineering, City Attorney, Fire, and Police Environmental Crimes meet monthly to share information about recent illicit discharges at the Environmental Crimes Enforcement Meeting.

City staff also actively participates with the Sonoma Environmental Quality Assurance Committee (SEQAC). Regularly scheduled bi-monthly SEQAC meetings cover county-wide environmental enforcement and education issues related to air quality, sanitary sewer (industrial waste), hazardous materials, and storm water quality.

Measurable Goals:

Continue to participate in SEQAC meetings.

Accomplishments:

See **Appendix III.E** for Year 4 SEQAC meeting agendas and list of attendees.

3.8 Training of Targeted Staff

Training of EC Inspectors is provided by the Utilities Department under the wastewater discharge permit and is not covered by this SWMP and therefore not part of this report. On-the-job training is provided to the PW storm water response staff. In addition, staff is sent to training courses offered in nearby locations as appropriate.

Measurable Goals:

A description of the training provided and a list of participants will be included in each Annual Report.

Accomplishments:

The following training topics were presented to staff at the SEQAC meetings during Year 4: The Dept. of Toxic Substance Control conducted a workshop on “Best Management Practices for Fleet Maintenance” on January 24, 2007 at the Laguna Treatment Plant. The workshop was geared toward at inspectors and was attended by staff from the Utilities,-EC, and Fire, and PW-Storm Water Departments.

4.0 MUNICIPAL OPERATIONS

Goal: Reduce or prevent pollution in storm water runoff from all municipal land use areas, facilities and activities.

4.1 Public Construction Activities Management

4.1.1 Contract Documents

The City requires that all work performed on public improvement projects shall be performed in accordance with the City of Santa Rosa Special Provisions, Plans, City Design and Construction Standards, City Specifications and State of California Department of Transportation (Caltrans) Standard Plans and Standard Specifications.

Special Provision Section 7-1.01G of the City’s standard project specifications requires that the contractor provide adequate measures to control and prevent the discharge of pollutants. This provision is included in all City public improvement projects. If an improvement project requires grading, other than trench work, the project improvement plans will include an erosion

prevention and sediment control plan. Additionally, contractors are required, as part of the contract, to comply with Caltrans Standard Specification Section 20-3: Erosion Control. This section provides specifications for the preparation of areas that will receive erosion control materials such as application of straw, seed, and fertilizer.

Measurable Goals:

Continue to include Special Provision Section 7-1.01G as part of construction contract documents on all public improvement projects. Review special provisions and submit any revisions to the Regional Water Board in the first annual report.

Accomplishments:

In Permit Year 1, PW staff reviewed the special provisions and recommended no revisions.

4.1.2 Compliance with Statewide General Construction Permit

All public improvement construction projects undertaken by the City and subject to the State General Construction Storm Water Permit will file a Notice of Intenet (NOI) and comply with the terms of the General Permit to discharge storm water associated with construction activities.

Currently, a project is subject to the State General Construction Storm Water Permit if it disturbs one acre or more of soil or if the project results in the disturbance of less than one acre but is part of a larger common plan of development or sale that exceeds one acre.

Measurable Goals:

- The City, or contracted consultant on behalf of the City, files an NOI for applicable projects and comply with terms of the State General Permit.
- Each Annual Report submitted to the Regional Water Board includes a list of the projects that have complied with the terms of the State General Permit.

Accomplishments:

All projects subject to the conditions of the State General Construction Storm Water Permit have filed an NOI and are in compliance with the terms of the General Permit to discharge storm water associated with construction activities. The current list of active projects with NOI's is included in **Table III.1** below.

**Table III.1
City Construction Projects With NOI on File at the Regional Water Board
(compiled July 2007)**

WDID	Status	Owner	Site Name	Site Location	Acres	Start Date
1 49C313660	Active	Santa Rosa City	A Place To Play Phase I	2375 West Third St	82	9/11/00
1 49C333210	Active	Santa Rosa City	Proctor Heights Water Storage Tanks	2521 Del Rosa Ave	2	8/15/04
1 49C338451	Active	Santa Rosa City	West College Utilities Facility Phase 2	35 Stony Point Rd	10	6/1/2006
1 49C340987	Active	Santa Rosa City	Fountaingrove Community Park	APN 173 670 01735	32.25	6/1/06006
1 49C340988	Active	Santa Rosa City	Airfield Park	APN 035 800 061	2.87	6/1/2006

4.1.3 Inspection

Purpose of Inspection:

Construction inspection policy and procedures are defined in the Public Works Engineering Division Procedures Volume 1. The City construction inspectors are responsible for ensuring that public improvement projects, whether constructed through City contracts or by private developers, are constructed in accordance with approved plans and specifications. The specifications and plans require the contractor to implement and maintain BMP's to protect water quality during construction activities.

Measurable Goals:

On active projects, inspections are performed and documented in a construction diary on a daily basis.

Accomplishments:

Inspection procedures are ongoing as described above.

4.1.4 Enforcement

Enforcement protocols are described in detail in Section 1.0 Legal Authority of Annual Reports 1, 2, and 3, Term 2.

Measurable Goals:

Continue to implement progressive enforcement procedures. Report to the Regional Water Board in each Annual Report the number and details of any notice of Non-Compliance issued.

Accomplishments:

There were two Notices of Non-Compliance issued to 2600 Bennett Valley Road for inadequate erosion protection. After the second notice the Contractor quickly responded and installed appropriate erosion protection to the satisfaction of the City Inspector. Both Notices of Non-compliance were Level 2 violations.

4.1.5 Training of Targeted Staff

All PW-Engineering Division staff are responsible to have knowledge of and comply with Public Works procedures. As part of their duties, inspectors are specifically required to read and be familiar with the City of Santa Rosa Standard Specifications and Caltrans Standard Specifications, which define the requirements the contractor must adhere to during construction to protect water quality.

A pre-construction conference is conducted by the project engineer before the contractor commences construction during which storm water quality requirements are discussed.

Measurable Goals:

Continue to discuss storm water quality requirements during pre-construction conferences for public improvement projects.

Accomplishments:

As previously described in Section 2.6, twenty-two City staff from several Departments attended an all-day workshop titled “Preventing Storm Water Pollution from Construction Sites and Proper Installation of Construction BMP’s” at the Laguna Treatment Plant on May 10, 2007. The workshop was conducted by AEI-CASC Consulting under the auspices of the Russian River Watershed Association. A list of attendees is included in **Appendix III.B**.

4.2 Landscape and Recreational Facilities Management

Goal: Reduce or eliminate pollutants resulting from maintenance activities of landscaped areas and recreational facilities.

Maintenance practices at parks and recreational facilities generally include fertilizer and pesticide application, vegetation maintenance and disposal, swimming pool maintenance, and trash and debris management. The City’s landscape and recreational facilities management programs aim to address storm water quality concerns when conducting maintenance and operation activities.

4.2.1 Pesticide Management

Pesticides are stored, handled, and applied in accordance with California Title 3, Division 6, Pesticides and Pest Control Operations. Detailed records of pesticide applications are kept and all pesticide use is reported to the Sonoma County Agricultural Commissioner on a monthly basis.

As an ongoing activity, and as part of the overall IPM Program, the City continues to seek less toxic materials and new methods and techniques for the purpose of reducing pesticide use.

Measurable Goals:

Continue to keep pesticide use below the levels used prior to the adoption of the Integrated Pest Management Program (1997). Report on Integrated Pest Management Program in each Annual Report.

Accomplishments:

During Year 4, the City continued to keep pesticide use below the levels prior to the adoption of the Integrated Pest Management Program (1997). Total pesticide use in 2006 was 857 lbs. The unit per acre was 1.1 lbs., which is consistent with recent years but well below the baseline of 2.19 lbs. /acre set prior to 1997. Reductions in both staffing levels and other resources continue to hamper the ability to implement and maintain any additional or more effective alternative vegetation control methods.

4.2.2 Fertilizer Management

Fertilizer use is generally limited to turf areas such as sports fields and those lawns deemed high visibility. Spring and fall applications are made utilizing slow-release nitrogen fertilizers formulated for turf use. Spot fertilization application in landscaped areas may be made according to plant need. This approach has reduced fertilizer use from past years.

Measurable Goals:

Include Fertilizer Management Plan and training program in the first Annual Report.

Accomplishments:

Continue to implement Fertilizer Management Plan and staff training. Details of the Fertilizer Management Plan and the training program were included in Section 4.2.3 of Annual Reports 1, 2, and 3, Term 2.

4.2.3 Planting and Retention of Native Vegetation

Planting of native vegetation at City landscaped areas will be implemented to the extent feasible when practical to reduce water, fertilizer and pesticide needs. The decision to plant native vegetation will be based upon the possible effects on drainage and erosion, hardiness, maintenance requirements, and possible conflicts between preserving vegetation and the resulting maintenance needs.

Measurable Goals:

None are proposed for this permit term.

Beyond Compliance:

- On October 17, 2006, Public Works staff completed a revegetation project on City owned property following a fire in the riparian area of Santa Rosa Creek. The project was located near Yulupa Circle and included removing invasive English ivy, installing erosion control blankets, planting native trees and shrubs, and seeding the slope with native grasses. Native species planted included California brome, creeping wild rye, blue wild rye, snowberry, and honeysuckle.
- In October of 2006, 80 trees and shrubs were planted along Irwin Creek, which is located on the reclamation property Stone Farm. Stone Farm is leased to a rancher who uses recycled water to grow hay and pasture livestock. The initial fencing to exclude livestock from the creek was increased from 20-30 feet to approximately 100 feet on the southeast stretch. A second layer of vegetation that typically grows in riparian (streamside) areas in the Laguna de Santa Rosa was planted along the bank and floodplain with the help of the Laguna Keepers.
- In December 2006, The City planted 100 valley oaks on the Keegin property and adjacent Windmill Creek on Brown Farm. Keegin and Brown Farm are reclamation properties purchased to irrigate recycled water. The Land is leased to a rancher who grazes cattle. Oak regeneration is promoted by fencing the livestock out from under the canopy of groves mature valley oaks and along corridors on the farm. Because acorn production is unpredictable, seedlings were planted with the help of the Laguna Keepers to make sure that each aging valley oak will have a replacement.
- In March of 2007, 100 native trees and shrubs were planted at the Joint Wetlands adjacent to the Laguna Treatment Plant. Water-loving wildrose and hawthorn were installed by Laguna Keepers near the edge of the wetland and valley oak and coyote bush were planted on the knoll above the wetlands.

4.2.4 Procedures to Reduce Water, Fertilizer and Pesticides Needs

Efforts continue to support compliance with City-wide water conservation and the Water Efficient Landscape programs.

During Year 5, landscape audits of City sites will be conducted to identify opportunities to increase water use efficiency. It is planned to have applicable sites participate in the Green Exchange Rebate Program to upgrade inefficient hardware and remove non-functional turf and replace low water use alternatives, therefore reducing water demand.

Measurable Goals:

None are proposed for this permit term.

Beyond Compliance:

A recent change in the City's Fertilizer Management Plan includes the use of compost in place of chemical fertilizers whenever possible. The compost is applied using a metered application of ¼ to ½ inch applied with a top dressing machine. This application controls the distribution of compost to the exact area with no drift of the material. Drain inlets in the turf area are covered to prevent compost from entering the storm drain system. This method of fertilization can be used at any time of the year except during the winter when the turf may be too wet. The use of compost prevents compaction of the soil and helps to retain moisture, thus reducing the amount of irrigation water needed.

4.2.5 Landscape Waste

Landscape waste consists of clippings, cuttings and droppings of woody and leafy materials. The following procedures are implemented, where applicable, to assure that exposed materials and accumulated sediment, trimmings, and litter are disposed of properly and not discharged to the storm drain system.

Measurable Goals:

Continue to implement existing and new activities as described in the Storm Water Management Plan.

Accomplishments:

Management of landscape waste is ongoing as described above.

4.2.6 Recreational Water Bodies

Picnic areas, lakes and ponds receive a large number of visitors each year and may collect large amounts of litter, debris and other pollutants. To minimize the amount of potential pollutants that reach adjoining water bodies, appropriate procedures are implemented to manage and contain trash generated by the public.

Measurable Goals:

Continue to implement existing activities that adequately contain trash in target areas and minimize trash entering the City's waterways as described in the Storm Water Management Plan.

Accomplishments:

Maintenance activities are ongoing as described above.

4.2.7 Swimming Pool Discharge**Ridgway Pool and Finley Aquatic Center**

The pool drains at both the Ridgway Pool and Finley Aquatic Center locations, which are connected to the City sanitary sewer system. Drains in the pool deck are designed to capture storm water and incidental pool water, and are connected to the storm drain system. Appropriate procedures are implemented, where applicable, to manage discharges from both pools.

Measurable Goals:

Continue to implement existing activities as described in the Storm Water Management Plan.

Accomplishments:

Maintenance activities are ongoing as described above.

4.3 Storm Drain System Operation and Management

The storm drain system functions primarily to collect and convey surface runoff to receiving waters during storms to prevent flooding. It is necessary to maintain the storm drain system so that it functions hydraulically as intended during storms. The goal of this program is to reduce the impact of storm drain operation and maintenance activities on storm water quality.

The City of Santa Rosa owns and maintains most of the underground public drainage system within the City limits. This system consists primarily of an underground pipe network that discharges to flood control channels that are owned and maintained by the Water Agency. There are some segments of open channels and two detention basins that are part of the City-maintained system. In addition to maintaining most of the open channels, the Water Agency maintains five detention basins within the permit boundary. The County of Sonoma maintains the remainder of the public drainage system within the permit boundary. Many of the open channels within the permit boundary are privately owned and maintained.

4.3.1 Source Identification-Drainage System Mapping**Existing Activities:**

The Storm Drain Maps book was reprinted in January 2007 and one set of replacement sheets are being provided with this Annual Report for the Regional Water Board records. The storm drain system is also available on the City's web page at <http://imaps.ci.santa-rosa.ca.us/>. The grid on the first few pages of the map book is used to determine which page to turn to for more specific information on a particular area.

The Storm Drain Maps book was developed by entering information into a computer mapping system from 1960's era maps and improvement plans from City files. Because of the cost and effort required to print the map book, future printings will be on an as-needed basis. The City

assumes no responsibility for the accuracy or completeness of the drainage information shown on the maps.

Although the existing Storm Drain Maps book is complete, it is updated periodically with information related to new and modified systems, and/or to resolve conflicts as identified in the field. This work is ongoing and is planned to continue through the permit term.

Measurable Goals:

Submit updated City of Santa Rosa Storm Drain Maps books at the written request of the Regional Water Board, not to exceed one printing per year.

Accomplishments:

Online GIS maps have virtually replaced the printed map books and represent the most current information the City has on the public storm drain system

4.3.2 Clean and inspect storm drain pipe and inlet structures

The City continues to implement a dedicated storm drain cleaning program consisting of two-person full-time equivalent cleaning crew with a combination vacuum and water-jetting truck. The cleaning crew begins in the spring as soon as weather permits and systematically works through the City's storm drain system. Areas that have been previously identified as problematic are given priority. During the fall and early winter, crews concentrate on removing leaf and vegetative debris. As the drainage systems are cleaned, the data is recorded in a Cartegraph[®] database to track locations and footage of pipe cleaned. Reports can then be generated to show the total number of structures and linear footage of pipes cleaned, the location and quantity of pollutants found, and the location of any noted structural problems.

Measurable Goals:

The amount of drainage system cleaning that can be completed each year varies depending on overall work load, staffing, equipment reliability and weather. The cleaning and maintenance of the drainage system is an ongoing operation and will continue throughout the permit term. The numeric goal for each year of the second permit term is to clean and inspect:

- 130,000 linear feet of storm drain pipe
- 1,200 drainage structures

Accomplishments:

During Year 4, Public Works crews accomplished the following tasks:

- 221,343 linear feet of storm drain pipe cleaned
- 9,484 drainage structures inspected and/or cleaned
- 16,513 curb miles of streets swept
- 65 inlets repaired
- 25,471+ linear feet of ditches cleaned
- 8,736 cubic yards of debris cleaned from storm drain pipes, storm drain structures, leaf pickup and street sweeping activities

4.3.3 Flood control channel or road side ditch inspection and maintenance

City-maintained open channels are cleared of trash and debris annually for flood control purposes. All materials are disposed of properly.

Measurable Goals:

Continue to inspect and remove debris from open channel for flood control purposes throughout permit term.

Accomplishments:

Continue to implement existing activities as described in Storm Water Management Plan.

4.3.4 Storm drain labeling

The storm drain labeling program was originally implemented as an educational volunteer participation. For the last four years, the City has supplemented its ongoing public volunteer storm drain labeling program with City crews checking and verifying if catch basins throughout the City have decals or not, and adding decals to those without.

Measurable Goals:

The goal of the storm labeling program was to labeling of 80% of the curb opening inlets within the City right-of-way by the end of the first year of the second permit term.

Accomplishments:

During the 2006-07 fiscal year, Field Services staff continued to install new and replace worn storm drain decals. However, the City has entered into a pilot project to use a consultant to contact property owners of priority properties for permission to install decals. When permission is obtained, the decals will be installed. The project will try to determine the most practical method of contacting property owners to achieve the maximum number of decals installed. This project will be carried out in Year 5.

4.4 Street and Road Maintenance

Streets and roads may collect litter and debris from nearby activities, as well as from vehicular traffic. Routine maintenance of streets and roads may also generate waste materials. The goal of this program is to reduce the impact of street and road operations and maintenance on storm water quality.

4.4.1 Street Sweeping Frequency

PW Field Services performs street sweeping with a regenerative air sweeper. Street cleaning operations are prioritized by traffic volume and based on their respective priority.

The City continues to follow the street sweeping schedule which is available for public viewing at the City's GIS map webpage noted below.

New Activities:

The City continues to receive calls from residents wanting to know when their street will be swept so that they can maximize the effectiveness of the street sweeping operation. This information was not previously available except by telephone during normal business hours. However, the street sweeping schedule is now available to the public at all times and can be viewed on the City's GIS map site as noted below under Accomplishments.

Measurable Goals:

Continue to sweep streets on the frequency as prioritized above.

Accomplishments:

During the fourth permit year the City accomplished the following:

- 16,513 curb miles of streets swept
- The street sweeping schedule is located on the City's GIS map site at <http://imaps.ci.santa-rosa.ca.us/>. Street sweeping schedule viewing option is available from Basic Map pull down menu.

4.4.2 Material Management-Road Construction, Sweeping, Pipe/Ditch Cleaning

Street and road maintenance operations may include saw-cutting, paving, the use of concrete materials and disposal of debris from cleaning operations. Best management practices to prevent storm water pollution generated from the materials used in each of these activities are implemented as necessary.

Measurable Goals:

Continue to implement Best Management Practices (BMP's) for road construction, sweeping, and pipe/ditch cleaning activities with proper recycling or disposal of materials.

Accomplishments:

During Year 4, Street and Road Maintenance crews continued to utilize appropriate BMP's during their road construction, street sweeping, and pipe/ditch cleaning activities.

4.4.3 Training of Targeted Staff:

PW-Streets and Road Maintenance crews receive on the job training for appropriate procedures in preventing their operations from impacting the City's storm drain system. An annual refresher is given to all Streets and Road maintenance crews about the subject of the storm water discharge permit and how to maintain compliance with the permit requirements.

Measurable Goals:

Continue to provide training to appropriate staff members.

Accomplishments:

In October 2006, training was provided during a biweekly safety meeting to the City employees that operate out of the Municipal Services Center North (Corporation Yard). The training informed the employees about the Industrial Storm Water Permit and the Storm Water Pollution

Prevention Plan for the Corporation yard. This training is provided annually and is part of the City's Storm Water Pollution Prevention Plan for the Corporation Yard.

4.5 Parking Facilities Management

4.5.1. Sweeping/Spill Clean Up

The goal of this component is to reduce the water quality impact of parking facilities with greater than 25 parking spaces owned by the City.

Measurable Goals:

- Continue to sweep public parking lots and garages weekly and pressure wash annually. Maintain records in Transit and Parking Department.
- Priority spills are immediately responded to within City owned and operated parking lots and garages and non-urgent small spills within one business day.

Accomplishments:

- Generally, sweeping is performed weekly at the City's Corporation Yard at 55 Stony Circle and at City Hall and monthly at the Senior Center
- City Transit and Parking Department hired contractors to sweep and pressure wash City-owned public parking lots and garages (currently 5 garages and 8 lots. Parking lot closures associated with the current Hwy 101 construction has temporarily reduced the number of parking lots to be swept has temporarily from 9 to 8).

4.6 Emergency Procedures

The City has an Emergency Operations Plan to guide staff in responding to and recovering from natural disasters or other emergencies. Where feasible, fire-fighting water from City fire incidents is vacuumed up and disposed of into the sanitary sewer or as hazardous material..

4.6.1 Hazardous Material Response Plan

The City's Hazardous Material Response Plan is an extension of the City's Emergency Operations Plan and meets the requirements of Chapter 6.95, California Health and Safety Code and Title 19, Article 3, California Code of Regulations. The response plan contains information concerning specific hazardous chemicals at specific sites and emergency response procedures in the event of a release or threatened release of a hazardous material.

Measurable Goals:

Continue to implement the Emergency Operations and Hazardous Material Response Plans.

Accomplishments:

The City's Emergency Operations Plan and Hazardous Material Response Plans continue to be implemented when appropriate.

5.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION

Goal: Detect and Minimize Illegal Non Storm Water Discharges

The goal of the illicit discharge program is to detect and eliminate non-storm water discharges (except those that are exempt or conditionally exempt) from entering the storm drain system and to reduce pollutants from such discharge to the maximum extent practicable.

5.1 Spill Response

Preventing spills to the storm drain system, including creeks and channels, is an ongoing educational and proactive process inherent to compliance with the NPDES storm water permit.

Spill Prevention Coordination:

During the first permit term, funding was approved for a Police Department Environmental Crimes Investigator. Funding for this position continues to be provided annually by the PW storm water utility assessment and the Utilities Department. The Environmental Crimes Investigator assists Public Works, Utilities and Fire Departments with incidents of environmental crime. As described in Section 3.7, monthly coordination meetings with the Environmental Crimes Investigator, Fire, EC, City Attorney, CD-Building & Engineering, Utilities-EC, PW Field Services, and PW-Storm Water are held to coordinate and share information about recent illicit discharges.

The EC routinely responds to potential incidents of violation of the sewer use ordinance in addition to periodic routine inspections of permitted businesses. Reports and referrals that indicate potential illegal disposal to the storm drain system are forwarded to the PW for locations within the City limits that do not have an active Industrial Waste Permit.

In addition to coordination among City departments, the City actively participates with the Sonoma Environmental Quality Assurance Committee (SEQAC). Regularly scheduled SEQAC meetings cover County-wide environmental enforcement and education issues for air, sanitary sewer (industrial waste), hazardous materials, and storm water quality.

Spill Containment, Cleanup and Investigation:

Non-Hazardous Materials:

Under the NPDES storm water permit, the City is responsible for cleaning up non-hazardous materials from its right-of-way within the permit boundary. The City Public Works Department has developed Spill Response Procedures to provide appropriate response for discharges to the storm drain system; see **Appendix III.F**.

Prioritization for Investigation of Illicit Discharges:

- Investigations of illicit discharges and disposal are prioritized by the nature, location and quantity of the material spilled and the time of year. Highest priority is given to those incidents involving large quantities and occurring in the wet weather season with the highest potential of discharge to a storm drain system or a creek.

Measurable Goals:

- Continue existing illicit discharge detection and elimination activities.

- Maintain records of spill response actions in the PW Department and summarize in each Annual Report.

Accomplishments:

- PW has continued illicit discharge detection and elimination activities with five Storm Water Inspectors who rotate spill response duty on a weekly basis. In addition to spill response field visits, the Storm Water Inspectors performed follow-up education, issued violation letters, and provided assistance to businesses and the public on storm water management and pollution prevention issues. The “Storm Water Incident Response” form continues to be revised and a copy of the latest version is included as **Appendix III.G.**
- 112 reports of illicit discharges were received during Year 4, resulting in a total of 1,547 reports since the City's first NPDES storm water permit was issued in 1997.

5.2 Private Sanitary Septic Systems:

The City of Santa Rosa contracts with the County of Sonoma to be the lead agency with for well and septic issues. The County’s Permit and Resource Management (PRMD) Well & Septic Section issues permits for new septic systems and repair permits to fix failing septic systems if no sewer is available within 200 feet. This section also issues new well permits.

When a complaint is received of a possible failing septic system within City Limits, a City Building & Code Compliance inspector conducts an onsite review within a few hours, usually less than 24 hours from the time the complaint is received. If the inspector finds the complaint valid, a correction notice is issued, directing the property owner to contact County Well & Septic at PRMD for proper testing, evaluation and to obtain a repair permit, if possible.

If a property owner is unable to obtain a septic repair permit and City sewer is available, the owner must pay hook-up fees to Santa Rosa’s Utilities Department, obtain a PW encroachment permit, and obtain a plumbing permit from CD-Building Code Compliance. The owner must also obtain a septic abandonment permit from the County’s Well & Septic Section and properly abandon the septic system. Inspections are required for all three activities: PW Encroachment for the sanitary sewer tie-in in the public right-of-way, County Well & Septic for the septic abandonment, and CD-Building for inspection of the new sanitary sewer connection.

If the inspector finds raw sewage above ground, the CD-Building Code Compliance inspector will contact County Well & Septic Section directly and request that one of their inspectors come out to the property for immediate evaluation of the septic system. If the CD-Building Code Compliance inspector finds raw sewage being pumped into a storm drain, drainage ditch or creek the City’s Spill Response team is notified immediately. If the CD-Building Code Compliance inspector can locate who is doing the pumping, that individual is ordered to stop immediately via a correction notice and stop work order.

Measurable Goals:

- Follow up and resolve any reported illicit discharges from private sanitary septic systems
- Respond within one hour to a reported illicit septic discharge that flows beyond the property boundary
- Respond within one business day to a reported illicit septic discharge contained within property boundary and which poses no immediate threat to public health or environment

Accomplishments:

The Utilities Department responded to fourteen sewer spills in Term 2, Permit Year 4, resulting in clean up of 853 gallons of sewage. Eleven of the spills were discharged from private property. When sewage discharges from private property, the City Police Dept. is called and the owner is billed for clean up costs. The average cleanup size was 59 gallons and owners were billed a total of \$1,439.

5.3 Enforcement Procedures

The City established Enforcement Procedures for general violations which formalize a plan of action to be taken pursuant to City Code Chapter 17-12, Storm Water or other State law violations. The Enforcement Procedures include a list of possible violations and template letters for warnings, notices of violation, cease and desist orders and administrative orders.

Measurable Goals:

- Continue to implement existing procedures.
- Update enforcement procedures as needed and provide appropriate enforcement response in accordance with these procedures.

Accomplishments:

Existing procedures continue to be implemented as established.

5.4 Record Keeping and Documentation:

The City continues to use and update its computerized databases to track activities related to the NPDES storm water permit. Each department documents its own inspections and actions and maintains its own database regardless of whether it was routine, follow-up or resulted from referral. Each department compiles summary reports of its activities. PW's complaint reports and inspections are entered into the Cartegraph[®] database.

PW continues to use the Cartegraph[®] software program to document illicit discharge complaints and enforcement actions. The program has significantly reduced the time spent by staff reporting on complaints and facilitates the creation of reports by querying the database.

Measurable Goals:

- Continue to update Cartegraph[®] database as complaint response and inspections are completed.
- Document illicit discharge detection and elimination activities and summarize in each Annual Report.

Accomplishments:

PW responded to 112 reports of illicit discharges to the storm drain system during Permit Year 4, resulting in the following:

- 6 identified as "no discharge"
- 5 discharges on private property
- 84 discharges to gutter/ditch
- 8 discharges to the storm drain

- 9 discharges to creek

Clean-up operations were completed by dischargers or City staff. However, clean-ups were not completed for all discharges since clean-ups were not be feasible for some spills on private property that would reach the City's storm drainage system or that had previously occurred (e.g. dried paint).

Table III.2 categorizes PW's spill responses by discharge source. Similar to previous years, the majority of spills were related to discharges from residential, construction, and street discharges.

Table III.2
City of Santa Rosa Public Works Department
Incident Reports According to Source-Year 4
(Compiled July 2007)

Industry	Year 1 '03-'04		Year 2 '04-'05		Year 3 '05-'06		Year 4 '06-'07	
	Incidents	%	Incidents	%	Incidents	%	Incidents	%
Residential	34	23	39	30	39	27	30	27
Street Spills	14	10	11	8	12	8	8	7
Contractors, Landscapers, Painters, etc.	0	0	21		18		16	14
Construction	25	17	30	23	21	15	8	7
Food Facilities	8	5	6	5	4	3	3	3
Automotive	8	5	6	5	5	4	2	2
Schools and Public Agencies	7	5	6	5	2	1	3	3
Pollution reported in creek	3	2	7	5	11	8	*	*
Dumping/Abandoned	8	5	4	3	12	8	7	6
Multi-family Residential	5	3	1	1	6	4	3	3
Other	3	2	0	0	0	0	0	0
Retail	3	2	4	3	8	6	4	4
Cleaning	7	5	2	1	4	3	3	3
Traffic Accidents	0	0	2	1	6	4	1	1
Unknown	9	6	6	5	2	1	8	7
Manufacturing	2	1	2	1	1	1	2	2
Homeless	1	1	0	0	0	0	1	1
Business Centers	4	3	3	2	3	2	2	2
Recreational	0	0	0	0	0	0	0	0
Residential Care	0	0	0	0	1	1	0	0
Service Based Organization	2	1	1	1	1	1	0	0
Printing	0	0	0	0	0	0	**	**
Medical Facilities	3	2	2	1	0	0	0	0
Residential – Neighborhood***	-	-	-	-	-	-	4	4
Food/Wine Processing***	-	-	-	-	-	-	3	3
Other City Department***	-	-	-	-	-	-	1	1
No Information***	-	-	-	-	-	-	2	2
No Discharge***	-	-	-	-	-	-	1	1
Blank	-	-	-	-	2	1	0	0
TOTAL	146	100	132	100	142	100	112	100

*Category removed since spill discharge type addresses this issue.

**Incorporated into business, commercial, and retail

***Categories added in Year 4

Enforcement relating to spill response included the following:

- 54 Verbal Warnings
- 17 Written Warnings
- 1 Notice of Violation
- 0 Administrative Actions
- 1 Cease and Desist Orders
- 9 Cost Recovery Actions for \$4,601.61

PW Staff took enforcement actions in 73 of 112 alleged discharge reports since some were not actual discharges, some occurred on private property, others were abandoned with no responsible parties, or other City departments/agencies took enforcement action.

5.5 Illicit Connection Investigation:

Illicit connections are defined as specific pathways for illicit discharges, even though a discharge may be infrequent or intermittent. The goal of the illicit connection elimination program is to eliminate these connections to the maximum extent practicable.

Possible illicit connections within the City are investigated in a number of ways. When odor complaints are received, they are forwarded to the Utilities Department to investigate. Once an illicit connection is identified, Utilities repair crews correct the situation or the owner of the connection is notified to correct the situation immediately.

Storm drain inspection and illicit connection identification by field screening is conducted by a two-person PW-Field Services (FS) crew dedicated to storm drains. When the FS crew has a reason to suspect an illicit connection or illegal discharge as a result of this field screening process, they coordinate with the PW-Engineering Division and/or the Utilities Department to test the flow and follow up as appropriate.

All suspected illicit connections are investigated in a timely manner.

Record Keeping and Documentation:

Illicit connections to the sanitary sewer system are documented in the same manner as sanitary sewer overflows by the Utilities Department.

Accomplishments:

PW-FS has a two-person full-time equivalent crew with a combination vacuum and water-jetting truck that cleans the storm drain system on a daily basis. All unusual or dry weather flows are investigated. In addition, PW coordinates with other programs and departments; such as EC, Fire, Police, and Utilities on the inspection/investigation of illicit connections to the municipal storm drain system. During Year 4, the City cleaned 221,343 linear feet of storm drain pipe, inspected and/or cleaned 9,484 drainage structures, repaired 65 inlet structures, replaced 9,368 linear feet of old sanitary sewer and conducted 1,453 inspections for industrial facilities. In

addition, CD-Building Code Compliance responded to 1,337 incidents without finding any illicit connections to the storm drain system.

5.6 Illicit Connection Termination

If an illicit sanitary sewer connection to the storm drain system is discovered, the City's sewer use code, Chapter 15-16.020, describes the measures to be taken to make a proper sanitary sewer connection. An illicit connection is subject to the same enforcement procedures as specified by the City's storm water ordinance.

Measurable Goals:

Any identified illicit connections to the storm drain system and associated steps taken to eliminate the connection are included in each Annual Report.

Accomplishments:

No illicit connections to the storm drain system were found during Year 4.

5.7 Disposal of Used Oil and Toxic Materials:

Sonoma County Waste Management Agency provides used oil and toxic materials disposal services within the City limits. Existing activities, new activities and measurable goals are included in the County's Storm Water Management Plan.

5.8 Training of Targeted Staff

During the first permit term, PW staff gave annual presentations to the PW Streets, Garage, and Electrical shops staff, Utilities Department water and sewer crews, and Recreation and Parks Department maintenance crews. These annual presentations described the City's storm water discharge permit and the roles of these employees in observing, responding to, and reporting any incidents of pollutant discharges to the storm drain system. These educational programs have continued during the second permit term to provide annual training to targeted City employees.

Measurable Goals:

Training is provided annually, documented, and summarized in each Annual Report. See Section 4.4.3.

6.0 PUBLIC EDUCATION AND OUTREACH

Goal: Increase the community's knowledge of the municipal separate storm sewer system and the impacts of urban storm water runoff, and encourage behavior changes thereby reducing pollutant release to the receiving waters

6.1 General Public/Residents

Public information and involvement is one of the most important elements of the storm water management program. Each member of the community can contribute to storm water quality

improvement by modifying their activities to reduce the amount of pollution generated and by notifying the appropriate agencies of known or potential sources of storm water pollution.

For the second permit term, the public outreach program will continue to be a coordinated effort among the three copermittees, with each utilizing their existing community outreach and education programs for maximum effect. Due to the new requirements under the Standard Urban Storm Water Mitigation Plan (SUSMP), the majority of the public outreach efforts in the second term will be directed toward the development community.

6.1.1 Storm Drain Inlet Decal Program

In 1993 the City of Santa Rosa began a volunteer catch basin stenciling program as an element of its Storm Water Management Program. Catch basins or curb inlets that collect storm water runoff from the street were labeled, “No Dumping, Drains to Creek.”

Measurable Goals:

The City will continue to provide decal kits to volunteer groups, and will report the number of decals placed each year in the Annual Report. Since this portion of the Storm Drain Inlet Decal program is voluntary, a numeric goal would not be appropriate. See Section 4.3.4 for a description of the portion of the inlet decal program to be completed by City staff.

Accomplishments:

No volunteer groups installed storm drain labels this permit year.

Beyond Compliance:

As described previously in Section 4.3.4, the City does not have the legal authority to enter private property and label private storm drain structures. However, a pilot project has been initiated to use a Consultant to contact property owners of priority properties for permission to install decals. When permission is obtained, decals will be installed. The project will try to determine the most practical method of contacting property owners to achieve the maximum number of decals installed.

6.1.2 Ecology Column in Local Newspaper

Local newspapers reach a large number of citizens and businesses within Sonoma County. A column focused on ecological topics is a simple way to present detailed information to these readers. This column would include reporting on a variety of ecological topics, including storm water pollution prevention.

Measurable Goals:

Correspondence and meeting notes and results regarding the presentation of Ecology Column idea to local newspapers will be included in the first Annual Report. If the column is published, readership numbers would be included in subsequent Annual Reports.

Accomplishments:

- The writing and submittal of an environmental newspaper column (Column) is being coordinated through the RRWA. RRWA’s coordination has ensured the promotion of a

consistent storm water message throughout the Region which may be more recognizable by the public.

- Newspapers publishing the Column on a monthly basis include” Sonoma West Times, Healdsburg Tribune, Windsor Time Ukiah Daily Journal, West County Gazette, Russian River Times, and the Community Voice.
- Columns written during Year 4 include: Why Water Conservation? (July ‘06), Coastal Cleanup and Pollution Prevention (August ‘06), Integrated Pest Management (September ‘06), Trash in the Street Gets in the Creek (October ‘06), Holiday FOG Announcement from the Russian River Watershed Association (November ‘06), When the holidays are over--- recycling paper, holiday trees and electronic wastes in Sonoma County (December ‘06), Your Watershed: Recycled Water (January ‘07), Pick Up After Your Pet (February ‘07), Treat Storm water as an Important Resource (March ‘07), Is Your Creek Healthy? (April ‘07), Mercury Pollution Prevention (May ‘07) and Gardening with Water-Thrifty Plants (June ‘07). All Columns were submitted to the Press Democrat (PD) for publishing. However, the PD will not publish an environmental column not written in-house as they are concerned that the article would have an “agency bias”. In spite of this, The PD did print one Column, “Pick Up After Your Pet” in March ‘07 as a Letter to the Editor from the RRWA. (See **Appendix III.H**; Also see <http://www.rrwatershed.org/reports.html> for copies of these environmental columns)
- The City of Santa Rosa issued several Media Releases to the Press Democrat and other local media including “September 18 through 24 is National Pollution Prevention Week” on September 11, 2006, “Santa Rosa Uses Fish To Monitor Local Creeks” on Oct 28-30, 2006, and “High School Students Use Bugs To Monitor Local Creeks” on May 16, 2007. The PD used “Santa Rosa Uses Fish To Monitor Local Creeks” as the basis for an article on November 3, 2006 entitled “SR’s RUNOFF COPS.” (see **Appendix III.I**)
- Other storm water friendly articles were printed by Press Democrat during Year 4 including “Santa Rosa’s Unseen Creek” on June 24, 2007 and several articles on Integrated Pest Management in the Home and Garden Section.

6.1.3 Storm Water Management Program Web Site

During the first permit term, the City created a website for the Storm Water Management Program (<http://www.ci.santa-rosa.ca.us/default.aspx?PageId=319>) to better inform the public about storm water quality issues including the NPDES Storm Water Permit and creek restoration. Updates and revisions to the pages occur periodically.

Measurable Goals:

A counter will be installed on the main storm water page to track the number of visitors to the site. These numbers will be reported in each Annual Report.

Accomplishments:

The following list shows the number of total page views from July 1, 2006 to May 31, 2007 of select storm water web pages:

STORM WATER HOME	4300
CREEK RESTORATION	1743

CITY WIDE CREEK MANAGEMENT PLAN	1518
CREEK STEWARDSHIP PROGRAM	1156
CURRENT EVENTS (ACTIVITIES)	875
NPDES PERMIT INFO	362
STORM WATER MANAGEMENT PLAN	854
FLOOD CONTROL INFORMATION	518
STORM WATER ORDINANCE	455
ENVIRONMENTAL CRIMES	256
POLLUTION PREVENTION BMP's	388
REPORTING SPILLS/CONTACTS	218
BIOASSESSMENT PROGRAM	604
CLEANING INDUSTRY BMP's	378
BMP's for APT MANAGERS	136

Beyond Compliance:

In addition, during Year 4, a section was added to the SWMP web page to inform the public about bacteria, public health, and the reason for warning signs along the Prince Memorial Greenway. This can be viewed at <http://www.ci.santa-rosa.ca.us/default.aspx?PageId=2452>.

6.1.4 Water Agency Adopt-a-Creek Program

The Water Agency is the lead for the Adopt-a-Creek program within the permit boundary. Details of the program are included in Part IV of this Annual Report. The Water Agency and the City jointly fund a full-time Environmental Specialist position. Duties of this position include the coordination of the Adopt-a-Creek program. The Adopt-a-Creek Program and associated measurable goals are detailed in Part IV.

6.1.5 Pet Waste Signs Along Water Agency Channels in Santa Rosa

Signs that remind pet owners to protect water quality by cleaning up after their pets are posted at major public access points to creekside trails. These signs remind trail users to not pollute creeks and to help take care of creeks by doing such things as carrying out their trash, picking up after pets, keeping pets on leashes, and not building fires.

Interim signs specifically targeting pet owners to "Clean Up After Your Pet" to reduce bacteria and nutrient pollution were posted at creekside trail access points. These interim signs will remain until additional informational signs are installed.

Dispensers of pet waste collection bags were installed at four points in the Brush Creek Restoration area. Dispensers are refilled as necessary. The City's Recreation and Parks Department supplies containers to dispose of collected pet waste and regularly empties the containers.

Measurable Goals:

- By the end of the first year of the permit, 10 informational signs will be posted at major access points to the Santa Rosa Creek Trail, subject to approval by the Water Agency and City's Waterways Advisory Committee.

- 25 “Clean Up After Your Pet” signs will be posted at access points each year of the permit term.
- Each annual work plan will identify the locations and numbers of additional signs to be posted along creekside trails.

Accomplishments:

A partnership of the Sonoma County Agricultural Preservation and Open Space District, Sonoma County Regional Parks, Sonoma County Water Agency, and the City of Santa Rosa was formed to implement signage improvements along the Santa Rosa Creek Greenway (comprised of the 6 miles of Santa Rosa Creek between Santa Rosa Avenue and Willowside Road). A consultant was hired to design interpretive, directional, and regulatory signs with a distinct and consistent “look.” Interpretive signs will include information on fisheries, wildlife, recreation, plant species, flood control, cultural history, and storm water runoff pollution prevention. The design of these signs is currently under review by the partnership’s member agencies.

One hundred fifty-five pet waste signs have been installed during this permit term. No additional signs will be installed except for the replacement of damaged signs. Fifteen signs were replaced in Year 4.

6.1.6 Public Events

The City actively pursues opportunities to participate in general outreach events. Participation in previous events has continued throughout the permit term.

Measurable Goals:

The City will provide a summary of participation in general outreach events including materials distribution numbers to the Regional Water Board on an annual basis.

Accomplishments:

- Public education and outreach continue to be an integral part of the SWMP as is evidenced by the large quantity of educational materials distributed and the number of public outreach exhibits and speaking engagements coordinated each year. During outreach events, members of the general public are actively engaged at the Storm Water booth. Typically, a large wheel is spun by the public as they try to win their choice of prizes. The number on the wheel determines the question they must answer to win. The wheel attracts people to visit the booth and allows them an opportunity to think about issues related to storm water pollution prevention.
- The following is a list of outreach events with the date, event title, location and related information (audience type, direct number contacted, estimate of event attendees). The number of materials distributed can be found in **Table III.3** in Section 6.1.8.

Public Outreach Exhibits or Speaking Engagements (numbers listed by audience type, direct # contacted, estimate of event attendees):

- 7/04/06, PW staffed a display and gave out informational materials at the Bicycle Santa Rosa Fourth of July Festival, Julliard Park (general public, 50, 500).

- 7/12/06, PW staffed a display and gave out informational materials at the Wednesday Farmers Market, downtown Santa Rosa (general public, 180, 1500+).
- 8/12/06 PW staffed a display and gave out informational materials at the RR Square Festival and conducted a creek walk, near downtown Santa Rosa (general public, 80, 500).
- 9/15/06, PW staffed a display and gave out informational materials at the Santa Rosa Junior College Wellness Fair (employees and students, 110, 400).
- 10/15/06, PW staffed a display and gave out informational materials at the Cultural Diversity Festival at the Finley Center (general public, 180, 800).
- 3/31/07, PW staffed a display and gave out informational materials at the Cesar Chavez Health Fair at Roseland Elementary School (general public, 150, 600).
- 4/14/07, PW staffed a display, gave out informational materials, and conducted a small workshop at the Green Living Expo, County Memorial Building (general public, 110, 700).
- 4/19/07, PW staffed a display and gave out informational materials at the Agilent Earth Day Fair in Santa Rosa office (employees, 90, 300).
- 5/05/07, PW staffed a display and gave out informational materials at a Cinco de Mayo Festival off Sebastopol Road (general public, 150, 600).
- 5/23/07, PW staffed a display and gave out informational materials at the Wednesday Farmers Market, downtown Santa Rosa (general public, 200, 1500+).
- 6/02/07, PW staffed a display and gave out informational materials at a National Trails Days Event in Juilliard Park (general public, 80, 400).
- 6/10/07, PW staffed a display and gave out informational materials at the Pride Festival in Juilliard Park (general public, 120, 700).
- 6/18/07, PW staffed a display and gave out informational materials at the Wednesday Farmers Market, downtown Santa Rosa (general public, 180, 1500+).

6.1.7 Hazardous Waste Disposal

The Sonoma County Waste Management Agency has public outreach programs to prevent improper disposal of used oil and toxic materials. This program and associated measurable goal are described within the County's Storm Water Management Plan.

Measurable Goals:

No measurable goals were established for this activity during this permit term.

6.1.8 Illicit Discharge Incidents

Pollution prevention outreach materials designed for private citizens during response to accidental or illicit discharges were developed during the first permit term. These outreach materials continue to be distributed to citizens as part of spill response duties during illicit discharge incidents.

Measurable Goals:

Material distribution numbers will be reported each year in Annual Report.

Accomplishments:

- City staff continues to work with the Caltrans Storm Water section to participate in the “Don’t Trash California” outreach program. Caltrans previously provided car litterbags, informational flyers on litter, and activity books for children. Caltrans had also contacted the local community access TV channel about airing their “Don’t Trash California” TV commercials. The total number of airings of the two Public Service Announcements is XX: 144 in English and 92 in Spanish.
- See **Table III.3** as follows for a quantitative list of educational material distributed to the public. This includes new Creek Protector Stickers (See **Appendix III.J**) developed by staff to show residents of creek areas and a positive message.

Table III.3
Educational Material Distributed (compiled July 2007)

Outreach Item	Quantity Distributed	Category/Audience	Language
Apartment Manager Checklist	2	Multi-Family	English
Automotive Guide	0	Automotive	English
Automotive Guide	0	Automotive	Spanish
BMP 1 Storm Water	3	Construction	English
BMP 2 Heavy Equip/Earth Moving	2	Construction	English
BMP 3 Road Work/Paving	2	Construction	English
BMP 4 Concrete/Mortar App.	9	Construction	English
BMP 5 Gen Construction/Supervision	4	Construction	English
BMP 6 Home Repair/Remodel	38	Construction	English
BMP 7 Painting	11	Construction	English
Clean Carpet, Dirty Streams	4	Cleaning/General	English
Cleaning Industry General Guide	0	Cleaning	English
Cleaning Industry Q & A	1	Cleaning	English
Cleaning Industry Surface Cleaner	12	Cleaning	English
Cleaning Industry Carpet Cleaner	4	Cleaning	English
Cleaning Industry Water Regulations	2	Cleaning	English
Cleaning Industry Auto Detailer	15	Cleaning	English
Only Rain down the Storm Drain insert	7	Cleaning	Eng/Span
Cleaning Industry Poster	1	Cleaning	English
Food Facility Guide	0	Food	English
Food Facility Quick Ref. CHN	0	Food	Chinese
Food Facility Quick Ref. ENG	0	Food	English
Food Facility Quick Ref. SPN	0	Food	Spanish
What RG Stations need	4	RGO	English
Retail Gas Station Site Cleanup	4	RGO	English
Taking Care of your Car	40	General	English
IPM Find Pest Control Company	101	IPM/General	English
IPM Problem Pesticides & Water Quality	110	IPM/General	English
IPM Safe use and disposal of Pesticides	125	IPM/General	English
IPM Tips for a Beautiful Lawn	140	IPM/General	English
IPM Growing a Healthy Garden	150	IPM/General	English
IPM Tips for Wonderful Roses	45	IPM/General	English
IPM How to control Weeds	50	IPM/General	English
IPM Controlling Ants	280	IPM/General	English
IPM Controlling Aphids	120	IPM/General	English
IPM Keeping Cockroaches Out	115	IPM/General	English
IPM Keeping Fleas Off	110	IPM/General	English
IPM Keeping Mosquitoes Away	300	IPM/General	English
IPM Controlling Snails and Slugs	190	IPM/General	English
IPM Living with Spiders	140	IPM/General	English

Table III.3
(continued)

IPM Controlling Yellow jackets	130	IPM/General	English
IPM Problem Pesticides	2	IPM/General	Spanish
IPM Safe use and disposal of Pesticides	8	IPM/General	Spanish
IPM Tips for a Beautiful Lawn	11	IPM/General	Spanish
IPM Controlling Ants	25	IPM/General	Spanish
IPM Keeping Cockroaches Out	3	IPM/General	Spanish
IPM Keeping Fleas Off	3	IPM/General	Spanish
IPM Controlling Snails and Slugs	25	IPM/General	Spanish
IPM Living with Spiders	5	IPM/General	Spanish
IPM Controlling Yellow jackets	10	IPM/General	Spanish
Door Tag "No Dumping"	25	General/Reg	English
Door Tag Storm Drain Violation	20	General/Reg	English
Healthy Environment Begins @ Home	75	General	English
Recycle Autumn Leaves	30	General	English
Recycle Guide, 2006	50	General	English
SD are for SW Only brochure	160	General	English
SD are for SW Only brochure	30	General	Spanish
Storm Water Citizen Resource Guide	30	Gen/Reg	English
Storm Water Ordinance	70	Regulation	English
Draining Your Pool or Spa	50	General	English
Creek Stewardship Program	130	Creek/Gen	English
Only Rain Down the Storm Drain magnet	300	Gen/Promo	English
Frisbee w/ curb marker decal	250	Gen/Promo	English
Creek Protector Stickers	300	Gen/Promo	English
Tattoos w/ nature image	200	Gen/Promo	English
Erasers - fish shape	220	Gen/Promo	English
Coffee Mug with SW & City Logos	0	Gen/Promo	English
Pencil with creek message & City logo	200	Gen/Promo	English
Magnet Clip with decal design	300	Gen/Promo	English

6.2 Industrial/Commercial Outreach

During the first permit term, significant outreach was undertaken for food facilities and the automotive, cleaning, landscape, building, and construction industries. Brochures and educational materials, including posters and videos, were created and distributed during inspections or by mail. These materials continue to be reprinted as needed and distributed upon request in the second permit term.

In addition, the City participated in the Sonoma Environmental Quality Assurance Committee (SEQAC) during the first permit term. This organization includes many regulatory agencies involved with hazardous material control. Participation in this organization allows for more coordinated outreach and the ability to respond quickly to environmental emergencies through

effective coordination between all involved agencies. The City continues to participate in SEQAC as part of its ongoing outreach to industry (See **Appendix III.E**).

6.2.1 Automotive Repair, Food Facility, and Cleaning Industries

During the first permit term, the copermitees created and distributed outreach materials in English and Spanish for the automotive, food facility, landscape, and cleaning industries. The outreach materials were distributed by City and County inspectors upon request and while doing routine inspections or when responding to incidents of illicit discharges. Educational materials were also distributed by staff at presentations, trade shows, and meetings. These educational materials continue to be printed, as needed, and distributed during the second permit term.

Measurable Goals:

- Distribute prepared educational materials on storm water pollution prevention during inspections. Ongoing through second permit term.
- Track and report in each Annual Report the type and number of educational brochures distributed. Material distribution numbers will be reported each year in the Annual Report.

Accomplishments:

See previous **Table III.3** for outreach materials distributed.

6.2.2 Landscape Industry

During the first permit term, the City worked with University of California Cooperative Extension (UCCE) Master Gardeners for distribution of the Integrated Pest Management (IPM) Fact Sheets, conducting public IPM workshops, and the creation of a native plant garden display at the Sonoma County Fair. The goal of this partnership was to raise public awareness that pesticides can affect water quality and to provide information on less-toxic pest management and the proper use and disposal of pesticides. The City continues to provide IPM Fact Sheets to retail stores who are part of the “Our Water, Our World” Program.

At the beginning of Year 4, the City pursued the continuance of this funded partnership with the University of California Cooperative Extension (UCCE) Master Gardeners for distribution of the Integrated Pest Management (IPM) Fact Sheets, conducting public IPM workshops, and the creation of a native plant garden display at the Sonoma County Fair. However, the Master Gardeners were not interested in continuing this partnership with the City. As a result, during Year 4, the City contracted with the “Our Water, Our World” Program, part of a Bay Area regional organization, to provide Integrated Pest Management Fact Sheets to the public, encourage local stores to stock nontoxic and less toxic pest control products, and train store employees in the new product lines.

Measurable Goals:

Materials distribution numbers will be reported each year in the Annual Report as well as stores supporting Integrated Pest Management products, store employee training and outreach events.

Accomplishments:

- The City of Santa Rosa has continued to support the Bay Area Regional IPM group, part of the Bay Area Storm water Management Agencies Association in the point of purchase program, “Our Water, Our World”. The City hired a Consultant to encourage local hardware and nursery stores to stock more non- and less toxic products, train store employees and conduct informational displays in stores. Currently there are five stores in this program, Pricketts Nursery, Friedman’s Home Improvement, Western Farm Center, Mission Ace Lumber and Hardware, and True Value Village Hardware. Select employees have been trained at all five stores and an informational table for the public was held at Western Farm Center. All stores have increased the number of products offered that are nontoxic or less toxic and they highlight these products on their shelves with a display rack of OWOW fact sheets. Pictures from several stores are included in **Appendix III.K**.
- The Bay Area Regional IPM organization placed color advertisements for the “Our Water, Our World” program in the winter and spring editions of *Bay Nature* magazine. Examples of the advertisements can be found in **Appendix III.K**.

6.2.3 Building and Construction Industries

During the first permit term, outreach materials for the building and construction industry were developed and distributed. Information was provided during site inspections as well as industry-sponsored workshops. The City continues to print and distribute these outreach materials during the second permit term.

A large portion of the public outreach effort during the second permit term is focused on the development and distribution of materials related to the Standard Urban Storm Water Mitigation Plan (SUSMP).

Measurable Goals:

Materials distribution numbers will be reported in each Annual Report. Measurable goals related to the SUSMP outreach effort are detailed in Part VI of this Annual Report.

Accomplishments:

See previous **Table III.3 in Section 6.1.8 for a list of** outreach materials distributed.

6.3 School Education**6.3.2 High School Aquatic Macroinvertebrate Bioassessment Program**

The City continues to educate Santa Rosa area high school students about storm water pollution prevention through the Macroinvertebrate Bioassessment Program. This program includes classroom and field coursework during spring and fall of every school year. Students learn how to identify aquatic macroinvertebrates and about the ecology of creeks within Santa Rosa. The importance of storm water pollution prevention is also covered during lectures.

Measurable Goals:

The number of students reached through this program and total teaching hours of City staff will be reported in each Annual Report. However, it is ultimately the decision of the administration

of each individual school to continue the Bioassessment Program each year. As such, a goal for a minimum number of students reached for each year will not be set.

Accomplishments:

STUDENT BENTHIC COMMUNITY SURVEY

During the 2006-07 school year, five high schools in the Santa Rosa City School District participated in the "City of Santa Rosa Aquatic Macro-invertebrate Bioassessment Project." The primary focus and goal of this program is to educate high school students and teachers about how human actions affect water quality. The curriculum is focused on watershed dynamics, riparian and aquatic habitat, and aquatic macro-invertebrates (aquatic insects).

Secondly, the program is designed to teach students how to use a water quality monitoring technique to evaluate biological and physical conditions of Santa Rosa's creeks. Students utilize the California Department of Fish Game (CDFG) Protocol, "California Stream Bioassessment Procedures (Habitat Assessment and Biological Sampling for Citizen Monitors)" (CSBP) under the direction of the staff Program Adviser. The CSBP is a method of taking macro-invertebrates out of a creek (organisms such as mayflies, stoneflies and caddisflies) and determining water quality based on their diversity and abundance.

The following is a list of high schools, number of students and sample locations, for the data collection which occurred during the 2006-07 school year:

1. **Elsie Allen High School:**
Number of Students: 68
Sample Location: Colgan Creek at Bellevue Avenue
2. **Piner High School:**
Number of Students: 52
Sample Location: Peterson Creek west of Fulton Road
3. **Montgomery High School:**
Number of Students: 30
Sample Location: Matanzas Creek at Hoen Frontage Road
4. **Maria Carrillo High School:**
Number of Students: 16
Sample Location: Brush Creek south of Highway 12
5. **Santa Rosa High School:**
Number of Students: 54
Sample Location: Piner Creek at Marlow Road

Accomplishments:

- In summary, a total of 220 students from five high schools participated in the program during the 2006-07 school year. The five participating schools were: Santa Rosa, Montgomery,

- Maria Carrillo, Elsie Allen and Piner High Schools. The 2006-07 Aquatic Macro-invertebrate Bioassessment Report which describes the program about Storm Water Pollution Prevention for high school students is included as **Appendix III.L**.
- A total of 100 hours were spent presenting the classroom and field coursework by City staff and/or contract staff from Envirichment.
- Pre and Post surveys showed students increased their knowledge of creeks and storm water pollution an average of 45%.

6.3.3 Spring Lake Environmental Discovery Center

The Environmental Discovery Center of Sonoma County (EDC) is a multi-sensory, interactive, hands-on educational place where people of all ages are exposed to information about what's being done to enhance the environment and to highlight the natural resources of Sonoma County. The EDC uses the facility location resources of Spring Lake and other regional parks for interpretive displays, docent-led programs, habitat restoration projects and field laboratories. The EDC also provides environmental education programs at schools throughout the County. The facility hosts two rotating programs throughout the year, each featuring a different aspect of Sonoma County's unique natural resources to highlight what local agencies, businesses, and citizens are doing to encourage environmental stewardship and to foster the enjoyment of natural resources within the community.

Measurable Goals:

Attendance and materials distribution numbers will be reported in each Annual Report. However, as the City has no control over these numbers, no minimum goal will be set.

Accomplishments:

Similar to years past, the EDC's primary program related to storm water was displayed during the months of January to June 2007. This program is appropriately named "Down the Drain: A raindrop's journey from cloud to creek." The centerpiece display is an interactive storm drain system that children can crawl through, entering into a "storm drain" and exiting to either a "creek" or "beach" area. Also included are large-size board games, a technology tent with computer stations (featuring the Waterwaze game and other programs), a movie theater with short video films, and an interactive watershed model (Enviroscape). This permit year, 9,500 members of the general public visited the center, including 5,280 school children and their chaperones. A copy of the poster advertising the storm water displays is in **Appendix III.M**.

7.0 EFFECTIVENESS EVALUATION

Goal: Provide the City and the Regional Water Board an assessment of the City's program implementation and permit compliance

7.1 Management Plan

The objective of the City of Santa Rosa Storm Water Management Plan is to protect and enhance water quality by reducing storm water pollutants to the maximum extent practicable. Through

systematic storm water management program implementation, the City is making an appreciable impact on protecting and improving the quality of urban storm water runoff.

The purpose of the effectiveness evaluation is intended to provide to the City and the Regional Water Board an assessment of program implementation and permit compliance. The information is used to track progress and focus or redirect program resources through process improvement and to achieve the maximum benefit in minimizing the impact of the pollutants of concern. The assessment utilizes direct and indirect measurements to evaluate program elements.

An example of a direct measurement is the amount of debris removed from the storm drain system as a result of municipal cleaning and maintenance activities. Removal and proper disposal of debris is a quantitative reduction in the pollutant load that would otherwise result in a discharge of pollutants to the receiving waters.

Indirect measurements are used to evaluate program elements that cannot be numerically quantified such as the educational impact that the message “No Dumping, Drains to the Creek” on a storm drain inlet decal may have in deterring illicit discharges.

The effectiveness evaluation is a “self assessment” of the program implementation status.

Measurable Goals:

Where a measurable goal for a plan component identifies a deliverable or a reporting task, the plan component will be evaluated to determine whether or not the goal was met. The At-a-Glance summary in Section 4 of Part 1 serves as a checklist for an annual evaluation by City staff to determine the progress of implementation of the Storm Water Management Plan. An At-a-Glance summary is included in each Annual Report.

An example of an evaluation of a measurable goal that identifies a deliverable would be the cleaning and inspection of 130,000 linear feet of storm drain. Data would be gathered, an evaluation conducted and the results reported. Conversely, the measurable goal defined under Emergency Procedures does not contain a deliverable or a reporting task. The stated goal is to follow the HAZMAT Response Plan. This would not be included as part of the effectiveness evaluation.

Accomplishments:

Activities supporting the program’s measurable goals are summarized in the “At a Glance” table and detailed information is provided under each program element section.

The following program highlights directly correlate the City's compliance to activity-based permit requirements:

Activities that directly improved water quality

- Implementation of Storm Water Best Management Practices for New Development and Redevelopment
- 221,343 linear feet of storm drain pipe cleaned
- 9,484 drainage structures inspected and/or cleaned
- 16,513 curb miles of streets swept
- 65 inlets repaired
- 25,471 linear feet of ditches cleaned

- 8,763 cubic yards of debris cleaned from storm drain pipes, storm drain structures, leaf pickup and street sweeping activities

Activities that indirectly improved water quality

- Installation of 155 pet signs to date at waterway access points
- Conducted 1,453 inspections for industrial facilities
- Conducted 2,691 NPDES SWMP site inspections on grading permit sites & applicable construction sites
- Planting of native vegetation occurred at 1 site in the City
- Funded IPM outreach through the Our Water, Our World program.
- Responded to 112 reports of illicit discharges
- Initiated 9 cost recovery actions for \$4,601.61

Program elements that promote changes in knowledge and awareness of the general public or in school children are highlighted below:

Activities that indirectly improved water quality

- Over 5,000 pieces of outreach materials provided to the public and businesses
- A monthly environmental column has continued and is published by several local newspapers.
- A total of 220 students from five high schools in the City of Santa Rosa participated in the High School Aquatic Macro-invertebrate Bioassessment program during the 2006-07 school year. City staff and/or contract staff from Envirichment spent a total of 100 hours presenting classroom and field coursework.
- Similar to past years, during January to June 2007, the Spring Lake Environmental Discovery Center displayed “Down the Drain: A raindrop’s journey from cloud to creek.” The centerpiece display is an interactive storm drain system that children can crawl through, entering into a “storm drain” and exiting to either a “creek” or “beach” area promoting the concept that storm drains are directly linked with natural water bodies. Between January and June 2007, 9,500 members of the general public visited the center, including 5,280 school children and their chaperones.

Behavioral impacts are also related to activities associated with the City's Storm Water Management Program as noted below:

Activities that indirectly improved water quality

- Implementation of BMP's on private construction sites and municipal operations.
- Installation of pet waste signs and pet waste collection bags remind people to protect water quality by cleaning up after their pets.

Pollutant load reductions to City waterways can be directly associated with fulfilling permit requirements yet are often not directly measurable. Load reduction benefits are described as follows:

Activities that directly improved water quality

- Decrease in debris loading to the storm drain system and downstream waterways due to thousands of miles of streets swept annually.
- Decrease in oil and grease loading resulting from regular sweeping of public parking lots and garages and annual washing of the same.

The Monitoring Plan aspects of the storm water management plan allow the City to assess receiving water quality so that resources can be directed toward local pollutants of concern as well as toward identifying waterways that may need special attention.

Activities that indirectly improved water quality

Bioassay samples collected for all sites during the second representative storm of Year 4 reflected high survivability rates for both the rainbow trout and the *Ceriodaphnia*. However, the first flush sample from Matanzas Creek produced a low survivability rate of 40% for rainbow trout. Interestingly, this same sample produced a 100% survivability rate for the *Ceriodaphnia*.

The SWMP's program elements aim to reduce pollutant loadings to the storm drain system to the maximum extent possible (MEP). Further improvements to the SWMP will continue to be implemented as what constitutes MEP evolves based on national, statewide and local experience. Program assessments will continue to mature as results of specific program elements are gathered and analyses are made.

During the 4th year of the 2nd permit term, the City of Santa Rosa met or exceeded all its stated goals. Based on the results of this annual evaluation, the City is in substantial conformance with the permit requirements.

WORK PLAN

During the permit renewal process the City developed a five year management plan designed to promote activities to control urban storm water pollution to the "maximum extent practicable". During the second permit term a significant change to permit requirements involved the addition of the Santa Rosa Area Standard Urban Storm Water Mitigation Plan.

The attached work plan summarizes activities of the associated departments with the approved management plan, identifies the responsible lead departments and presents the implementation schedule

Implementation of the SUSMP was the primary new focus of the second permit term

8.0 FISCAL ANALYSIS

Permit-related expenses are tracked throughout the fiscal year and budgeted each year through the City's budget process. The categories of expenses included in the City's Storm Water budget are described below.

- a) *Storm water public education*
- b) *Storm water quality testing*
- c) *Storm water maps, hydraulics and surveys*
- d) *Storm water system operations and maintenance*
- e) *Storm water discharge permit*
- f) *Storm water program administration*

Each Annual Report also includes a description of shared funding among the copermittees for lead agency coordination work.

In addition, each year the copermittees meet with the Regional Water Board staff to discuss the work plan for the upcoming fiscal year. A discussion of the fiscal resources proposed to implement the work plan is part of that meeting so that costs can be considered as part of the budget process. After the City Council adopts the budget for the upcoming year, storm water budget information is available to include in the next Annual Report. The City Council generally adopts the budget before July 1 of each fiscal year.

Measurable Goals:

- Continue to report on funding of lead agency work as part of each Annual Report.
- Each year include a discussion of fiscal resources in work plan meeting with the Regional Water Board staff.
- In each Annual Report, report on fiscal resources in the following categories:
 - a. storm water public education
 - b. storm water quality testing
 - c. storm water maps, hydraulics and surveys
 - d. storm water system operations and maintenance
 - e. storm water discharge permit
 - f. storm water program administration.
- In each Annual Report after implementation of SUSMP requirements on private development projects, report on fiscal resources in the categories established for tracking SUSMP related expenses.
- Include in each Annual Report in the fiscal resources section for past fiscal years a breakdown within each of the above categories for salaries, benefits, and professional and other outside services, and capital costs.

Include in each Annual Report in the Fiscal Analysis section for the upcoming fiscal year the total budgeted amount within each of the above categories.

Accomplishments:

The City of Santa Rosa, County of Sonoma and the Sonoma County Water Agency executed a cooperative agreement on December 16, 2003, which specifically identifies the roles and responsibilities of each copermittee for the activities identified in the permit. The cooperative agreement designates the City as lead agency and designates cost sharing for the lead agency work under the permit. Under the terms of the agreement the County and the Water Agency each pay the City one-third of the lead agency cost. City of Santa Rosa hired a consultant to

perform lead agency work. This work includes conducting copermittee coordination meetings and assisting in the preparation of the annual report. During the past year the cost share for each copermittee was \$14,490 for a total cost of \$43,470 including contract administration.

Historically, Santa Rosa has reported only the fiscal resources required for new activities associated with permit compliance listed in the categories “a” through “f” above. For the past three years, in order to document the costs associated with all storm water related activities and for consistency with other California MS4 programs, municipal expenditures for all storm water activities are included in the fiscal analysis.

Operation and maintenance activities that were being performed prior to issuance of the NPDES permit include street sweeping, storm water management for flood protection projects, maintenance activities and storm drain related customer service. Crews repair, clean storm drain inlets and lines, and clear creeks and ditches during and after storm events.

The City of Santa Rosa and Sonoma County Water Agency jointly fund the Creek Stewardship program. The Water Agency will continue to report on the program activities, however this year the expenditures associated with program have been included in the fiscal analysis. The Creek Stewardship Program’s goals are to:

- provide public outreach on storm water runoff and the benefits provided by creeks and offer ways that the public can help to protect water quality.
- support public participation in the care of creeks and the involvement of individual Creek Stewards who adopt a specific reach of creek.
- provide clean up and maintenance of City and Agency creeks.

Annual Report - Fiscal Analysis

Prepared by the City of Santa Rosa

July 20, 2007

Storm Water Program Element	Salaries		Benefits		Services & Supplies		Capital Costs		Total	
	Actual 2006-07	Budget 2007-08	Actual 2006-07	Budget 2007-08	Actual 2006-07	Budget 2007-08	Actual 2006-07	Budget 2007-08	Actual 2006-07	Budget 2007-08
Permit Compliance Programs										
Storm Water Public Education	31,293	41,000	9,837	15,687	41,082	67,200	0	0	\$82,212	\$123,887
Storm Water Quality Testing	6,349	10,000	2,497	3,826	17,129	32,600	0	0	\$25,975	\$46,426
Storm Water Maps, Hydraulics and Surveys	18,662	24,500	8,316	9,374	1,311	2,500	0	0	\$28,289	\$36,374
Storm Water Systems Operations and Maintenance	132,897	147,000	64,288	71,658	130,099	100,608	0	0	\$327,284	\$319,266
Storm Water Discharge Permit	151,525	160,000	64,478	61,218	71,284	123,372	0	0	\$287,287	\$344,590
Storm Water Program Administration	21,563	18,000	7,700	6,887	110,818	123,405	0	0	\$140,081	\$148,292
Subtotal	\$362,289	\$400,500	\$157,116	\$168,650	\$371,723	\$449,685	\$0	\$0	\$891,128	\$1,018,835
Non Permit Storm Water Activities										
Storm Water Management Flood Protection Projects	42,921	65,392	17,865	23,258	743	911	0	0	\$61,529	\$89,561
Street Cleaning	152,018	140,593	81,111	68,402	256,855	254,966	0	0	\$489,984	\$463,961
Storm Drain System Flood Protection Maintenance	166,705	175,925	84,200	84,432	89,385	80,289	0	0	\$340,290	\$340,646
Creek Stewardship	108,148	135,397	36,123	51,805	41,608	72,798	0	0	\$185,879	\$260,000
Subtotal	469,792	517,307	219,299	227,897	388,591	408,964	0	0	\$1,077,682	\$1,154,168
Storm Water Management Program Total	\$832,081	\$917,807	\$376,415	\$396,547	\$760,314	\$858,649	\$0	\$0	\$1,968,810	\$2,173,003
City of Santa Rosa Annual cost per household based on the 2000 Census									\$35.13	\$38.78
Annual cost per household based NPDES Stormwater Cost Survey, California State Water Resources Control Board, January 2005 ranged from \$18 to \$46										

Attachment III.1: “At a Glance” Storm Water Management Work Plan 2007-08
Protecting and Enhancing Water Quality by Reducing Storm Water Pollutants to the Maximum Extent Practicable
City of Santa Rosa

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
Program Management Goal: Facilitate communication and coordination between the copermittees, Regional Water Board and other appropriate entities. Ensure the SWMP elements are implemented on schedule and that all requirements of the Permit are met.			
Copermittees Monthly Coordination Meetings	Schedule and Conduct monthly meetings <i>Continue through Permit term</i>	Public Works	Ongoing
Annual Work Plan	Develop preliminary work plan for Regional Water Board staff <i>April Coordination Meeting, Annually</i> <i>Final work plan submitted with each Annual Report</i>	Public Works	Work Plan for 2008-2009 will be determined upon Term III permit issuance
Annual Report	Submit to Regional Water Board on time	Public Works	October 1, 2008
Coordination with Phase II Communities	Invite City and Town staff from Phase II communities within the permit boundary to monthly coordination meeting	Public Works	Ongoing
Legal Authority Goal: Effectively prohibit non storm water discharges into the storm drain system and receiving waters.			
Review existing codes and propose amendments as required	Continue to assess the effectiveness of the storm water ordinance. Revise as required	Public Works City Attorney	Ongoing
Private Construction Element Goal: Reduce construction site related pollutant, especially sediment, to MEP			
Grading Permit Issuance	Continue to implement current approval process. Submit list of active grading permits to Regional Water Board <i>in each Annual</i>	Community Development	Ongoing

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
	<i>Report.</i>		
Private Construction on Public Land	Continue to issue Encroachment Permits that require compliance with California Standard Specifications, Section 7-1.01G "Water Pollution" and the City Storm Water Ordinance	Public Works	Ongoing
Inspection of Construction and Vineyard Sites	Inspect sites with active grading permits every two weeks and after major storm events Submit list of site inspections performed for each grading permit to Regional Water Board <i>in each Annual Report.</i>	Community Development	Ongoing
Enforcement of Non-Compliant Sites	Follow existing protocol and document verbal and written enforcement notices- Submit list of sites requiring Third and Fourth Level enforcement actions to Regional Water Board <i>in each Annual Report</i>	Community Development	Ongoing
Reporting of Non-Compliant Sites	Notify Regional Water Board verbally within 24 hours and in writing of Third and Fourth Level enforcement actions. Submit list of sites requiring Third and Fourth Level enforcement actions to Regional Water Board <i>in each Annual Report</i>	Community Development	Ongoing
Training of Targeted Staff	Provide Erosion Prevention and Sediment Control training for new staff, and continue attending and participating in the Regional Water Board's annual Erosion and Sediment Control Workshop	Community Development for private development Public Works for	Ongoing

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
	Submit list of staff that attend and/or participate in training to Regional Water Board <i>in each Annual Report</i>	public improvements	
Industrial/Commercial Element Goal: Reduce the potential for pollutants to contact storm water to MEP			
Inventory of Facilities	Maintain data base of businesses within City that may be required to file NOI and comply with the terms of State General Industrial Permit. <i>Submit in each Annual Report</i>	Public Works	Ongoing
Food Facility Inspections	Inspections are performed for wastewater discharge compliance. There are no measurable goals associated with this activity for the municipal NPDES permit.	Utilities Environmental Compliance	Refer to Sonoma County's Storm Water Management Work Plan
Retail Gasoline Outlet and Automotive Service Facilities Inspections	Follow up inspections	Public Works	Follow up inspections were conducted in Year 4
Industrial/Commercial Enforcement	Follow enforcement protocol for industrial/commercial facilities without industrial waste permits Report on enforcement activities in each Annual Report. Submit findings to Regional Water Board	Public Works	Ongoing
Interagency Coordination for Industrial/Commercial Facilities Program	Continue to participate in SEQAC meetings	Utilities - Environmental Compliance Public Works	Ongoing
Training of Targeted Staff	A description of the training provided and a list of participants will be included in each	Public Works	Ongoing

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
	Annual Report.		
Municipal Operations Element Goal: Reduce or prevent pollution in storm water runoff from all municipal land use areas, facilities and activities			
Public Construction Activities Management			
Compliance with State General Construction Permit	The City, or contracted consultant on behalf of the City, files a NOI for applicable projects and comply with terms of the State General Permit. Each Annual Report to the Regional Water Board includes a list of the projects that have complied with the terms of the State General Permit	Public Works Recreation and Parks Administrative Services Utilities	Ongoing
Inspection	Perform each working day on active projects	Public Works, Utilities, Administrative Services, and Recreation and Parks	Ongoing
Enforcement	Continue to implement progressive enforcement procedures. <i>Continue through 2nd permit term</i>	Public Works Recreation and Parks Administrative Services Utilities	Ongoing
Training of Targeted Staff	Continue to discuss storm water quality requirements during pre-construction conference for public improvement projects. <i>Provide Annually</i>	Public Works Utilities	Ongoing
Landscape and Recreational Facilities Management			
Pesticide management	Continue to keep pesticide use below the levels used prior to the implementation of the Integrated Pest Management Program	Recreation and Parks	Ongoing
Fertilizer management	Implement the Fertilizer Management Plan and training program	Recreation and Parks	Ongoing
Disposal of landscape waste	Continue to grind and reuse waste materials as compost and mulch	Recreation and Parks	Ongoing

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
Recreational water bodies	Continue to implement existing activities.	Recreation and Parks	Ongoing
Swimming pool discharge	Continue to implement existing activities	Recreation and Parks	Ongoing
Storm Drain System Operation and Management			
Source Identification-Drainage system mapping	Existing storm drain system complete. Continuously update	Public Works	Ongoing
Clean and inspect storm drain pipe and inlet structures	Continue to clean and inspect 130,000 feet of storm drain pipe and 1200 structures <i>Annually</i>	Public Works	Ongoing
Flood control channel or road side ditch inspection and maintenance	Continue to inspect and remove debris for flood control purposes <i>Annually</i>	Public Works	Ongoing
Storm drain labeling	Label curb opening inlets within the City ROW and replace worn or missing labels as required.	Public Works	Ongoing
Streets and Roads Maintenance			
Street sweeping frequency	Priority A <i>three times per week.</i> Priority B <i>twice a week</i> Priority C <i>once a week</i> Priority D <i>monthly</i>	Public Works	Ongoing
Material management	Continue to properly recycle or dispose of materials.	Public Works	Ongoing
Training of targeted staff	Continue to provide training annually	Public Works	

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
			Ongoing
Parking Facilities Management			
Sweeping	Continue to sweep City Transit and Parking sites (5 garages and 8 lots) <i>weekly</i> , pressure wash such garages <i>annually</i> . (* Due to parking lot closures associated with Hwy 101 construction, the number of parking lots to be swept has decreased from 9 to 8.)	Transit and Parking	Ongoing
Spill clean up	Respond immediately to priority reports/ within one business day for non urgent small spills	Transit and Parking	Ongoing
Emergency Procedures			
Emergency Operations Plan	Continue to implement the Emergency Operations Plan.	Police and Fire Department	Ongoing
Illicit Discharge Detection and Elimination Element Goal: Detect and minimize illegal non storm water discharges			
Spill Response	Continue existing illicit discharge detection and elimination activities.	Public Works	Ongoing
Private sanitary septic systems	Follow up on reported problems until resolved	Public Works	Ongoing
Enforcement Procedures	Follow written enforcement procedures-update as needed	Public Works	Ongoing
Record Keeping and Documentation	Continue to update database as complaint response and inspections are completed Document illicit discharge detection and elimination activities and summarize in each Annual Report.	Public Works	Ongoing

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
Illicit Connections	Document field inspection results from storm drain cleaning crew	Public Works	Ongoing
Disposal of used oil and toxic materials	Continue to utilize services provided by Integrated Waste Management	Refer to County SWMP	Ongoing
Training of targeted staff	Training provided annually, documented, and summarized in each Annual Report.	Public Works	Ongoing
Public Education and Outreach Element Goal: Increase the community's knowledge of MS4 and the impacts of urban storm water run off, encourage behavioral changes thereby reducing pollutant release to the MS4			
General Public/Residents			
Storm drain inlet decal program	Continue to provide decal kits to volunteer groups	Public Works	Ongoing
Ecology/Environmental column in local newspaper	The copermittees made first contact with the Press Democrat within 18 months of permit implementation and with Sonoma West within 24 months of permit implementation. Although the Press Democrat is not able to accommodate an "Ecology Column" at this time, the copermittees, in coordination with the RRWA, have established a monthly "Environmental Column" with several local newspapers. Articles are planned to be published on a monthly basis.	Public Works	Ongoing – Articles to be published on a monthly basis as coordinated by the Russian River Watershed Association.
Web site	Maintain web site. Continue to update street sweeping schedule	Public Works	Ongoing
Pet waste signs	10 signs will be posted at major access points to the Santa Rosa Creek Trail, subject to approval by the Water Agency and City's Waterways Advisory Committee. 155 "Clean Up After Your Pet" signs have been installed at creek access points. The	Public Works	Anticipate installation of Santa Rosa Creek Trail signs prior to the end of this permit term. Replacement of pet waste signs

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
	signs will continue to be maintained.		as required
Public Events	Continue to pursue opportunities to participate in general outreach events. Report in each Annual Report	Public Works	Ongoing
Hazardous Waste Disposal	N/A	County Waste Management Agency	Ongoing
Illicit discharge	Material distribution numbers will be reported each year in Annual Report. The City reached a partnership agreement with the "Don't Trash California" program sponsored by Caltrans.	Public Works	Ongoing
Industrial/Commercial	Continue to distribute prepared materials to the following industries: Automotive, Food facilities, Cleaning, Building and Construction as requested.	Public Works Utilities-Environmental Compliance	Ongoing
Landscape and Agriculture Industries	Continue to sponsor the Master Gardeners.	Public Works	Ongoing
Building and Construction	Refer to SUSMP for measurable goals.	Community Development	SUSMP Design Guidelines Implemented on June 27, 2005.
School Education			
High School Aquatic Macro-invertebrate Bioassessment Program	Continue to solicit program participation from the 6 public high schools <i>Annually</i>	Public Works	Ongoing
Spring Lake Environmental Discovery Center	Continue to sponsor and participate in storm water related displays. <i>Annually</i>	Public Works	Ongoing

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
Effectiveness Evaluation			
Formal Evaluation	Evaluations will be included in each Annual Report.	Public Works	October 1, 2008
Monitoring Program	Evaluations will be included in each Annual Report.	Public Works	Ongoing
Fiscal Analysis			
Financial Analysis of Program Activities	Include in Annual Report	Public Works	October 1, 2008
Monitoring Plan Goal: Assess the receiving water quality to direct resources toward local pollutants of concern			
Chemical Monitoring	Continue discharge characterization for pollutants of concern at two outfalls	Public Works	2007/08 rainy season.
Bioassay	Continue acute toxicity test with <i>Ceriodaphnia dubia</i> in addition to rainbow trout bioassay samples. Collect for the first flush and one representative storm at eight sites within the permit boundary. Data will be reported in annual reports.	Public Works	October 1, 2008
Aquatic Macro-invertebrate	Samples will be collected for the first flush and one representative storm at six sites within the permit boundary and analyzed to Level 3. Data/analysis will be reported in the Annual Report or other approved	Public Works	Construction of this work will be determined upon issuance of Term III permit.

Proposed Storm Water Management Plan	Year 5 Measurable Goals and Implementation Schedule		
	Measurable Goals	Lead Department	Schedule
	supplemental reports. Results of any local high school sampling will be reported in Annual Report or other approved supplemental reports.		
Special Study	Additional work supplemented the Colgan Creek Special Study in Year 3 ^r . Work included conducting rainbow trout bioassays at 5 locations close to specific storm drain outfall locations on Colgan Creek for at least two storm events. Additional details can be found in Part V, Section 5, New Activity. Outreach to Colgan Creek residents will occur in Year 5. Report in Annual Report	Public Works	Completed
SUSMP Goals: Minimize storm water pollution, limit storm water peak flows, and conserve natural areas to MEP from new and redevelopment			
Waiver	Waiver granted with Regional Water Board approval. Place fees in project fund	Community Development	In Progress
Develop/Modify City design standards for conformance with SUSMP requirements	Complete on schedule within 27 months of Program implementation	Community Development	In Progress
Implement SUSMP measures on City / County capital improvement projects	Design applicable projects with SUSMP measures <i>Upon Permit Adoption</i>	Public Works	Ongoing
Encourage applicants to implement SUSMP measures on projects	Require storm drain labeling on all projects <i>Upon Permit Adoption</i>	Community Development	Ongoing
Implement SUSMP measures on applicable projects within Urban Growth Boundary within Permit Boundary	Condition, plan check and inspect projects to meet SUSMP requirements <i>within 24 months of Program implementation</i>	Community Development	SUSMP required on all applicable projects deemed complete after June 27, 2005. Ongoing

PART IV

SONOMA COUNTY WATER AGENCY

**Permit Term 2
Annual Report 4**

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SONOMA COUNTY WATER AGENCY ANNUAL REPORT

0 UPDATE/REVISIONS TO ANNUAL REPORT

The “Existing Program” portion of each measurable goal has been removed to reduce paper usage. The “Existing Program” descriptions are available upon request.

The Sonoma County Water Agency continued with its current storm water program. One new activity was initiated during June 2006 through June 2007. For school year 2006-2007, the Water Agency’s education program added a new assembly program, originally targeted to middle schools, and subsequently opened to several elementary schools in the storm water service area. During the 2006-2007 school year, ZunZun performed 21 shows reaching 4591 students. Evaluations were given to the teachers at the school sites to return to the water agency and the results were very positive, with 100% of the respondents saying they would like to see this or a similar program offered in the future.

Measurable Goals not completed in this permit term: Section 6.1.3. Measurable Goal Section 6.1.3 refers to the Water Agency adding information on the Creek Stewardship Program to its website. This goal was to be completed in permit term 3. Action is under way to have it included in the Water Agency’s website in 2006.

The Water Agency’s At-a-Glance Storm Water Work Plan for the upcoming year can be seen in **Attachment IV.1**. New activities scheduled for next year includes a husband and wife team (Zunzun) performing storm water activities to teach storm water issues/problems to kids.

1 LEGAL AUTHORITY

The goal of this element is to identify the Sonoma County Water Agency's (Water Agency) legal authority to effectively prohibit non-storm water discharges into the Water Agency's flood control channels.

The following subsections itemize the Water Agency's legal authority to enforce each of the remaining nine programs of the Storm water Management Plan (SWMP). Details of each program element can be found under each respective section.

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 formed eight geographic flood control zones, each encompassing a major watershed. The core permit area encompasses the boundary of Zone 1A, which incorporates the Mark West Creek Watershed. The cities of Santa Rosa, Rohnert Park, Cotati and Sebastopol and the Town of Windsor all lay within Zone 1A. The urban boundary area surrounding the City of Healdsburg lies within the boundaries of Zones 4A and 6A. The urban boundary of Graton and a portion of the urban boundary of Sebastopol are located in Zone 5A. Flood control facilities within Zone 1A were constructed as the Central Sonoma Watershed Project by the Water Agency in cooperation with the U.S. Department of Agriculture, Soil Conservation Service with the purpose of protecting the Santa Rosa urban area from flooding. The construction of floodwater retarding structures and the straightening, shaping and stabilization of waterways began in 1958 and continued over the ensuing 25 years.

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 operates and maintains a water transmission system, which provides water to eight cities and water districts, (the Cities of Santa Rosa, Rohnert Park, Sonoma, Cotati and Petaluma and the North Marin, Forestville and Valley of the Moon Water Districts, 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 four 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 XIID, California Constitution (Proposition 218).)

The Water Agency is a copermittee, since it owns portions of the municipal storm sewer system (MS4) in the permit boundary. The Water Agency's management plan incorporates appropriate activities and best management practices (BMP's) for activities related to its 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 Water Agency's SWMP.

1.1 Program Management

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

No new activities are proposed.

Accomplishments:

None

1.2 Private Construction

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

The Water Agency will continue with its existing program. No new activities are proposed.

Accomplishments:

None

1.3 Industrial/Commercial

Measurable Goals:

None

New Activities:

No additional activities are proposed.

Accomplishments:

None

1.4 Municipal Operations

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

No additional activities are proposed.

Accomplishments:

None

1.5 Illicit Discharge Detection and Elimination

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element. Continue to rely on the City's, County's and other regulatory agency's legal authority, as applicable.

New Activities:

No new activities are proposed.

Accomplishments:

None

1.6 Public Education and Outreach

Existing Program:

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 Agreement for Water Supply. Therefore, the public outreach materials must be related to the Eleventh Amended water supply purpose.

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.

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

No new activities are proposed.

Accomplishments:

None

1.7 Effectiveness Evaluation

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

No new activities are proposed

Accomplishments:

None

1.8 Fiscal Analysis

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

The Water Agency is not proposing any new legal authority as it relates to the Fiscal Analysis part of the SWMP.

Accomplishments:

None

1.9 Monitoring Plan

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

The Water Agency's chemical monitoring proposed in this plan does not require additional legal authority. No new activities are proposed.

Accomplishments:

None

1.10 Standard Urban Storm Water Mitigation Plan

Existing Program:

The Standard Urban Storm Water Mitigation Plan (SUSMP) is a new program developed by the copermittees.

Measurable Goals:

Use the Water Agency's existing legal authority as it relates to this program element.

New Activities:

No new legal authority is needed to incorporate SUSMP measures in projects on Water Agency property.

Although the Water Agency performs drainage review for the City and may perform SUSMP review for private construction projects on behalf of the City, the legal authority to enforce SUSMP measures (as well as drainage improvement measures) will remain with the City or County.

Accomplishments:

None

2 PRIVATE CONSTRUCTION

The goal of this program element is to reduce construction site related pollutants, especially sediment, to the maximum extent practicable (MEP).

2.1 Grading Permit Issuance

Measurable Goals:

Review all projects referred to the Water Agency by the cities, and work with the cities and project engineers.

New Activities:

The Water Agency will continue with its existing program so long as the contracts with the cities remain in effect.

Accomplishments:

None

2.2 Vineyard Planting/Replanting Compliance

New Activities:

Not Applicable.

Measurable Goals:

Not Applicable.

Accomplishments:

None

2.3 Private Construction on Public Land

Measurable Goals:

Incorporate appropriate BMP measures as part of the provisions contained in Revocable Licenses.

New Activities:

The Water Agency will continue with its existing Revocable License program.

Accomplishments:

In the 2006-2007 reporting year, the Water Agency issued approximately forty-five Revocable Licenses for projects near flood control channels within the permit boundary.

2.4 Inspection of Construction and Vineyard Sites

Measurable Goals:

Perform at least one inspection on each construction project requiring a Revocable License.

New Activities:

The Water Agency will continue with its existing program.

Accomplishments:

All active construction sites are inspected before, during, and after construction. Construction sites with problems are inspected several more times during construction if needed. All active construction projects subject to a Revocable License were inspected at least once, in compliance with the SWMP.

2.5 Enforcement of Construction Sites**Measurable Goals:**

Use the Water Agency's existing program and the enforcement authority of regulatory agencies to ensure projects comply with the conditions stated in the Water Agency issued Revocable License. No enforcement actions were taken during the 2006-2007 reporting period.

New Activities:

The Water Agency will continue with its existing program.

Accomplishments:

None

2.6 Reporting of Non-Compliant Sites**Measurable Goals:**

Notify the Regional Water Board within 48 hours of situations where the Water Agency is aware of a non-filer status. The Water Agency was not aware of non-filers during the 2006-2007 reporting period.

New Activities:

The Water Agency will continue with its existing program

Accomplishments:

None

2.7 Education of Targeted Staff**Measurable Goals:**

Continue to provide training to the appropriate personnel on the components of the SWMP and the NPDES storm water permit.

New Activities:

The Water Agency has an in-house expert that is used to train other Water Agency personnel on appropriate BMP implementation. The Water Agency provides the appropriate personnel information on the applicable requirements of the SWMP and the newly adopted NPDES storm water permit.

Accomplishments:

Two meetings were held for specific Water Agency staff in January and March 2007 on current issues regarding the SWMP.

3 INDUSTRIAL/COMMERCIAL

The City and County, rather than the Water Agency, are authorized by California planning and zoning law to regulate land use. Thus, this section is not applicable to the Water Agency.

4 MUNICIPAL OPERATIONS

The goal of this section is to reduce or prevent pollution in storm water runoff from all municipal land use areas, facilities and activities.

In this element, municipal operations are divided into six major categories, each with its own BMP's.

4.1 Public Construction Activities Management**4.1.1 Contract Documents****Measurable Goals:**

Continue to Review Special Provisions and General Specifications for existing BMP's to determine if they are adequate. If changes are needed, make modifications and report on these changes in Annual Report No.3.

New Activities:

The Water Agency will review and modify, as needed, its Special Provisions and General Specifications to ensure that BMP's are incorporated into flood control projects.

Accomplishments:

None

4.1.2 Compliance with State General Construction Permit**Measurable Goals:**

File NOI for applicable flood control projects, as required. No Water Agency construction projects larger than one acre were undertaken during the 2006-2007 reporting period.

New Activities:

No new activities are proposed.

Accomplishments:

None

4.1.3 Inspection

Measurable Goals:

Each Water Agency construction site that is active during the wet season will be inspected by Water Agency personnel to ensure erosion control measures are in place. Sites that have a higher potential for sediment discharge will be inspected more frequently.

New Activities:

The Water Agency will continue with its existing program. In addition, the Water Agency has in-house expertise on erosion control. This expert is available to provide additional inspection of key construction sites.

Accomplishments:

Water Agency inspected all active sites during 2006-2007.

4.1.4 Enforcement

Measurable Goals:

Use the enforcement mechanisms available to the Water Agency for public construction projects

New Activities:

No new activities are proposed.

Accomplishments:

No enforcements actions were taken during the 2006-2007 reporting period.

4.1.5 Education of Targeted Staff

Measurable Goals:

Maintain CPESC or CPESC-in-training on staff, beginning six months after permit implementation.

New Activities:

The Water Agency has a Certified Professionals in Erosion and Sediment Control (CPESC). The CPESC is available for consultation on the compilation of erosion control plans, design of construction BMP's, and inspection of construction projects.

Accomplishments:

Water Agency is in the processes of having two CPESC or CPESC-in-training on staff by the end of 2007.

4.2 Landscape and Recreational Facilities

Please note, County Parks and Recreation Department manages the Water Agency's Spring Lake Park recreational facility. Please see Section II.4 of the County's SWMP for a description of Recreational Facilities Management, as it relates to Spring Lake Park.

4.2.1 Pesticide Management

Measurable Goals:

Continue with low-impact pesticide management.

New Activities:

The Water Agency will continue with its existing program.

Accomplishments:

The Water Agency continues to use low-impact pesticide management.

4.2.2 Fertilizer Management**Measurable Goals:**

Offset the need for fertilizers by utilizing recycled water at the Water Agency's West College Facility.

New Activities:

The Water Agency has no plans to use fertilizers at its West College Facility.

Accomplishments:

The Water Agency continues to use and supports the use of recycled water for irrigation.

4.2.3 Native Vegetation**Measurable Goals:**

Incorporate retention and planting of native vegetation in design projects and maintenance activities on flood control facilities.

New Activities:

A key element of the Water Agency's watershed stewardship program (See Public Education and Outreach, Section IV-6) includes procedures to identify and eradicate non-native vegetation in Water Agency channels and replace them with native vegetation.

Because the landscaping at the Water Agency's West College facility was required by the City as part of the permitting process for the recycled water use, no changes to the landscaping are proposed at this facility.

Accomplishments:

None

4.2.4 Proper Disposal of Landscape Waste**Measurable Goals:**

Continue to use landscape waste as mulch on flood control channels.

New Activities:

No changes to the existing program or new activities are proposed.

Accomplishments:

Water Agency applied approximately 20 tons of landscape waste on flood control channels.

4.2.5 Minimize Pollutants from Entering Copermitttee-Owned Recreational Water Bodies**Measurable Goals:**

Continue to limit equipment and material storage in Water Agency's right-of-way.

New Activities:

The Water Agency will be installing pet waste signs at major access points to flood control channels as part of a public education effort. In addition, public participation though the Creek Stewardship Program will also be used to minimize pollutants from entering recreational water bodies. For more details on these items, see Section IV-6.1.

Accomplishments:

Continue to limit equipment and material storage in Water Agency's right-of-way.

4.2.6 Manage Swimming Pool Discharge**Measurable Goals:**

Not applicable

New Activities:

Not applicable

Accomplishments:

Not applicable

4.3 Storm System Operation and Management**4.3.1 Source Identification – Drainage System Mapping****Measurable Goals:**

Review existing mapping by the end of permit year three. Modify maps, as needed by the end of permit year five.

New Activities:

No new activity

Accomplishments:

The Water Agency updated its facility guide in April 2007. Information regarding flood control channels was updated.

4.3.2 Clean and inspect storm drain pipe and inlet structures

Measurable Goals:

See section on flood control channel maintenance below.

New Activities:

No new activities are proposed.

Accomplishments:

None

4.3.3 Flood Control Channel or Road Side Ditch Inspection and Maintenance**Measurable Goals:**

Continue to provide trash cleanup in Water Agency channels and coordinate work with the local law enforcement to reduce illegal activity within Water Agency flood control channels when possible.

New Activities:

The Water Agency plans to continue focusing its efforts on the more problematic areas first.

Accomplishments:

The Water Agency also continues to remove loose garbage from flood control channels, as stated in the SWMP. During the 2006-2007 reporting period, Water Agency and SAC crews removed approximately 130 tons of garbage from flood control channels within the permit boundary, including yard debris, a sofa, tires, shopping carts, and other debris.

4.3.4 Storm Drain Labeling**Measurable Goals:**

Apply stenciling in West College Avenue parking lots. Check annually to ensure legibility. Storm drain labels will be installed at the new Water Agency building in the Airport Business Park within one year of occupancy.

New Activities:

The Water Agency has applied and maintains labels to its storm drain inlets in the parking areas at its West College Facility. Streets and Roads Maintenance

Accomplishments:

The storm drain labels at the West College Facility parking lot was check to ensure legibility. Several of the storm drain labels have faded or come unglued. These labels will be replaced in 2007-2008.

4.4 Streets and Roads Maintenance**4.4.1 Street Sweeping Frequency**

Measurable Goals:

Maintain gravel layer on roads. Continue to require resurfacing of roads in Revocable Licenses. Continue to limit vehicular access to Water Agency roads, where appropriate.

New Activities:

None

Accomplishments:

None

4.4.2 Material Management**Measurable Goals:**

Continue to limit equipment and material storage in Water Agency's right-of-way. Dispose of trash removed from Water Agency channels at a landfill.

New Activities:

The Water Agency will continue with its existing program. No new activities are proposed.

Accomplishments:

Water Agency crews removed approximately 130 tons of loose garbage and yard debris from channels within the permit boundary.

4.4.3 Standardized BMP Training**Measurable Goals:**

Provide informal road maintenance BMP training on an as-needed basis.

New Activities:

No new activities

Accomplishments:

None

4.5 Parking Facilities Management**4.5.1 Sweeping****Measurable Goals:**

Continue to provide refuse receptacles. Sweep at least once between August 15 and October 15 each year.

New Activities:

Sweep Water Agency's employee and visitor parking lots to remove accumulated sediment and other pollutants.

Accomplishments:

The West College Facility parking lots were swept in June and July 2007.

4.5.2 Spill Clean-Up

Measurable Goals:

Respond to parking lot spills in a timely manner.

New Activities:

The Water Agency will continue with its existing program. No new activities are proposed.

Accomplishments:

None

4.6 Emergency Procedures

Measurable Goal:

Review Emergency Operations Plan by the end of permit year four.

New Activities:

Review Emergency Operations Plan to ensure it is up to date, and propose and adopt changes, as needed.

Accomplishments:

The Water Agency Emergency Operations Plan was updated in 2006.

5 ILLICIT DISCHARGE DETECTION AND ELIMINATION

The goal of the illicit discharge element is to detect and eliminate non-storm water discharges (except those that are exempt or conditionally exempt) from entering the storm drain system.

5.1 Spill Response Procedures

Measurable Goals:

Continue to implement spill response procedure as outlined above.

New Activities:

No new activities are proposed.

Accomplishments:

Continue to implement spill response procedure.

5.2 Private Sanitary Septic Systems

Measurable Goals:

Respond to septic discharges to Water Agency channels as noted in the Water Agency's emergency response procedures. Notify appropriate land use agency of septic problems discovered by the Water Agency and not immediately corrected by a property owner.

New Activities:

The Water Agency plans to continue with its existing program. No new activities are proposed.

Accomplishments:

No septic discharges were reported in 2006/2007.

5.3 Enforcement Procedures

Measurable Goals:

Work with the responsible party to correct the situation, or notify the City, County or other regulatory agency with enforcement authority to take action.

New Activities:

The Water Agency plans to continue with its existing program. No new activities are proposed.

Accomplishments:

None

5.4 Record Keeping and Documentation

Measurable Goals:

Continue tracking reported spills. List reported spills in each annual report.

New Activities:

No new activities are proposed

Accomplishments:

None

5.5 Illicit Connection Investigation

Measurable Goals:

Investigate the sources of illicit discharges within the Water Agency's flood control channels. Notify the appropriate municipality for discharges originating outside of Water Agency flood control channels.

New Activities:

No new activities are proposed.

Accomplishments:

None

5.6 Disposal of Used Oil and Toxic Materials

Measurable Goals:

Rely on existing programs provided by the City, County and other agencies. Provide developed outreach materials to individuals when education for proper disposal practices is appropriate.

New Activities:

No new activities are proposed.

Accomplishments:

None

5.7 Training of Targeted Staff

Measurable Goals:

None

New Activities:

No new activities are proposed

Accomplishments:

None

6 PUBLIC EDUCATION AND OUTREACH

The goal of the public education and outreach element is to: (1) increase the community's knowledge of storm water systems and the impacts of storm water runoff, (2) to encourage behavioral changes thereby reducing pollutants released to the storm water system, and (3) to encourage public participation in storm water issues.

The public outreach program is a coordinated effort among the three copermittees, with each utilizing their existing community outreach and education programs for maximum effect.

6.1 General Public/Residents

6.1.1 Storm Drain Labeling Volunteer Program

Measurable Goals:

Key Water Agency staff, including staff at front counters and staff in the water education, Revocable License, storm water, and fisheries sections will be provided contact numbers for existing storm drain labeling programs by the end of permit year one. If a labeling program is not available, the Water Agency will loan out its storm drain stencil. The Water Agency will evaluate the effectiveness of incorporating storm drain labeling in its Creek Stewardship Program by the end of permit year two. The findings of this evaluation will be presented in the subsequent annual report.

New Activities:

No new activities are proposed.

Accomplishments:

None

6.1.2 Ecology/Environmental Column in Local Newspapers**Measurable Goals:**

The copermittees propose to include a regular column covering ecology and environmental issues in the *Press Democrat*, *The West County Gazette*, *Ukiah Daily Journal*, *The Russian River Times*, and *The Sonoma West Times* (includes *Healdsburg Tribune* and *Windsor Times*) have started, or will shortly begin to run environmental/ecology articles.

New Activities:

No new activities are proposed

Accomplishments:

RRWA has submitted ecology articles, and the articles have been printed in the following newspapers: *The West County Gazette*, *Ukiah Daily Journal*, *the Russian River Times*, and *the Sonoma West Times* (includes *Healdsburg Tribune* and *Windsor Times*) for the past year and a half. However, due to union concerns, the *Press Democrat* has not agreed to run a column on ecology and environmental issues.

6.1.3 Web Site

The Water Agency's Web site provides basic information about the Water Agency and water conservation tips.

Measurable Goals:

Add information regarding the Creek Stewardship Program to the Water Agency's website by the end of permit year three.

New Activities:

No new activities are proposed.

Accomplishments:

None

6.1.4 Creek Stewardship**Existing Program:**

The Adopt-a-Creek elements of the storm water permit are implemented through the Agency and City's Creek Stewardship Program. The Program's goals are to support:

1. Public outreach on storm water runoff, the benefits provided by creeks, and ways the public can protect water quality.

2. Public participation in the care of creeks and the involvement of individual Creek Stewards who adopt a specific reach of creek.
3. Clean up, enhancement, and maintenance of City and Agency creeks.

A full time Program Coordinator (employed by the City with half of the funding and supervision provided by the Agency) assists the public and facilitates cooperation between copermittees, the public, and other responsible agencies on issues regarding public safety, creekside trail improvements, and the protection of water quality and wildlife habitat.

New Activities:

The Creek Stewardship Program continued to organize outreach activities such as creek walks, educational presentations, community creek events, creek restoration projects, and volunteer creek clean ups. The program provides gloves, garbage bags, and trash removal to support volunteer creek clean ups. Informational signs regarding watershed protection and creek cleanup activities will be placed at several locations in the permit boundary.

Measurable Goals:

To implement this program, the Water Agency worked with the City to develop the program and signs within permit year one. During the second and subsequent years, the Water Agency will coordinate four outreach/training sessions related to this program per year. Starting in permit year three, the Water Agency will try to obtain coverage under this program for one creek per year.

Accomplishments:

The program encourages individuals, neighbors and businesses to become Creek Stewards and adopt a specific reach of creek. Creek Stewards learn about their particular reach of creek and serve as additional “eyes, ears, and ideas” to identify potential problems and situations detrimental to creeks and water quality. Creek Stewards can either take action to remedy situations themselves or, in more complicated instances, report to the Program Coordinator who initiates an appropriate response. Creek Stewards’ familiarity with their adopted creek allows Agency and City staff to respond to reports of a known set of circumstances at an exact location.

Over 150 Creek Stewards have adopted reaches on the following fifteen creeks within the permit boundary:

Arroyo Sierra Creek	Forestview Creek	Roseland Creek
Austin Creek	Matanzas Creek	Santa Rosa Creek
Brush Creek	Paulin Creek	Spirit Creek
Colgan Creek	Piner Creek	Spring Creek
Ducker Creek	Poppy Creek	Steele Creek

Creek Stewards are provided with the *A Guide to Restoring Native Riparian Habitat in the Russian River Watershed*, the *Creek Steward Handbook* that includes information specific to their reach of creek, maps, and periodic updates from the Program Coordinator.

Creek Stewardship Program outreach activities consisted of creek walks, educational presentations, community creek events, creek restoration projects, and volunteer creek clean ups. Outreach activities were often in conjunction with schools, churches, non-profit organizations, and community groups involved with the protection and enhancement of creeks.

During the Permit Year, the Creek Stewardship Program used 87 partnerships with agencies, businesses, community groups, and schools to sponsor or support:

- 25 school groups with creek related educational and stewardship activities
- 18 creek walks
- 21 community events and educational presentations on storm water runoff and creeks
- 17 creek restoration and monitoring projects
- 33 volunteer creek clean ups that collected 136 cubic yards of trash and debris

The Creek Stewardship Program formed partnerships for creek activities with the 62 organizations shown in Table VI.1 and the 25 school and educational programs shown in Table VI.2.

**Table VI.1
Creek Stewardship – Community Partnerships**

Agilent	Latter Day Saint Missionaries
Arroyo Sierra Creek Neighborhood	Madrone Audubon Society
Beck Law Offices	National Oceanic & Atmospheric Administration Fisheries
Bennett Valley Vision	North Junior College Neighborhood Assoc.
Burbank Gardens Neighborhood Assoc.	Pastors' Prayer Fellowship
California Native Plant Society	Rebuilding Together Santa Rosa
Church of Religious Science	Redwood Empire Food Bank
City Bicycle and Pedestrian Advisory Committee	Roseland Creek Community Clean Up
City Summer Day Camps	Ross Recreational Equipment
City Waterways Advisory Committee	Russian River Watershed Association
Coastal Commission Coast and Creek Cleanup Day	Russian River Watershed Council
Coastal Conservancy	Salmonid Restoration Federation
Coastwalk	Santa Rosa Cycling Club
Community Clean Water institute	Senior Center
Community Market	Sierra Club Redwood Chapter
Cub Scouts	SMART
Day of Caring 2006	Social Advocates for Youth
Dynamy Santa Rosa	Sonoma County Agricultural Preservation & Open Space District
Empire Runners	Sonoma County Bicycle Coalition
Forests Unlimited	Sonoma County Horse Council
Friends of Austin and Ducker Creeks	Sonoma County Regional Parks
Friends House	Sonoma County Trails Council

Friends of Paulin Creek	Sonoma County Volunteer Center
Girl Scouts of America	Sonoma State University Project JUMP
Graffiti Abatement Program	Sonoma SERVEs
Hands Across the County	Sotoyome Resource Conservation District
Historic Railroad Square Association	Spring Clean 2007
Junior College Neighborhood Association	Trout Unlimited
Laguna de Santa Rosa Foundation	West End Neighborhood Association
LandPaths	Youth Volunteer Corps
Sunrise Rotary Club	YMCA Walking Program

During the first half of the Permit Year, a part-time Environmental Educator hired by the City developed creek education curricula and activities for youth. In June, a series of these activities were provided at three of the City's Summer Recreation Playground sites and at six sites serving the Summer Lunch Program.

Table VI.2
Creek Stewardship - School/Youth Education Partnerships

Abraxis School	Summer Day Camps
Brook Hill Elementary School	Summer Lunch Program
Chops Teen Center	Summer Playground Recreation Program
Elsie Allen High School - Interact Club	Roseland School and Cool School
Healthy Eating Active Living	Samurai Sprouts
Hidden Valley Elementary School	Santa Rosa Charter School
High School Aquatic Macroinvertebrate Bioassessment Program	Sonoma Academy
Kawana Elementary School	Steele Lane Elementary School
LandPaths (In Our Own Backyard Program)	Strawberry Elementary School
Lincoln Elementary School	STRAW - Bay Institute
Maria Carrillo High School EcoClub	Watershed Educators
Maria Carrillo Track & Cross Country teams	Willowside Middle School
Montgomery High School	

The Program sponsored or supported the 18 creek walks shown in Table VI.3

**Table VI.3
Creek Stewardship Creek Walks**

Date	Group/Walk	Location
7/22/2006	Friends of Austin and Ducker Creeks and Friends House	Austin/Ducker Creeks @ Middle Rincon Road
7/29/2006	Creek Stewardship, Plant Walk	Santa Rosa Creek @ Farmers Lane
10/6/2006	West End Neighborhood	Santa Rosa Creek x Pierson St.
10/11/2006	Friends House	Flat Rock
10/25/2006	Samurai Sprouts	Santa Rosa Creek @ Yulupa Ave.
11/1/2006	Sonoma Academy, Community Connections Program	Upper Colgan Creek
11/8/2006	Willowside Middle School	Santa Rosa Creek @ Willowside Rd.
12/10/2006	Sierra Club	Santa Rosa, Piner, & Peterson Creeks
2/3/2007	Creek Stewardship, Survival on Santa Rosa Creek	Santa Rosa Creek @ Yulupa Ave.
3/1/2007	Creek Stewardship, bird walk	Prince Memorial Greenway
3/7/2007	Samurai Sprouts	Piner Creek
3/8/2007	Salmonid Restoration Federation tour	Prince Memorial Greenway
3/24/2007	Creek Stewardship, Raccoon Highway	Brush Creek Restoration Area
5/5/2007	YMCA Walking Program	Santa Rosa Creek & Doyle Park
5/27/2007	Samurai Sprouts	Piner Creek
6/7/2007	Ins and Outs of Poppy Creek, LandPaths, JC Neighborhood, N JC Neighborhood	Poppy Creek
6/16/2007	LandPaths, Prince Greenway and Creek Exploration	Prince Memorial Greenway
6/20/2007	Sierra Club	Santa Rosa Creek @ Farmers Lane

The 21 educational presentations and community events are summarized in Table VI.4:

Table VI.4
Creek Stewardship Events and Educational Presentations

Date	Group/Event	Location/Topic
7/4/2006	Bicycle Santa Rosa Festival w/Sonoma County Bicycle Coalition	Julliard Park
7/12/2006	Rosie Trolley Creek Tour	Creeks of Santa Rosa
7/23/2006	Whitewater Rodeo	Prince Memorial Greenway
8/10/2006	Senior Center	Creek presentation
8/12/2006	Railroad Square Festival	Booth and creek walking tour
8/24/2006	Friends House	Creek presentation
9/6/2006	JUMP Fair @ Sonoma State Univ.	Job/Volunteer Fair
10/14/2006	Raccoon Highway at Brush Creek	Storm drains and creeks
10/25/2006	Maria Carrillo High School Eco Club	Creek presentation & project planning
11/7/2006	Willowside Middle School	Creek presentation and creek walk
11/21/2006	Landpaths and Coastal Conservancy	Interpretive sign @ Upper Colgan Ck
2/22/2007	Healthy Eating Active Living	Booth at community forum
3/1/2007	Abraxis School	Creek presentation
3/9/2007	Salmonid Restoration Federation Conference	Information booth
3/26/2007	Willowside Middle School	Enviroscape presentation
3/31/2007	State of the Laguna Conference	Information booth
4/19/2007	Willowside Middle School	Presentation to Sonoma County Fish and Wildlife Commission
4/21/2007	YMCA Healthy Kids Fair	Information booth
4/22/2007	Earth Day on the Greenway	Prince Memorial Greenway
6/2/2007	National Trails Day	Event in Julliard Park
6/16/2007	All City Fun Run	Brush Creek trail – run and info booth

Additionally, the Creek Stewardship program coordinated or supported 17 volunteer creek restoration or creek monitoring activities summarized in Table VI.5.

**Table VI.5
Creek Stewardship Restoration and Monitoring Activities**

Date	Event/Group	Location/Topic
8/25/2006	Agilent Creek Care Day	Prince Memorial Greenway
9/7/2006	Sonoma SERVEs, ivy removal	Doyle Park – Matanzas & Spring Creeks
10/7/2006	Bennett Valley Vision	Arroyo Sierra Creek
10/14/2006	Empire Runners, plant care	Brush Creek Restoration Area
11/4/2006	CA Native Plant Society	Flat Rock area of Santa Rosa Creek
11/13/2006	Maria Carrillo High School Eco Club tree planting	Ducker Creek
1/3/2007	Cub Scout tree planting	Poppy Creek
1/30/2007	LandPaths & Kawana School plant care	Upper Colgan Creek
2/20/2007	STRAW, Montgomery High School, Brookhill School, LandPaths,	Matanzas Creek in Doyle Park
3/3/2007	LandPaths, Rotary, & Kawana School creek path	Upper Colgan Creek
3/7/2007	Steele Lane Elementary School, LandPaths, & North Junior College Neighborhood Association	Poppy Creek in Steele Lane Park
3/22/2007	Lincoln Elementary & LandPaths	Upper Colgan Creek
4/21/2007	National Youth Service Day	Colgan Creek
4/21/2007	Empire Runners, plant care	Brush Creek Restoration Area
4/22/2007	Earth Day on the Greenway w/Community Market	Prince Memorial Greenway
4/28/2007	Rebuilding Together Santa Rosa	Prince Memorial Greenway
6/13/2007	Willowside School display board	Santa Rosa Creek

The Creek Stewardship Program helped to organize 33 volunteer creek clean ups shown in Table VI.6. Volunteers collected 145 cubic yards of trash from creeks within the permit boundary. Not reported is all of the trash collected by individuals who received clean up supplies from the Creek Stewardship Program for Community Service Projects or in conjunction with the City's volunteer graffiti abatement program.

**Table VI.6
Creek Stewardship Volunteer Creek Clean Ups**

Date	Event/Group	Location
8/25/2006	Agilent's Creek Care Day	Prince Memorial Greenway
9/7/2006	Sonoma SERVEs	Doyle Park - Spring and Matanzas Cks.
9/13/2006	Day of Caring	Paulin Creek
9/13/2006	Day of Caring	Prince Memorial Greenway
9/16/2006	Coast and Creek Clean Up	Doyle Park - Spring and Matanzas Cks.
10/3/2006	Dynamy Santa Rosa	Matanzas Creek x South E St.
10/7/2006	Bennett Valley Vision clean up day	Arroyo Sierra Creek
10/21/2006	Roseland Creek community clean up	Roseland Creek
11/1/2006	Sonoma Academy	Upper Colgan Creek
11/4/2006	CA Native Plant Society	Flat Rock area on Santa Rosa Creek
11/13/2006	Maria Carrillo High School Eco Club	Ducker Creek
11/14/2006	Santa Rosa Charter School	Paulin Creek
11/19/2006	Envirichment	Prince Memorial Greenway
12/10/2006	Envirichment	Piner Creek
1/3/2007	Cub Scouts	Poppy Creek
1/5/2007	NW Community Park neighborhood	Pomo Creek
2/21/2007	Latter Day Saint Missionaries	Prince Memorial Greenway
3/6/2007	Maria Carrillo High School	Brush Creek Restoration Area
3/7/2007	Samurai Sprouts	Piner Creek
3/21/2007	Roseland School and Cool School	Roseland Creek
3/24/2007	Willowside School	Santa Rosa Creek
3/24/2007	Girl Scouts	Countryside Creek
3/27/2007	Montgomery High School	Matanzas Creek
4/5/2007	Latter Day Saints Missionaries	Santa Rosa Creek @ Farmers Lane
4/21/2007	Girl Scouts	Santa Rosa Creek
4/21/2007	National Youth Service Day	Roseland and Colgan Creeks
4/21/2007	Empire Runners	Brush Creek Restoration Area
4/22/2007	Earth Day w/Community	Prince Memorial Greenway

	Market	
4/28/2007	Spring Clean 2007	Santa Rosa, Brush, Spring, Peterson, Piner, Forestview, and Paulin Creeks
4/28/2007	Rebuilding Together Santa Rosa	Prince Memorial Greenway
5/19/2007	Montgomery High School	Matanzas Creek
5/27/2007	Samurai Sprouts	Piner Creek
6/15/2007	Ross Recreational Equipment	Brush Creek

To coordinate response to reports from Creek Stewards and the public, the program has developed relationships with Sonoma County Sheriff's Department, Sonoma County Regional Parks, Sonoma County Agricultural Preservation and Open Space District, Caltrans, Agency crews, and staff of the City's Public Works, Police, and Recreation and Parks Departments. Reports that the Program Coordinator receives from the public or agencies on specific maintenance and clean up needs are typically investigated further and then directed to either the responsible party, the Creek Stewards, or the Agency's contracted Supervised Adult Crews (SAC), as deemed appropriate for resolution.

SAC crews cleaned up 377 cubic yards of trash and debris that had been deposited in or near creeks or entered creeks through the storm drain system. Working with the City Police and the County Sheriff, the SAC crews cleaned up 222 homeless encampments near creeks.

6.1.5 Pet Waste Signs

Measurable Goals:

Maintain Pet Waste signs at all public access points to Water Agency creeks.

New Activities:

Signs have been installed at all public access points and are repaired or replaced as needed. The Pet Waste Sign BMP will be coordinated with the Creek Stewardship Program and will be incorporated in public access areas of creek restoration projects. The Water Agency anticipates that during the second permit term, additional educational signs within City limits will be fairly elaborate, providing more storm water information.

Accomplishments:

15 damaged signs reminding creek trail users to "Clean up after Your Pet" were replaced along Water Agency creeks, in conjunction with the Creek Stewardship Program.

6.1.6 Public Events

Measurable Goals:

Participate in the Sonoma County Fair in permit years one through five. Provide outreach materials to those visiting the booth.

New Activities:

No new activities are proposed. The Water Agency may endorse, participate in or provide financial sponsorship of other events, assemblies and workshops, as it deems appropriate.

Accomplishments:

The Water Agency again staffed a booth at the Sonoma County Fair, promoting water conservation, recycled water, and pollution prevention. Many of the water conservation methods encouraged also serve to improve storm water quality.

6.1.7 Hazardous Waste Disposal**Measurable Goals:**

None

New Activities:

The Water Agency will continue to distribute appropriate outreach materials on a case-specific basis.

Accomplishments:

None

6.1.8 Illicit Discharges**Measurable Goals:**

Continue with the existing program of providing informal education to responsible parties.

New Activities:

No new activities are proposed.

Accomplishments:

The Water Agency maintains a pollution prevention billboard on Highway 101. The billboard on this highly traveled section of road is visible to over 100,000 cars per day. This year an ad was not featured. A storm water billboard is currently being designed for 2007/2008.

6.1.9 Private Septic System Outreach**Measurable Goals:**

None

New Activities:

If the Water Agency encounters a situation where education is needed in the industrial or commercial sector, it will refer this situation to either the City or County, as appropriate.

Accomplishments:

None

6.2 Industrial/Commercial Education

Measurable Goals:

None

New Activities:

If the Water Agency encounters a situation where education is needed in the industrial or commercial sector, it will refer this situation to either the City or County, as appropriate.

Accomplishments:

None

6.3 Landscape Industry**Measurable Goals:**

None

New Activities:

No specific activities are proposed.

Accomplishments:

None

6.4 Building and Construction**Measurable Goals:**

None

New Activities:

If the Water Agency encounters a situation where education is needed in the construction and development sector, it will refer this situation to either the City or County, as appropriate

Accomplishments:

None

6.5 School Education Program**6.5.1 Water Education Program:**

Note: The Water Agency's Water Education Program, described below, is funded by the Water Agency's Water Contractors and other customers (including the Town of Windsor and Marin Municipal Water District). As noted in Section IV-1.6, 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 Water Education Program 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.

Existing Program:

The Water Agency's Water Education Program provides a comprehensive learning experience to students and teachers in Sonoma and North Marin Counties for grades K-12. During the first permit term, the program evolved from focusing on water supply issues to 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 purely voluntary. However, the program is very popular.

Each fall, the Water Agency sends out information packets to teachers within the approximately 200 kindergarten through 12th grade public and private schools which are located in areas serviced by the Water Contractors and other customers. The program includes classroom instructional presentations, field study opportunities, teacher trainings and workshops, free curriculum materials, a lending library of videos, interactive models and printed materials. These packets include an order form for free educational materials, instructions for signing up for classroom and field study programs and descriptions of materials available through the lending library program. The packets also contain information on upcoming workshops available to teachers facilitated by Water Agency Education staff. The Education Program's lending library includes books, videos / DVD's, printed curriculum materials, an enviroscape model and a groundwater model, and interactive learning units on pollution prevention and biodiversity. These materials are loaned for a two week period and are available for teachers to order by telephone or by visiting the lending library during working hours at 404 Aviation Blvd. The instructional component of the program includes classroom visits at the school site and field trips at the Water Agency's field classroom at Wohler. Last year, the programs offered were:

3rd Graders: In-class instructional series at their school site

4th Grade: In class instruction and follow up visit to Wohler with a focus on watershed ecology.

5th Graders: In-class instruction and a follow up site visit to Mirabel / Wohler for lessons on water transmission, water quality and the natural history of salmon and steelhead in the Russian River watershed.

All of these programs are extremely popular and are generally limited to first come, first served.

Prior to both the 4th and 5th grade site visit, Water Education staff provided teachers a pre-site assessment to administer to their students in order that staff could assess the basic knowledge of the children attending the program. This allowed the program to be tailored to maximize the effectiveness of the Agency outreach efforts. At the end of the program, a verbal post test was taken of the student's knowledge at the conclusion of the field trip and teachers were also requested to give their students a written post assessment (the same questions asked before the students had participated in the program) and return them to the education staff. In addition, teachers were asked to complete an evaluation of the educational program. The evaluations asked teachers if they felt the Water Education Program affected the behavior of the students, and unanimously they felt their students benefited from participating in the program. The pre/post assessment results showed an average increased score of a little over 20%.

As mentioned above, the Water Education program includes instructional workshops for teachers. During the 2006-2007 school year four teacher trainings were held with 70 teachers

participating. All of the workshops included some storm water pollution prevention activities. Teachers are also sent the Hydro-Herald newsletter produced by the Water Agency.

New Activities:

For school year 2006-2007, the Water Agency's education program added a new assembly program, originally targeted to middle schools, and subsequently opened to several elementary schools in the storm water service area. Below is a description of that program.

"The Musical Watershed" is a 45 minute assembly program performed by ZunZun, which celebrates the environment through music. Through the use of over 25 different instruments, lyrics, laughter, and audience participation, students were introduced to the topics of water pollution, recycling, watershed ecology, storm drain run-off, sanitary sewers and water conservation. Students learned about the proper disposal of "FOG" (Fats, Oils and Grease) and other ways to make a difference in their home. They also learned how their actions impact the watershed around them and what they can do (and teach their families to do) to help preserve and protect the watershed. Students and teachers participated in the assembly by singing, dancing, getting up on stage, and playing instruments. This program was booked on a first come basis and was available to elementary and middle schools in the storm water service area. During the 2006-2007 school year, ZunZun performed 21 shows reaching 4591 students. Evaluations were given to the teachers at the school sites to return to the water agency. The results were very positive, with 100% of the respondents saying they would like to see this or a similar program offered in the future. A copy of the evaluation form and a summary of the returned evaluations are included in **Appendix IV.A.**

The following education programs were also available:

K to 2nd Grade: Education Materials, Teacher Trainings and referrals to the Environmental Discovery Center at Spring Lake Park

3rd Grade: Education Materials, Classroom Instructional Presentations at the school site, Teacher Trainings

4th Grade: Education Materials, Field Study Program "We All Live in A Watershed" which includes in class training and a site visit to the Wohler Education Site, Teacher Trainings

5th Grade: Education Materials, Field Study Program which includes in class training and a follow up site visit to Wohler and Mirabel focusing on SCWA water supply and transmission system, water quality testing and the natural history of salmon and steelhead in the Russian River Watershed. Students receive basic training on water quality sampling and how to identify a healthy watershed including looking at benthic diversity. Teacher Trainings

Grades 6-8 Education Materials, Teacher Trainings, Limited direct instruction.

Grades 9-12 Education Materials, Teacher Trainings, Limited direct instruction

The education program continues to increase curriculum materials available for teachers of 7th through 12th grade. New materials include a unit titled California Water Problems which was developed by the Water Education Foundation. California Water Problems is a series of four role playing scenarios designed to give students first-hand experience at working out a solution to real-life problems involving the management of California's water, and is appropriate for grades 9 – 12. We also have curriculum on methyl t-butyl ether (MtBE): risks and issues, and

Project H₂O, a unit that includes water chemistry experiments, both which are suitable for 7th through 12th graders. An additional unit on that focuses on the prevention, reduction and elimination of groundwater pollution for grades 7-10 was added during the 2005/06 school year. Direct teaching opportunities for 7th to 12th graders are available on a very limited basis.

The Education Program is also in the initial stages of developing a wetland / wastewater unit that will be piloted to schools in the Sonoma Valley area.

Measurable Goals:

Since this program is distinct from the storm water program and flood control zones, and funds spent on it cannot be spent for other purposes, no measurable goals are included.

However, the Water Education Program will continue to request that teachers participating in the field study programs for 4th and 5th graders have their class take a pre-assessment test before and a post-assessment after the in-class and outdoor visits are completed to see if student knowledge is being increased by the program. In addition, as part of the program evaluation, teachers will be asked to assess if they believe there has been any behavioral changes resulting from their students participating in the program.

Accomplishments:

The programs are free to teachers in the over 200 schools within our service area.

- Water Education Program Packets
- Water Education Program Packets with order forms for teachers to request education materials or direct instruction are distributed to all public and private schools in the service area. A packet is sent to each teacher at the elementary level and to science teachers at the middle and high school levels. Workshops for teachers are listed in the program packet, on the Agency's website and additionally in a Professional Development Catalog published by the Sonoma County Office of Education. A copy of the 2006-2007 Water Education Program Brochure is available upon request.
- *Education Materials / Lending Library* Curriculum materials are available for grades K – 12. The Program offers developmentally appropriate student workbooks for grades K – 6 and Project Water Science, Groundwater Education for Secondary Students, and California Water Problems education units developed by the Water Education Foundation, for grades 7 – 12. Curriculum guides for teachers, maps, rain gauges, and a variety of student incentives (folders, stickers, pencils, erasers, rulers, pencil sharpeners etc.) are also available. The Program received requests for free education materials from 98 different schools, and 396 classrooms (9509 students) during the 2006-2007 school year.
- *The Water Education Program* lending library includes additional education materials available to teachers including books, interactive models (groundwater and enviroscape models) and videos / DVD's that are loaned for a two-week period. The Program had 19 requests this year to borrow lending library materials. One of the most popular and

frequently requested items was the Enviroscape Model. This is a tabletop watershed model that depicts a community and a local water supply source. This interactive model lets the students sprinkle Kool-aid for pesticides, make cocoa patties for cow manure then create a rainstorm over the community with a spray bottle and watch what happens to the local water supply. Discussion of point and non point source pollution is generated throughout the lessons. The models are especially popular with middle and high school science teachers.

- *Classroom and Field Study Instruction* All instructional visits have been carefully developed to support the California State Frameworks. Certain grade levels are offered a field study experience and other grade levels a classroom instructional program. Each grade level lesson has a subject specific focus that supports the revised California Science Standards for that grade level and includes developmentally appropriate hands-on activities. During the 2006-2007 school year, the Water Education Program offered a classroom instructional series for grade three and field study programs for grades four and five. During the 2006-2007 school year the total number of students receiving direct instruction was 2561. The Program had 43 classes from 17 different schools participating in our field study programs (1201 students) and an additional 68 classrooms from 24 schools participated in our classroom only instructional program (1360 students). Below is a detailed description of each grade level program:

Classroom Instructional Program – Grade 3

The classroom instructional program includes two 60 minute lessons conducted by Water Agency staff in the school classroom. Through hands-on experiments and discussions, students explore how their attitudes and daily habits affect their water supply source. Topics covered include:

- Water and how it moves about the earth
- Water is essential to all living things
- Ways we manage our water
- Anything that goes down a storm drain enters the natural system without treatment

During the first visit, students conduct an experiment that demonstrates the surface tension of water and how it can support the weight of insects. They explore what elements can break that surface tension (soap), how surface tension allows certain communities of living things to survive and what happens when pollution enters the system. The second visit focuses on the concepts of adaptation and interdependence as students identify a variety of ways that animals and plants use water. Teachers are given extension activities after each lesson.

Field Study Programs – Grades 4 and 5

The Water Agency's field study programs consist of a pre-site student assessment, a one-hour visit to the school classroom by Water Agency staff and a follow up full day field

trip. Each student receives a journal which is used both during the classroom portion of the program and then again on their day in the field. Journals, the pre-assessment sheets, Lesson plans and the accompanying Journals are available upon request. The Program provides free buses for the field trip portion of the program.

Grade 4 – Wohler Field Study Site

Before the initial classroom visit, teachers are asked to give their students a short pre-assessment that indicates the baseline knowledge of the class before participating in our field study program. During the initial classroom visit students are introduced to watershed ecology, the concept that each small watershed is part of a larger watershed and that everything in a watershed is connected. During the field trip portion of the program, students explore redwood-bay forests, meadows and beaches in the heart of the Russian River Watershed.

Grade 5 – Mirabel Pumping Facility

Before the initial classroom visit, teachers are asked to give their students a short pre-assessment that indicates the baseline knowledge of the class before participating in our field study program. The fifth grade field study program focuses on the Water Agency's water supply and transmission system, water quality testing and the natural history of salmon and steelhead in the Russian River watershed. During the classroom portion of the program, discussions center around watersheds and how everything that occurs in a watershed will ultimately affect the overall health of that watershed. Discussion topics also include salmonids, the water quality parameters they need to survive, and that coho, Chinook and steelhead are protected in the Russian River, the source of the student's drinking water. A water quality testing activity follows where students are given four prepared water samples and asked to conduct a series of tests (pH, temperature, turbidity and dissolved oxygen) to determine, which, if any, of the samples could support salmon. Each student is given a journal to record his or her test results.

On the field study day, a bus takes students out to the Russian River to experience the source of their drinking water first hand. Students conduct the same water quality tests they did in the classroom on a water sample taken directly from the Russian River and again use their journals to record and compare this data. On their field tour of the water transmission system, they see Water Agency computers conducting these same tests on their drinking water. Water samples are collected from the river and students are given the opportunity to use microscopes to examine and identify aquatic invertebrates. Discussions follow on the implications of finding pollution sensitive organisms in the water samples, and how this is another method for testing the health of water. These journals also include information to be shared in the classroom and at home regarding water conservation, pollution prevention and personal responsibility for taking care of our water.

Program Evaluation

All participating teachers are asked to complete an evaluation of the program. Teacher comments are carefully reviewed and often lead to further program development. The program has been continuously commended for:

- Age appropriate activities and concepts that related to their curriculum
- Hands on activities
- The opportunity for students to use science equipment no longer available in schools (microscopes, binoculars etc)
- The individual student field journals

Thousands of student letters received by the Water Agency also reflect the success of the Water Education Program. Program staff, have also asked the teachers to give the same pre-assessment sheet to their students as a post assessment once the students have completed the program. This has provided some comparative data on what the students are learning and retaining. The results have been very encouraging.

- **Teacher Workshops and Trainings**

Water Education staff conducted several teacher workshops during the 2006-2007 school year. These workshops have been developed to provide teachers with standards aligned lessons and materials that support water science instruction, water conservation and pollution prevention. During the 2006-2007 school year, 70 teachers participated in four different workshops:

- 58 teachers participated in two Water Cycle Workshops
- 8 teachers attended a six-hour WOW (Wonders of Wetlands) Workshop
- 4 teachers attended a six hour POW (The Planning of Wetlands) workshop

- **Water Awareness Contests**

This year we conducted two contests in celebration of Water Awareness Month:

A Poster Contest for 3rd and 4th graders: This year's theme was "Save Water, Every Drop, Every Day!" We administered this contest along with City of Santa Rosa Water Conservation staff. Winning entries will be featured in the SCWA 2008 Water Awareness Calendar. A copy of the 2007 Water Awareness Calendar is included is available upon request.

A High School Video Contest: The theme was FOG – Fat Free Sewers, Keeping Fats, Oils and Grease Out of the Drain and was sponsored by the Russian River Watershed Association. We received 13 videos from four high schools with 23 students participating. The winning videos are to be used for education purposes. A copy of the three winning videos is included in **Appendix IV.B.**

6.5.2 High School Aquatic Macroinvertebrate Bioassessment Program

Measurable Goals:

None

New Activities:

None

Accomplishments:

None

6.6 Spring Lake Environmental Discovery Center**Measurable Goals:**

Provide fiscal support up to and including fiscal year 2007-08.

New Activities:

The Water Agency will continue with its existing activities, including providing financial support for the Environmental Discovery Center (EDC) up to and including Fiscal Year 2006-07, actively participate in the advisory board, and acting as a resource to EDC staff.

Accomplishments:

The Water Agency continued to provide funding for the EDC in fiscal year 2005-2006. A summary of the EDC is available upon request.

6.7 Employee Newsletter**New Activities:**

As part of the Phase II storm water program, the Water Agency has begun to include a storm water article in the Water Agency employee newsletter on a quarterly basis. These articles, covered topics such as keeping our neighborhoods and waterways clean, storm water quiz, clean up pet waste. Articles are available upon request.. Articles are available upon request.

7 EFFECTIVENESS EVALUATION

The goal of this program element is to assess the Water Agency's SWMP to (1) quantify the efforts being taken to improve storm water quality, (2) determine if the program is being implemented, as proposed, and (3) determine if these efforts are impacting storm water quality.

Existing Program:

A number of existing programs are evaluated for their effectiveness using direct and indirect indicators. The results of the evaluation are included in the Annual Reports. Some of these program evaluations include:

Municipal Operations: The Water Agency tracks the status of programs included in its SWMP. This includes measures such as the amount of trash removed from Agency channels each year.

Public Outreach: The Agency tracks the effectiveness of its other outreach programs by the number of workshops held, the number of pamphlets distributed, and the number of other educational materials distributed.

Monitoring Program: The Water Agency annually reviews monitoring data for trends between upstream and downstream constituents. The concentrations of constituents measured are an indication of the pollutant loading in the receiving water.

Special Studies: In the third permit term, the Water Agency did not participate in special studies.

Measurable Goals:

Provide a summary report in the annual report of Permit Year 5 assessing the effectiveness of the Agency's program elements.

Since the Water Education Program is distinct from the storm water program and flood control zones, no measurable goals are included for this activity. The Water Agency will track and report on the status of indirect indicators in each annual report.

Perform a review of the chemical monitoring program and present the findings in the last annual report for the second permit term.

New Activities:

The Water Agency will continue to track and report on its program elements through direct and indirect indicators, as it does with its existing program. Most BMP's in the Water Agency's SWMP include measurable goals. A status of the Water Agency's efforts to meet these measurable goals is included in the Annual Reports. Special efforts to measure the effectiveness are contained in the following programs:

Public Outreach: The Water Agency's Water Education Program includes feedback mechanisms, such as pre-site visit testing and program evaluations with questions regarding behavioral changes. Participation in these test and evaluations is purely voluntary. This program is funded by the Water Contractors, who are not a part of this permit. The Water Education program asks teachers to administer both pre- and post-visit test for selected grades. In addition, as part of the program evaluation, teachers will be asked to assess if they believe there have been any behavioral changes as a result of this outreach.

In the last year of the second permit term, the Water Agency and the County will review the ten years of chemical monitoring data collected over the course of the first two permit terms from the two sampling locations on Santa Rosa Creek to determine trends. The Water Agency will use this review to recommend changes in focus or monitoring for the third permit term. This review will be included in the last annual report for the second permit term.

Special Studies:

For the next permit term, the Water Agency is not proposing any special studies.

Accomplishments:

- Compliance with the measurable goals set out in the SWMP is summarized in the "At-a-Glance" table at the beginning of this Annual Report (Part I, Section 4.0). The table shows that the Water Agency has met most of the measurable goals for the fourth year of the permit term
- One set of direct indicators of the effectiveness of the storm water program include the amount of debris removed from creek channels that would otherwise have contributed to pollution. For 2006-2007, the following were from the creeks within the permit boundary:
 - Approximately 130 tons of loose garbage, removed by Agency forces

- Sofas, many tires, and other debris were removed by Agency forces
- 377 cubic yards of debris, removed by Creek Stewardship volunteers
- 222 homeless encampments, removed by SAC crews in response to Creek Stewards
- The Water Education Program has recently added a measure of program effectiveness. As stated earlier, pre- and post-site visit evaluations were distributed to 1201 students from 43 different 3rd and 5th grade classes from 17 different schools that participated in the Water Education Program field study programs. Results of these surveys indicate that students' knowledge of watersheds is increased through participation in the program. The pre-and post-site visit evaluations administered to the three grade levels and summary tables of the results are available upon request. The evaluation questions focus on the difference between storm drain systems and sewer systems, and on the effects of illicit discharges.
- For school year 2006-2007, the Water Agency's education program added a new assembly program, originally targeted to middle schools and subsequently opened to several elementary schools in the storm water service area. Below is a description of that program. During the 2006-2007 school year, ZunZun performed 21 show reaching 4591 students. Evaluations were given to the teachers at the school sites to return to the Water Agency. The results were very positive, with 100% of the respondents saying they would like to see this or a similar program offered in the future.

Based on the above indicators, it appears that the Water Agency storm water program is effective.

8. FISCAL ANALYSIS

Measurable Goals:

Report on expenditures and sources of funding for work related to the NPDES Phase I permit as part of each Annual Report.

New Activities:

No new activities

Accomplishments:

Table IV.7 below reflects operational and maintenance costs associated with the implementation of the storm water program. Note that costs of activities funded through other sources, such as the Water Education Program and Zone 1A drainage maintenance activities, do not have measurable goals included in the SWMP, and are not reflected in the table below.

Table IV.7
Operational and Maintenance Costs

Engineering Studies and Annual Report	\$ 32,561
Sampling	\$ 16,434
Lab Analysis	\$ 2,077
Drainage Maintenance Zone 1A	\$ -
Pollution Prevention Education	\$ 37,253
Application Cost/Annual Fees	\$ 7,653
Coordination Meetings	\$ 10,848
Trainings And Conferences	\$ 1,172
RRWA Activities	\$
Illicit Discharge Tracking	\$
Creek Stewardship	\$ 39,946
TOTAL	\$ 147,944

There were no capital costs incurred during the 2006-2007 year.

Attachment IV.1 “At a Glance” Storm Water Work Plan 2007-08

Protecting and Enhancing Water Quality by Reducing Storm Water Pollutants to the Maximum Extent Practicable
 Sonoma County Water Agency

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Program Management Goal: Facilitate communication and coordination between the copermittees, Regional Water Board and other appropriate entities. Ensure the SWMP elements are implemented on schedule and that all requirements of the Permit are met.			
Copermittees Monthly Coordination Meetings	Participate in monthly meetings Continue through Permit term	Operations	Ongoing
Annual Work Plan	Develop preliminary work plan for Regional Water Board staff Final work plan submitted with each Annual Report	Operations	Complete
Annual Report	Submit to Regional Water Board on time October 1, Annually	Operations	Complete
Coordination with Phase II Communities	Invite City and Town staff from Phase II communities within the permit boundary to monthly coordination meeting	Operations	Ongoing
Legal Authority Goal: Effectively prohibit non storm water discharges into the storm drain system and receiving waters.			
Review existing codes and propose amendments as required	Water Agency relies on enforcement authority of City and County, and has no plans to seek additional authority. The Water Agency will use its existing legal authority as appropriate.	Operations	Ongoing

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Private Construction Element Goal: Reduce construction site related pollutant, especially sediment, to MEP			
Private Construction on Public Land	Incorporate appropriate BMP measures as part of the provisions contained in Revocable Licenses for private construction which occurs on Water Agency flood control channels. Request that cities and County refer project managers to Agency when project includes work on flood control channel.	Maintenance	Ongoing
Inspection of Construction and Vineyard Sites	Provide at least one inspection for construction projects on Agency flood control channels which have been issued a revocable license to ensure compliance with license.	Maintenance	Ongoing
Enforcement of Non-Compliant Sites	Use the Water Agency's existing program and the enforcement authority of regulatory agencies to ensure projects comply with the conditions stated in the Water Agency-issued revocable licenses.	Maintenance	Ongoing
Reporting of Non-Compliant Sites	If Water agency becomes aware of non-filer status, Agency will refer non-filers to the Regional Water Board within 48 hrs.	Operations	Ongoing

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Industrial/Commercial Element Goal: Reduce the potential for pollutants to contact storm water to MEP			
No measurable goals planned			
Municipal Operations Element Goal: Reduce or prevent pollution in storm water runoff from all municipal land use areas, facilities and activities			
Public Construction Activities Management			
Contract Documents	Review Special Provisions and General Specifications for existing BMP'S to determine if they are adequate. Submit needed changes, if any, in Annual Report 2. Completed. It is infeasible to incorporate BMP's into contracts. Permits require SWAAP by contractor and is reviewed by engineering.	Operations, Engineering	Ongoing
Compliance with State General Construction Permit	File NOI for applicable projects, as required	Engineering	Ongoing
Inspection	Continue to inspect active construction sites.	Engineering	Ongoing
Enforcement	Take action for non-compliance based on contract specifications.	Engineering	Ongoing
Training of Targeted Staff	Assess current education and training practices for construction practices. Update, if necessary.	Operations/Engineering	Ongoing

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Landscape and Recreational Facilities Management			
Pesticide management	Continue with low-impact pesticide management.	Maintenance	Ongoing
Fertilizer management	Continue to utilize recycled water for irrigation which offsets the need for fertilizer at the Water Agency’s West College facility.	Maintenance	Ongoing
Native vegetation	Continue to incorporate retention and planting of native vegetation in design projects on flood control facilities. (See also, Public Outreach)	Maintenance	Ongoing
Disposal of landscape waste	Continue to use chipped brush and weeds as mulch around existing vegetation at Water Agency Channels.	Maintenance	Ongoing
Recreational water bodies	County manages Spring Lake Park for Agency. Continue to limit equipment and material storage in flood control channel right-of-way.	Maintenance	Ongoing
Storm Drain System Operation and Management			
Clean and inspect storm drain pipe and inlet structures	Pipes through City treated as open channel, see below.	Maintenance	Ongoing
Flood control channel or road side ditch inspection and maintenance	Continue to provide trash cleanup in Water Agency channels, coordinate with local law enforcement when	Maintenance	Ongoing

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
	possible. <i>Annually, as needed</i>		
Streets and Roads Maintenance			
Street sweeping frequency	Water Agency does not maintain public roads. No sweeping planned. Maintain shale layer on Water Agency-owned roads. Continue to require reshaling of road in revocable licenses, where appropriate. Continue to limit vehicular access to Water Agency roads.	Maintenance	Ongoing
Material management	Continue to limit equipment and material storage in Water Agency's ROW.	Maintenance	Ongoing
Training of targeted staff	Provide informal road maintenance BMP training, as-needed.	Maintenance	Ongoing
Parking Facilities Management			
Sweeping	Sweep two employee and one visitor parking lot at West College facility. <i>Annually between August 15 and October 15</i>	Maintenance	Ongoing
Spill clean up	Respond in a timely manner. Use spill response protocol for hazardous or unmanageable spills.	Maintenance	Ongoing
Illicit Discharge Detection and Elimination Element Goal: Detect and minimize illegal non storm water discharges			
Spill Response	Implement current program.	Operations and Maintenance	Ongoing

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
	Copermitees are in the process of finalizing a county wide program.		
Private sanitary septic systems	Notify City, County or Regional Water Board if a problem with a private sanitary septic system is discovered and not immediately corrected by land owners.	Operations	Ongoing
Enforcement Procedures	Water Agency will work with responsible party, City, County, and other regulatory agencies to correct the problem.	Operations and Maintenance	Ongoing
Record Keeping and Documentation	Tracking system developed List reported spills in annual report. Will develop tracking system for spills within channels based on sewer spills tracking system. Report of spills referred to other agencies will not be tracked	Operations	Ongoing
Illicit Connections	Investigate the sources of illicit discharges within flood control channels. Notify and provide support to appropriate municipality for discharges originating outside of channels.	Operations and Maintenance	Ongoing
Disposal of used oil and toxic materials	Rely on existing programs by others. Provide outreach material developed by others where appropriate.	Operations	Ongoing

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Training of targeted staff	Provide annual review of contact info.	Operations and Maintenance	Ongoing
Public Education and Outreach Element Goal: Increase the community’s knowledge of MS4 and the impacts of urban storm water run off, encourage behavioral changes thereby reducing pollutant release to the MS4			
General Public/Residents			
Storm drain inlet decal program	Evaluate efficacy of incorporating storm drain labeling program into creek stewardship program. <i>Permit Year 2</i>	Operations	Storm drain labeling has been incorporated into the creek stewardship program. Agency will refer and/or loan out its stencils to those who request it
Website	Include information regarding the Creek Stewardship program by the end of Permit Year 3. (not completed)	Operation/Public Information	The Creek Stewardship Program has not been posted on the Water Agency’s website. Water Agency anticipates adding the program to its website in Permit year 5.
Creek Stewardship	Conduct outreach.	Operations and Maintenance	Outreach material is currently available on the web, and as part of the Santa Rosa Adventure Guide.
Billboard	A billboard containing a storm water pollution prevention message is posted along Highway 101	Public Information	Ongoing
Pet waste signs	Pet waste signs have been posted at major access points to creeks, Water Agency will continue to participate in the pet waste signs.	Operations and Maintenance	Signage has been developed and posted.

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Public Events	Participate each year in Sonoma County Fair. Distribute outreach materials at fair. <i>Ongoing, annually</i>	Public Information	Participated in 2007 Fair, and planning to participate in 2008.
Illicit discharge	Continue existing program of providing informal education to parties responsible for illicit discharges	Operations and Maintenance	Ongoing
School Education			
Water Education Program	Although no measurable goal is included, as this program is independent of storm water funding, it is anticipated that the current program will continue.	Public Information	Ongoing
Spring Lake Environmental Discovery Center	Provide financial support through fiscal year 2007/08	Public Information	Continue to provide fiscal support
Effectiveness Evaluation			
Formal Evaluation	Continue to track program elements through direct and indirect indicators. <i>Annually</i>	Operations	Ongoing
Public Education and Outreach	Voluntary include feedback mechanisms in water Education Program.	Public Information	Ongoing
Monitoring Program	Review monitoring data for trends. <i>Permit Year 5</i>	Operations	Monitoring data will be summarized in Permit Year 5.

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Fiscal Analysis			
Financial Analysis of Program Activities	Develop new reporting structure Permit Year 1. a. Include discussion of fiscal resources in work plan meetings/Annually b. Report program expenditures and funding sources in Annual Report.	Operations	Ongoing
Monitoring Plan Goal: Assess the receiving water quality to direct resources toward local pollutants of concern			
Chemical Monitoring	Collect samples for first flush and three representative storms. <i>Annually</i> Include results and proposed changes to program in annual reports. Analyze data for trends. <i>Permit Year 5.</i>	Operations	Ongoing.
SUSMP Goals: Minimize storm water pollution, limit storm water peak flows, and conserve natural areas to MEP from new and redevelopment			
Waiver	Waiver granted with Regional Water Board approval. Place fees in project fund		
Provide training to staff	Train targeted staff within 22 months of Program implementation	To be spearheaded by County	Completed

<u>Proposed Storm Water Management Plan</u>	Measurable Goals and Implementation Schedule Program Implementation began on July 1, 2003		
	Water Agency Tasks	Lead Department	Status
Provide workshop to the development community	Prepare and conduct workshop within 24 months of Program implementation	To be spearheaded by County	Completed
Implement SUSMP measures on City / County capital improvement projects	Design applicable Zone 1A flood control projects with SUSMP measures	Engineering	No applicable projects are scheduled for design.
Implement SUSMP measures on applicable projects within Urban Growth Boundary within Permit Boundary	Condition, plan check and inspect projects to meet SUSMP requirements		

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PART V

MONITORING RESULTS

**Permit Term 2
Annual Report 4**

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MONITORING RESULTS

In compliance with the NPDES permit, discharge characterization activities were continued during Year 4 to help identify storm water pollutants within the permit boundary. This section of the Annual Report combines information gathered from all three copermittees. The characterization process for the 2006/07 year is described in five parts: chemical results, bioassay results, discharge characterization at outfalls, professional benthic community survey and the Colgan Creek special study.

1. CHEMICAL RESULTS

The County and the Water Agency regularly collect composite and grab samples necessary for chemical analysis of storm water runoff. This section includes:

1. An overview of the chemical monitoring stations, sampling equipment and procedures;
2. A summary of the sampling events; and,
3. Results from the two events sampled.

Laboratory analysis reports for the chemical monitoring sampling are included as **Appendix V.A.**

Chemical monitoring was also conducted at two outfalls during two storm events, as described under Section 3. Discharge Characterization at Outfalls, below.

Chemical Monitoring Stations

Site "C1" is located along Santa Rosa Creek approximately fifty feet upstream of the confluence with Piner Creek. This site provides downstream monitoring of most of the permit area. The site can be reached by using one of two flood control access roads off Fulton Road in Santa Rosa.

The Water Agency is responsible for chemical monitoring at this site. Site C1 is equipped with a portable 900 Max Sigma sampler with a rain and depth gauge. The sampler is housed in a steel cabinet within a fenced area at the top of the bank of Santa Rosa Creek. The sampler is programmed to automatically collect samples after a set rainfall accumulation occurs within a specific timeframe. The sampler will also collect samples if the water level in the creek rises above a set point. The sampler is programmed to automatically call the cell phone of the appropriate Water Agency personnel when it begins to take a sample. The Water Agency personnel then travels to the site to ensure that the sampler began sampling, and also takes grab samples at this time.

Site "C2" is located on Santa Rosa Creek at Melita Road upstream of the Santa Rosa urban area. The Water Agency is responsible for chemical monitoring at Site C2. Site C2 is equipped with a portable automatic composite sampler (Sigma 900 Max) that is housed in a secure steel cabinet near the creek, and a tipping bucket rain gauge (Sigma model #2149) that is mounted on a 20-foot high pole. The rain gauge is located about sixty feet away from the sampler, away from the trees along the creek. Solar cells, used to charge the backup batteries, are also mounted on the pole. The sampling unit is equipped with an internal modem.

Site “MW1” is located at Laughlin Road and Mark West Creek. This site provides monitoring for the southwest section of the Airport Larkfield-Wikiup area. The primary land use for this area is residential.

Site “MW2” is located at Fulton Road and Mark West Creek, near Highway 101. This site provides monitoring for the southern section of the Airport Larkfield-Wikiup area. The primary land use for this area is commercial with residential.

The 2006/07 year was the first year sampling occurred at MW1 and MW2. As such, grab samples were taken at both sites. The Water Agency and the County used the monitoring program currently in-place at monitoring locations C1 and C2 on Mark West Creek (sites MW1 and MW2).

2006/2007 Qualifying Rainfall Events

The representative storm is defined as a storm that produces at least 0.3 inches of precipitation within a 3-hour period. Additionally, the storm must be preceded by 72 hours of dry weather (less than 0.1 inch of precipitation), and one month must separate each monitoring event.

The two automatic composite samplers, on Santa Rosa Creek, are programmed to begin sampling storm water runoff once a set criterion is met. Criteria can include depth of precipitation, storm duration, and rise in creek depth. The samplers can be set to take samples when a volume of water has passed, or at specific time intervals. The programmed criteria are set to meet the target storm event. Because the samplers are several miles apart and rainfall and runoff varies between the sites, samplers must be monitored during a storm event for proper operation. As sampling in Mark West Creek is new, Site C1 was used as the trigger to sample at MW1 and MW2. To prepare for a sampling event, weather forecasts are monitored in order to target a representative storm, as outlined in the Monitoring Plan. Sampling is coordinated by a consultant hired to conduct the storm water sampling for the County and the Water Agency. Each sampler was checked to verify proper operation, and to collect field data and grab samples. The sampled events in Permit Year 4, Term 2 and the sampler settings are described below.

First Flush Storm Event

For the first flush storm event the samplers at Stations C1 and C2 were programmed to begin sampling when 0.3 inches of rainfall had accumulated in a time period of 3 hours. The first flush criteria for sites C1 and C2 were met on October 5, 2006 at approximately 3:00 p.m.

The samplers began the sampling sequence. Samples were obtained in a time-proportional sampling method. Sampling was completed at approximately 2:15 pm on October 5 at site C1 and at approximately 3:00 p.m. for site C2, when the first flush composite and grab samples were obtained. The samples were collected in laboratory supplied sterile containers that were labeled, capped, and placed under refrigerated conditions pending transport to a state certified analytical laboratory for chemical analysis.

First Representative Storm Event

Due to the accumulated rainfall that was measured during the October 5, 2006 rain event, the events qualified as both the first flush storm event as well as the first representative storm event for the monitoring stations

Second Representative Storm Event

The second representative storm event of the 2006/2007 season started just before 5:00 p.m. on November 26, 2006. The samples at stations C1 and C2 were programmed to begin sampling after 0.3 inches of rain had accumulated within a 3-hour period of time. Sampling began at approximately 5:00 p.m. at site C1 and 5:30 p.m. at site C2 and was completed at approximately 5:15 a.m. and 5:45 a.m., respectively. Both composite and grab samples were obtained from the sites in laboratory supplied sterile containers that were labeled, capped, and placed under refrigerated conditions pending transport to a State certified analytical laboratory for chemical analysis. The samples were analyzed for the chemical constituents as listed in the Monitoring & Reporting Program.

Third Representative Storm Event

The third representative storm event of the 2006/2007 season started just before 7:00 am on February 22, 2007. The samples at stations C1 and C2 were programmed to begin sampling after 0.3 inches of rain had accumulated within a 3-hour period of time. Sampling began at approximately 6:30 am at site C1 and 7:00 am at site C2 and was completed at approximately 6:45 am and 7:15 am respectively. Sampling errors made the analysis of constituents invalid.

Results

Table V.1 shows the results of the first flush and the representative storm sampled during the 2006/2007 wet season. Tables in **Appendix V.A** show summaries of the first nine years of chemical monitoring data. Lab reports of all storm events and sampling locations are available upon request.

**Table V.1:
Summary of Chemical Monitoring Results at Sites C1 and C2 during 2006-2007**

SAMPLE DATE	Event	Temp.	pH	TSS	TDS	Phosphorus	Total Nitrogen	Nitrate as N	TKN	Ammonia	Nitrite as N	Fecal Coli	Fecal Strep	
														°C
Method →		Field	Field	160	160.1	365.4	NM	353.2	351.2	4500NH	M4500NO3	SM9221	SM9230	
C1														
						Tot	Dis							
10/5/2006	FF/1	16.7	7.58	na	270	< 1.0	1.0	3.1	0.53	2.6	0.9	< 0.2	na	na
11/26/2006	2	10.1	7.37	93	85	< 1.0	< 1.0	1.5	0.21	1.2	0.7	< 0.2	300000	340000
2/22/2007	3	10.1	7.67	na	na	< 1.0	< 1.0	na	na	na	< 2	na	140000	50000
C2														
10/5/2006	FF/1	15.9	7.85	na	260	< 1	< 1	< 1.2	< 0.2	1	0.2	< 0.2	na	na
11/26/2007	2	9.5	7.46	16	190	< 1	< 1	0.59	0.2	0.49	0.3	< 0.2	17000	30000
2/22/2007	3	10.8	7.62	na	na	< 1	< 1	na	na	na	v 0.2	na	1700000	3800000

The Total Dissolved Solids (TDS) concentrations of two of the four samples were above the 90% upper limit of 200 mg/l in the Basin Plan. Due to sampling error, the Third representative sample was not viable for analysis. No total or dissolved phosphorus was detected in the storm water samples. Some forms of nitrogen were detected; however, there are no numeric Basin Plan objectives for nutrients with which to compare the data. To put the data in some perspective, the domestic water supply criterion for nitrate nitrogen is 10 mg/l, and aquatic species easily tolerate level much higher than this (EPA Quality Criteria for Water, 1986, EPA440/5-86-001). The highest nitrate nitrogen concentration observed in the 2006-2007 sampling was 0.53 mg/l at the downstream sampling station – substantially below drinking water standards. *This comparison should not in any way be interpreted to imply that drinking water standards should be applied to storm water discharges.* No nitrite nitrogen was detected in any of the samples. Fecal Coliform organisms ranged from most probable numbers (MPN) of 17,000 MPN/100 ml to 1,700,000 MPN/100 ml. Fecal Streptococcus ranged from 30,000 MPN/100 ml to 3,800,000 MPN/100 ml.

New Activity

The monitoring program's goals are to characterize storm water discharges and assess the overall stream health, evaluate long-term trends in receiving water quality, and identify sources of pollutants. These goals are achieved through implementation of a combination of chemical and biological monitoring of Santa Rosa and Mark West Creeks. With the commencement of Phase I - Term 2, the permit boundary expanded. As a result, the County and Water Agency conducted additional monitoring on Mark West Creek. Due to the access difficulties at Mark West Creek (MW1 & MW2) monitoring locations, sampling did occur at these two sites in 2006-2007. The Water Agency is working with a consultant to find a more suitable monitoring location(s) on Mark West Creek.

2. BIOASSAY RESULTS

Bioassay tests are conducted to determine whether storm water runoff is impacting the water quality in creeks that support fish populations. The Monitoring Plan requires bioassay tests for the first flush and one representative storm event at eight sites within the permit boundary.

Bioassay tests for fish measure the total toxicity of the samples by exposing twenty rainbow trout fry (15 to 30 days old) to 100% sample water for 96 hours under controlled conditions. The results are expressed as the percent that survive.

Two bioassay samples were collected for each sampling site during the 2006-2007 rainy season. The samples were collected during the first storm of the season on October 5, 2006 and the second sampling event was conducted during a representative storm event on March 26, 2007. Each set of samples typically consists of nine water samples collected from eight sites. Two samples were collected from one site, the second being a duplicate for quality assurance. Six of the sampling locations are the same sites used for the Benthic Community Survey component of the monitoring plan. Two sites, Santa Rosa Creek at Melita Road and Piner Creek, correspond to the chemical monitoring sites (C1 and C2). Each sample consisted of five gallons of creek water and was either dipped or bucketed from the creeks into a plastic five-gallon container. The samples were transported to Pacific EcoRisk in Martinez, California for testing. Twenty acclimated rainbow trout were placed in five gallons of undiluted sample water for each 96-hour acute static survival test following the EPA/600/4-90/027F protocol.

During the past permit year, the City expanded its bioassay testing procedures by incorporating an additional test species, the freshwater arthropod *Ceriodaphnia dubia*, in order to gather additional toxicity data on species other than rainbow trout. The *Ceriodaphnia dubia* testing was added to the existing 96-hour rainbow trout bioassays and was conducted for the first flush and the representative storm. Acute static tests for *Ceriodaphnia dubia* were also performed over 48 hours following the City's existing bioassay protocol (EPA/600/4-90/027F).

Year 4's bioassay results generally reflect high water quality at all sites except Matanzas and Piner Creeks, where rainbow trout survival was only 40% and 75% for the first flush (see **Table V.2**). All other sites had survival rates of 90% or higher for the first flush and representative storm (See **Appendix V.B** for lab results of 2006/2007 Bioassay Survey).

Table V.2
Bioassay Results for Year 4: 2006-2007

Sampling Location	First Flush		Representative Storm	
	October 25, 2006		March 26, 2007	
	Trout	Daphnia	Trout	Daphnia
Brush Creek @ Hwy 12	100%	100%	100%	100%
Colgan Creek @ Bellevue Ave	90%	100%	100%	100%
Matanzas Creek @ Hoen Frontage Rd	40%	100%	100%	100%
Paulin Creek @ Mendocino Avenue	100%	100%	100%	100%
Peterson Creek @ Fulton Road	100%	90%	100%	95%
Piner Creek @ Marlow Road	75%	100%	100%	100%
Santa Rosa Creek @ Melita Road	100%	100%	100%	100%
Santa Rosa Creek @ Piner Creek	100%	100%	100%	100%
Controls	100%	100%	100%	100%

During sample collection, City staff also measure water temperature, pH, specific conductivity, dissolved oxygen, weather, turbidity, odor, and record any additional comments about the sampling site. When compared to the water quality objectives of the Russian River Basin Plan, sampling field data met basin plan objectives for pH (6.5 to 8.5) and odors except for slightly lower pH readings and detectable odors at several locations (**Table V.3**). The basin plan objective for turbidity states levels shall not be increased more than 20% above background levels. On Santa Rosa Creek, turbidity results increased more than 20% between the upstream and downstream sites (first flush 14.8 to 22.0 NTUs; representative storm 2.07 to 3.4 NTUs). However, the downstream levels (22.0 and 3.4 NTUs) were well below levels (>70 NTUs) that salmonid fish species have been shown to avoid (Bisson and Bilby 1982). Elevated turbidity (74.4 and 74.0 NTUs) was measured on Piner Creek for the first flush and representative storms. The Basin Plan objective for temperature states the temperature shall not be increased more than 5 °F above natural receiving water conditions. The first flush and representative storm events on Santa Rosa Creek met the criteria (2.85 and 3.33 °F difference) between sites upstream and downstream of the urban area. Dissolved oxygen measurements for all locations were above minimum levels (7.0 mg/L) designated in the Basin Plan for the Laguna de Santa Rosa watershed, except Colgan Creek during the first flush (6.1 mg/L).

Table V.3
Bioassay sampling field data for Year 4: 2006-2007

Sampling Location	Date	Weather	Water Temperature (°C) (°F)	pH	Spec. Cond. (uS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTUs)	Odor	Comments
Brush Creek @ Hwy 12	10/05/2006	-	14.64 58.35	7.4	301.4	8.1	16.3	None	None
Brush Creek @ Hwy 12	3/26/2007	Rain	14.37 57.87	6.4	117.9	9.4	21.1	None	None
Colgan Creek @ Bellevue Ave	10/5/2006	-	15.6 60.08	7.4	359.1	6.1	45.9	Organic	None
Colgan Creek @ Bellevue Ave	3/26/2007	Rain	14.66 58.39	7.7	304.6	8.77	46.5	None	None
Matanzas Creek @ Hoen Frontage Rd	10/5/2006	-	14.77 58.59	7.5	256.0	8.5	60.4	Oily	None
Matanzas Creek @ Hoen Frontage Rd	3/26/2007	Cloudy	14.08 57.34	7.6	325.5	9.04	19.6	None	None
Paulin Creek @ Mendocino Avenue	10/5/2006	-	14.52 58.14	7.3	204.2	9.4	34.8	None	None
Paulin Creek @ Mendocino Avenue	3/26/2007	Rain	14.04 57.27	7.7	113.4	11.37	48.2	Chemical	None
Peterson Creek @ Fulton Road	10/5/2006	-	17.3 63.1	6.2	109.6	8.7	34.5	None	None
Peterson Creek @ Fulton Road	3/26/2007	Rain	15.78 60.40	6.2	108.8	8.08	2.88	None	None
Piner Creek @ Marlow Road	10/5/2006	-	15.53 59.95	7.2	236.8	7.9	74.4	None	None
Piner Creek @ Marlow Road	3/26/2007	Rain	15.05 59.09	6.2	274.2	8.94	74.0	-	None
Santa Rosa Creek @ Melita Road	10/5/2006	-	13.58 56.44	7.8	389.5	9.2	14.8	None	None
Santa Rosa Creek @ Melita Road	3/26/2007	Rain	12.83 55.09	7.3	362.3	10.68	2.07	None	None
Santa Rosa Creek @ Piner Creek	10/5/2006	-	15.16 59.29	7.3	445.9	7.5	22.0	None	None
Santa Rosa Creek @ Piner Creek	3/26/2007	Rain	14.68 58.42	6.4	405.6	9.51	3.4	None	None

Since lower bioassay survival rates have been recorded for Colgan Creek intermittently since 2000, the City plans to continue its special study to determine what is causing the intermittent low survivability rates in Colgan Creek (Section 5).

3. DISCHARGE CHARACTERIZATION AT OUTFALLS

As recommended in the prior peer reviews of the City's monitoring program, the City collected chemical grab samples for pollutants of concern from two outfalls within the City of Santa Rosa since the 2005/2006 monitoring year (**Figures V.A and V.B**). The two outfalls are located on Piner and Colgan Creeks and drain 57 and 99 acres, respectively. The Piner Creek outfall is 48 inches in diameter and the drainage area consists of primarily residential use. The 68x43-inch outfall sampled on Colgan Creek primarily drains commercial areas. Other land uses in the Colgan Creek watershed include industrial and residential areas.

Chemical testing was conducted for the first flush and a representative storm event during the 2006/2007 rainy season. The grab samples were analyzed for the local pollutants of concerns, including sediment, nutrients, and pathogens as shown in the following **Table V.4**. (See **Appendix V.C** for lab results) Lab results were typical of urban runoff and consistent with sampling results obtained by the County and SCWA as required by the storm water permit.

Table V.4
Outfall discharge characterization for the 2006/2007 rainy season

	Method	Units	PQL*	68" Outfall to Colgan Creek		48" Outfall to Piner Creek	
				Oct. 5, 2006	Mar. 26, 2007	Oct. 5, 2006	Mar. 26, 2007
Temperature	Field	°C	-	-	15	-	14
pH	Field	-	-	-	6.6	-	6.6
Specific Conductance	120.1	umhos/cm	20	-	-	-	-
Total Suspended Solids (TSS)	160.2	mg/L	1.0	77	30	130	9.5
Total Dissolved Solids (TDS)	160.1	mg/L	10	94	51	63	120
Total Phosphorus	365.2	mg/L	0.10	0.46	0.17	0.54	0.26
Dissolved Phosphorus	365.2	mg/L	1.0	ND	ND	ND	ND
Total Nitrogen	SM 4500-N	mg/L	1.0	3.5	1.5	3.5	3.5
Total Kjeldahl Nitrogen (TKN)	351.2	mg/L	1.0	3.2	1.1	3.2	2.2
Ammonia as N	SM 4500 NH3C	mg/L	0.20	0.87	0.70	0.66	0.40
Nitrate as N	300	mg/L	0.20	0.35	0.33	0.28	1.3
Nitrite as N	300	mg/L	0.20	ND	ND	ND	ND
Fecal Coliform	SM 9221	MPN/100 ml	2.0	850,000	**	500,000	**
Fecal Streptococcus	SM9230	MPN/100 ml	2.0	300,000	**	400,000	**
Total Coliforms	SM9221	MPN/100 ml	2.0	22,000,000	**	2,800,000	**
E. Coli	SM9223	MPN/100 ml	1.0	850,000	**	84,600	**

*Practical Quantitation Limits are used so that data from different labs can be evaluated on a consistent regulatory level. PQLs are sums of seven times the standard deviation of the analytical measurements plus the Method Detection Limit (MDL). MDLs are defined as three times the standard deviation of the analytical measurements and produce results with a 99% probability that are different from blanks.

**Alpha Analytical was not able to perform analyses within the required hold times.

FIGURE V.A



Fig. V.A 2005/06 Discharge Characterization - Colgan Creek Drainage Boundary and Outfall Location Scale : 1" = 400'
Drainage Area: 99 acres Primary landuse type: Commercial Date of Aerial: 2002

FIGURE V.B

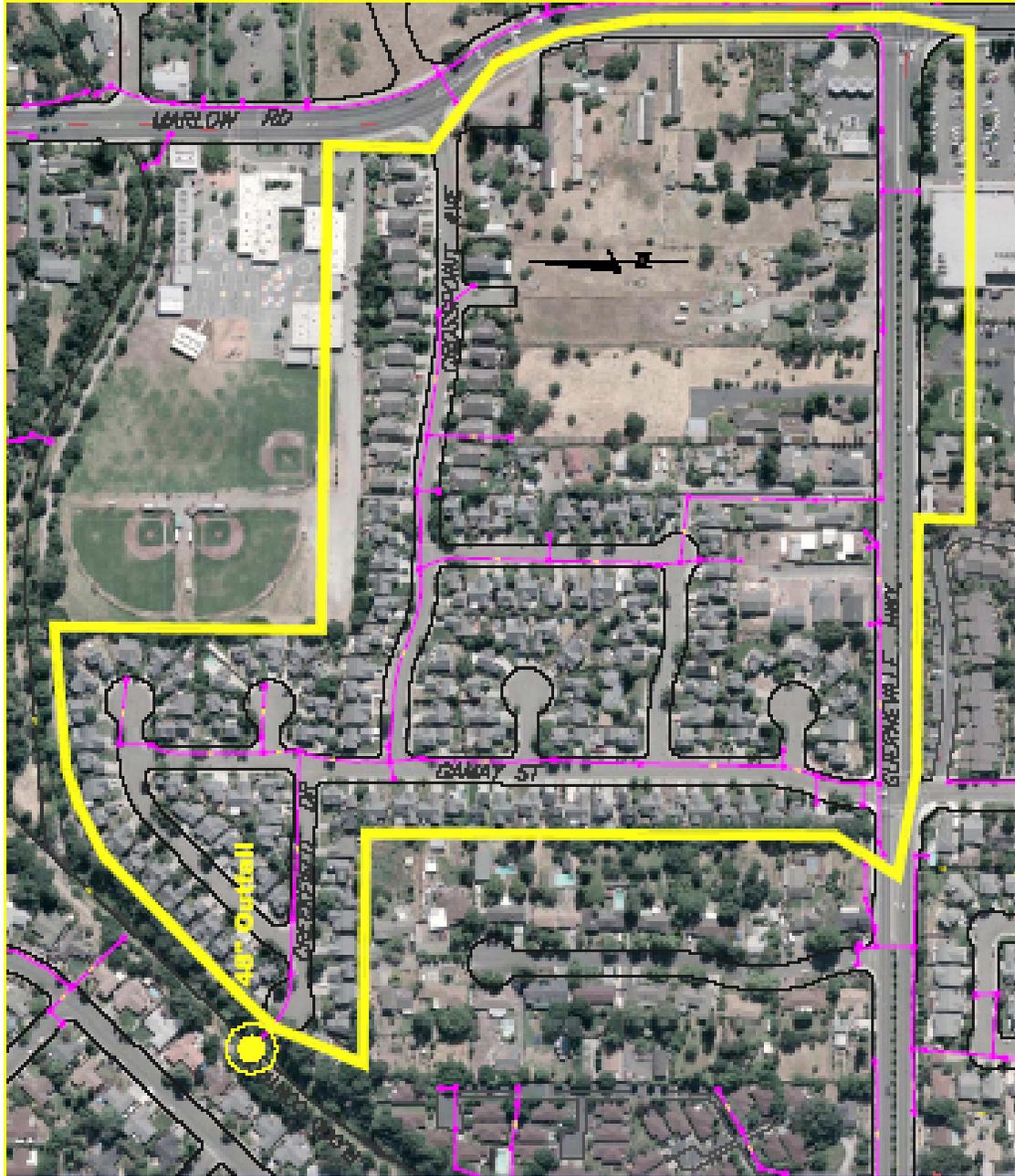


Fig. V.B 2005/06 Discharge Characterization - Pliner Creek Drainage Boundary and Outfall Localion Scale : 1" = 300'
Drainage Area: 57 acres Primary landuse type: Residential Date of Aerial: 2002

4. PROFESSIONAL BENTHIC COMMUNITY SURVEY

Every other year, samples are collected for the “Professional Benthic Community Survey” using the California Department of Fish and Game protocol, “California Stream Bioassessment Procedures (Habitat Assessment and Biological Sampling for Citizen Monitors).” Appropriate creek reaches identified within Matanzas, Brush, Piner, Paulin, Peterson, and Colgan Creeks are sampled in spring as flows diminish after winter rains. Samples are sent to an approved testing laboratory for sorting, macroinvertebrate identification and data analysis.

Sampling for Year 4 was conducted according to the new Surface Water Ambient Monitoring Program (SWAMP) protocol and written approval for the protocol change was obtained from Mona Daugherty of the Regional Water Board on May 30, 2007. Samples were transported to the Sustainable Land Stewardship Institute International in Sacramento, CA on July 2, 2007 and are currently being analyzed. Data analysis and a supplemental report will be forwarded to the Regional Water Board in late 2007.

5. COLGAN CREEK SPECIAL STUDY

Study Purpose: Determine if existing bioassay and chemical data indicate toxicity in Colgan Creek and, if toxicity is established, identify and control toxicant(s) and source(s) in the watershed through outreach/education and or enforcement.

The City received approval from Regional Water Board staff on August 11, 2005 to change the proposed special study outlined in the Storm Water Management Plan to the Colgan Creek Special Study. The City completed the study as outlined in the study plan but was not able to identify a source. As a result, additional work was performed to further the City's efforts in identifying the source(s) causing the intermittent low survival rates for rainbow trout in Colgan Creek. Further background information related to this study can be found in Term 2, Annual Reports 2 and 3.

2006/07 Geographic Bioassay Sampling

The City conducted rainbow trout bioassays from specific locations near creek outfalls to assist in the identification of the geographic area(s) of toxicity and allow focused outfall chemical sampling to locate the source of toxicity. During the 2006/2007 rainy season acute static bioassay tests with rainbow trout (*Oncorhynchus mykiss*) were performed at five locations for two storm events. Samples were collected following the City's existing NPDES storm water permit sampling criteria and analysis followed the EPA/600/4-90/027F protocol. Samples were collected during the first flush (October 5, 2006) of the season and one representative storm event (March 26, 2007). A representative storm is an event preceded by 72 hours of dry weather (less than 0.1” of precipitation), collected after 0.3” of precipitation has fallen in 3 hours, and one month must separate each monitoring event. Each sample consisted of five gallons of creek water that is either dipped or bucketed from the creek into plastic five-gallon containers.

Samples were collected at 5 sites to isolate major storm drain basins that drain to Colgan Creek. The three major storm drain areas include twin 54” storm culverts that drain Corby Avenue up to Hearn Avenue, a 68” storm drain that receives flows east of Highway 101 and the Santa Rosa Marketplace, and a 135” storm drain that drains up to CA State Highway 12 and portions of the

Sonoma County Fairgrounds. The remaining two sites included areas upstream and downstream of the City limits. Bioassay sampling sites included the following locations (**Figure V.C**):

1. *Bellevue Avenue*. Sample taken in the creek upstream of the Bellevue Avenue Bridge. The drainage area includes light industry, agriculture, residences, and all upstream reaches.
2. *Bellevue Avenue near Juniper Avenue*. Sample taken in the creek just above the twin culverts near 90° bend in creek along Bellevue Avenue. The drainage area includes residences, light industry, and all upstream reaches.
3. *Hearn Avenue*. Sample taken in the creek just below Hearn Avenue but above the major outfall. The drainage area includes residences and all upstream reaches.
4. *Bedford Street*. Sample taken in the creek upstream of the major outfall draining land northeast of Colgan Creek up to the Sonoma County Fairgrounds. The drainage area includes residences, agriculture, and all upstream reaches.
5. *Meda Avenue*. Sample taken in creek and isolate creek conditions upstream of the urban area. The drainage area includes agriculture and upstream open space.

Bioassay sampling did not identify toxicity in any specific geographic area (**Table V.5**); therefore chemical sampling was not performed in any storm drain outfalls (See **Appendix V.D** for lab results). Toxicity was defined as a sampling result with less than 80% survival and 20% lower than other areas sampled. Since no specific reach was identified as being toxic, then additional outreach/education will be conducted within the watershed (See Work Plan for Permit Year 5).

Table V.5
Rainbow Trout (*Oncorhynchus mykiss*) bioassay survival rates in the Colgan Creek Watershed

Location	October 5, 2006 (Control 100%)	March 26, 2007 (Control 100%)
Bellevue Avenue	90%	100%
Bellevue Avenue near Juniper Avenue	95%	100%
Hearn Avenue	80%	100%
Bedford Street	100%	100%
Petaluma Hill Road	95%	100%

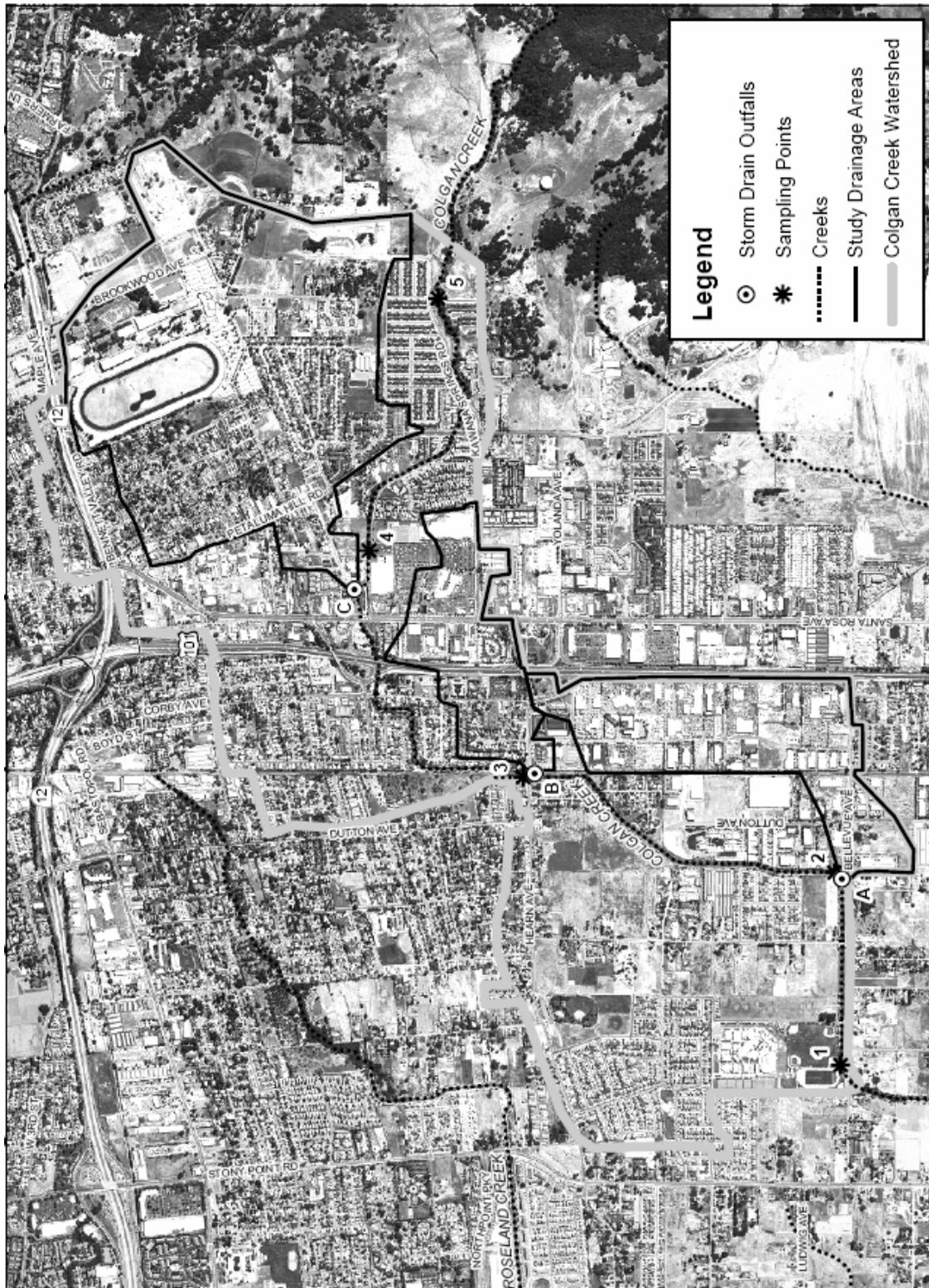
Outfall Chemical Sampling

Since geographic bioassay sampling could not associate toxicity results within the vicinity of specific storm drain outfall locations, outfall chemical sampling was not performed.

Status of Study

The Colgan Creek Special Study is now complete. The source of the intermittent toxicity could not be determined and outreach was performed for residents and businesses. Additional outreach is also planned for Year 5 to focus on the residents of Colgan Creek watershed (see Work Plan).

Figure V-C
Colgan Creek Special Study 2006/2007
Bioassay Sampling Locations



References

Bisson, P.A., R.E. Bilby. 1982. Avoidance of suspended sediments by juvenile coho salmon. North American Journal of Fisheries Management 4:371-374.

CWP (Center for Watershed Protection). 2005. Unified Subwatershed and Site Reconnaissance: A User's Manual. Office of Water and Management, U.S. Environmental Protection Agency, Washington, D.C.

PART VI

**STANDARD URBAN STORM WATER MITIGATION PLAN
(SUSMP)**

**Permit Term 2
Annual Report 4**

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STANDARD URBAN STORM WATER MITIGATION PLAN (SUSMP)

Goal: *Minimize storm water pollution, limit storm water peak flows, and conserve natural areas to MEP from new and redevelopment*

County private projects: **Table VI.1** is a list of private development projects conditioned by PRMD as part of the discretionary project review process.

Table VI.1
Private projects conditioned by PRMD with SUSMP BMP's as part of the design

Project name	Address	Type of project	Type of BMP's	Status
Warehouse/Office	11051 Petaluma Hill Rd	Commercial	Undecided	Planning
Thiessen design	4008 Bohemian Hwy	Mixed use	Swale, det. basins	
Minor Subdivision	18750 Buena Vida Ct	Residential	Undecided	Planning
New Winery	600 London Way	Winery	Undecided	Planning
New Olive Oil Co.	6020 Volkerts Rd	Commercial	Undecided	Planning
Minor Subdivision	6590 Starr Rd	Subdivision	Undecided	Planning
Ursulin High School	100 Ursulin Rd	Commercial	Undecided	Planning
Minor Subdivision	3200 N Laughlin Rd	Subdivision	Undecided	Planning
Minor Subdivision	898 Airport Blvd	Subdivision	Undecided	Planning
Warehouse/Distribution	3200 N Laughlin Rd	Commercial	Undecided	Planning
Gas Station/Market	4856 Old Redwood HWY	Commercial	Undecided	Planning
Major Subdivision	3336 Santa Rosa Ave	Residential	Undecided	Planning
Winery/Animal Shelter	555 Westside Rd	Commercial	Undecided	Planning
Residential Addition	2360 Corby Ave	Residential	Undecided	Planning
Major Subdivision	5495 Old Redwood HWY	Subdivision	Undecided	Planning
Sonoma Avenue Church of Christ	4260 Snyder Lane	Commercial	Undecided	Planning
Abbodanzo Winery	847 Airport Blvd.	Commercial/Winery	Swales, pervious pavement	Planning
Feed Store/Gas/Minimart	792 Todd Road	Commercial	Bio-retention	Planning
Spring Hill Church	3700 Fulton Road	Church	Swales	Planning

CITY CAPITAL IMPROVEMENT PROJECTS

The City of Santa Rosa's Public Works Department developed a capital improvement projects (CIP) database to track project and staff scheduling. The database has been modified to add a field identified as "Storm Water (SUSMP)." The database aids in tracking SUSMP applicable projects but also reminds project managers of SUSMP requirements. When the SUSMP box is selected a pop up window prompts the user to select all the conditions that apply to the project. These conditions are noted below:

- creates one acre or more of impervious surface
- located adjacent to a waterway
- requires a new storm drain outfall
- none of the above conditions apply

When the user selects one or more of the SUSMP applicable criteria, a pop up appears with the following text:

<u>STORM WATER REQUIREMENT</u>

Project is subject to the Standard Urban Storm Water Mitigation Plan (SUSMP) requirements.
--

The SUSMP field contains an associated help screen to explain the requirements and direct questions to a staff contact and a link to the SUSMP guidance documents. The SUSMP Guidelines can be found on the City's website at <http://ci.santa-rosa.ca.us/default.aspx?PageID=1171>. The CIP database is also used by the Utilities Department and Recreation and Parks Department.

The City has numerous capital improvement projects listed in **Table VI.2** below that have been identified as SUSMP applicable projects. Due to the variable nature of project budgets and priority, the status of the projects listed below may range from preliminary design to construction phase.

Table VI.2
City of Santa Rosa Capital Improvement/ SUSMP Applicable Projects
Year 4: 2006-07

A Place to Play
A Place to Play Pond Upgrade
Bennett Valley Road Pedestrian Path
Colgan Bellevue Park
Colgan Creek Bikepath
Colgan Creek Bridge @ Dutton Avenue
Farmers Lane Extension from Bennett Valley Road to Yolanda Avenue
Hearn Avenue Interchange
Lance Drive - Pedestrian Pathway
Lower Colgan Creek Restoration - Elsie Allen High School
Northpoint Parkway-new street-Dutton Connection-Hearn to Northpoint
Northpoint Parkway Extension
Piner Road Pedestrian Path
Santa Rosa Creek, Prince Memorial Greenway, Pierson Reach Restoration
Sebastopol Road – S. Wright to Lombardi Court
Sebastopol Road Reconstruction – N. Dutton to Olive Street
South Santa Rosa Area Trunk Sewers Project
Stony Point Rd from Sebastopol Rd to Hearn Ave - Widen to 4 Lanes (New)
Storm Water Creek Restoration Projects
Talbot Avenue Storm Drain
Yolanda Avenue Widening
Youth Community Park

CITY PRIVATE PROJECTS

The City has prepared and directed the implementation of SUSMP in accordance with the City General Plan and the NPDES Storm Water Permit. The application process for new projects now includes the requirement for the inclusion of worksheets determining the applicability of SUSMP requirements based on calculations of new impervious area, construction of a new outfall to a creek or proximity of the project to a waterway. The Engineering Division of the Community Development Department has been charged with the review and approval of both the Preliminary and Final Storm Water Mitigation Plans as required in the copermittee's formally adopted *Standard Urban Storm Water Mitigation Plan Guidelines*. The Engineering Division is also charged with assuring the proper design of BMP's and inclusion of required BMP's into the project improvement plans.

Review of the City Zoning Code, City Design Guidelines and City Standards has revealed no major impediments to implementation of SUSMP as of this date. As the City gains more

experience with SUSMP implementation, the need for revisions to the City Zoning Code, City Design Guidelines, City Standards and environmental review procedures will be evaluated.

There were several private projects under City SUSMP applicable jurisdiction for FY 06-07. In addition, there were projects in the City that were required to have storm water BMP's as a result of conditions from the State of California and the 401 water quality certification process. Both of these types of projects are as shown in **Table VI.3** as follows.

Table VI.3
City private development projects with SUSMP BMP's as part of the design.

Project name	Address	Type of project	Type of BMP's	Status
Chanate Village	2350 Chanate Road	34 Unit Subdivision	Bio Swales and Turf Block	Completed
Dutton Meadows Phase 1	2650 – 2884 Dutton Meadow	126 Unit Subdivision	Detention Basin	Design Stage
Dutton Village	2740 Dutton Meadow	148 Unit Subdivision	Detention Basin	Design Stage
G & C Auto Body		Commercial	Media Filter	Design Stage
Glenview II	1650 Meda Ave.	28 Unit Subdivision	Bio Swales	Design Stage
Gordon Ranch	1320 Gordon Lane	88 Unit Subdivision	Detention Basin	Completed
Kaiser Hospital - Phase 1	3975 Old Redwood Highway	New Medical Office Building	Underground Detention	Completed
Kaiser Hospital - Phase 2	3975 Old Redwood Highway	New Medical Office Building	Pond Detention and Bio Swales	Completed
Kawana Springs 5	1835 Kawana Terrace	32 Unit Subdivision	Bio Swales	Completed
Kawana Springs 6	1835 Kawana Terrace	94 Unit Subdivision	Detention CRWQCB	Design Stage
Kawana Village	1150 Kawana Springs Rd.	38 Unit Subdivision	Bio Swales & Pipe Detention	Design Stage
Kohl's Department Store	3746 Airway Drive	New Department Store	Bio Swales	Completed
Meda Avenue Subdivision	1820 Meda Avenue	32 Unit Subdivision	Bio Swales	Design Stage
Montgomery Creek	4743 Montgomery Drive	8 Unit Subdivision	Detention Basin	Design Stage
OSL Subdivision	4110 Thomas Lake Harris Drive	10 Single Family Dwellings and 136 Apartment Units	Bio Swales & Detention Basin	Design Stage
Prospect Oaks	4599 & 4607 & 4617 Sonoma Highway	32 Unit Subdivision	Bio Swales & Detention Basin	Design Stage
Red Tail Estates	5643 Melita Road	16 Unit Subdivision	Bio Swales and Detention and Vortex Unit	Completed
Safeway	2300 Mendocino Avenue	New Shopping Center	Baffle Filter Unit	Completed
Santa Rosa Village	2660 Petaluma Hill Rd.	Commercial + 126 Unit Residential	Bio-Retention	Design Stage
Sorrento	910 Acacia Lane	21 Unit Subdivision	Baysaver Unit	Completed
Stony Ranch	2132 Stony Point Road	28 Unit Subdivision	Baysaver Unit	Completed
West Entry	4055 Sebastopol Road	139 Mixed Use Condominiums	Bio Swales	Design Stage
White House	770 Third Street	183 Apartment Units	Detention System	Design Stage

CITY & COUNTY PROJECTS

The majority of the effort in 2006-2007 was focused on the process of implementing the SUSMP Guidelines. The City and County consider and implement post-construction storm water treatment BMP's for projects managed by their departments whenever possible.

The City and County have required applicants to implement SUSMP measures on projects, and have permitted several projects, which incorporate detention basins, proprietary vault storm water treatment devices, inlet filters and grassy swales.

SUSMP Guidelines

While SUSMP Guidelines have been developed and distributed to the public for use, there are two priority issues that need further refinement. The first is channel forming discharge and the second is the waiver program. Regarding channel forming discharge, the project design shall limit the post-development runoff flow rate and velocity to the pre-development discharge flow rate and velocity from the project site. Direction from the Regional Water Board staff was to follow the example of the flow-duration approach on a watershed scale when addressing channel forming discharge.

The SUSMP Guidelines contain a provision for a waiver to the SUSMP requirements. Waiver criteria, such as BMP's being evaluated and rejected as infeasible and requiring an in lieu fee, were briefly discussed in the SUSMP Guidelines. More details on the criteria as well as administrative processes are needed to create a formal waiver program.

Provide Training to Staff

Both the City and the County provide annual storm water training to all staff. SUSMP specific topics have been integrated into these trainings for this reporting periods. More information regarding training can be found in parts II (County), III (City of Santa Rosa) and IV (Sonoma County Water Agency) of this report.

Encourage applicants to implement SUSMP measures on projects

Staff at County PRMD and both City Community Development and Public Works encourage applicants to implement SUSMP measures on projects

Implement SUSMP measures on applicable projects within the SUSMP Boundary

The City and County currently use the SUSMP Guidelines to review and approve SUSMP applicable projects. The SUSMP Guidelines can be found at <http://ci.santa-rosa.ca.us/default.aspx?PageID=1171> and are used by municipalities to review, condition, and approve SUSMP projects.

Additional Accomplishments

1. The County of Sonoma's Permit and Resource Management Department (PRMD) developed a screen within the PermitsPlus database record information pertinent to SUSMP projects. The screen has fields to record: permit number, parcel number, disturbed area, whether the project is adjacent to a water body, the amount of impervious area the project creates, whether the project generates a new storm drain outfall. o track project and staff scheduling. The database has been modified to add a field identified as "Storm Water (SUSMP)." The

database aids in tracking SUSMP applicable projects but also reminds project managers of SUSMP requirements. When the SUSMP box is selected a pop up window prompts the user to select

2. The responsibility for inspecting BMPs for grading projects was shifted to the Engineering Division. With this shift grading inspectors can better hold pre-construction meetings to discuss the need for properly designed post-construction BMPs that address sediment control. Also, grading inspectors can inspect for BMP adequacy, installation, and maintenance.
3. Reg Cullen of Sonoma County's PRMD gave approximately 12 field tours to 95 county staff. These field tours included SUSMP BMP's such as storm drain inserts, pervious pavement, unit pavers, and permeable bricks. Aspects discussed included cost of SUSMP BMP's, efficiency of BMP's, and maintenance responsibility for SUSMP BMP's.
4. SUSMP Guidelines are available at PRMD and free to the public at the Storm Water public station. Approximately 20 hard copies of the guidelines were given to the public during this reporting period. The SUSMP Guidelines are also available at the PRMD web site. Many engineering firms have been directed to download the guidelines from this site (hosted by the City of Santa Rosa).

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**MS4 NPDES Term 2, Annual Report 4
July 1, 2006 – June 30, 2007**

Appendices

**National Pollutant Discharge
Elimination System Permit for
Storm Water Discharges
from the Santa Rosa Area**

NPDES Permit No. CA0025054

Submitted to:
**California Regional Water Quality Control Board
North Coast Region**

Submitted by:
**City of Santa Rosa,
County of Sonoma, and
Sonoma County Water Agency**

Submitted October 1, 2007

**MS4 NPDES Term 2, Annual Report 4
July 1, 2006 – June 30, 2007**

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Sonoma County Water Agency**

Submitted October 1, 2007

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COPERMITTEE MEETING NOTES
07/2006-06/2007

Appendix I

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From: Andy Rodgers [andy@econ-inc.net]

Sent: Tuesday, July 18, 2006 11:35 AM

To: Bacciarini, Brian; Bertolero, Toni; Booker, Kevin; Brady, Steve; Burt, Richard; Cabrera, Anthony; Cargay, Elizabeth; Christen, Elizabeth; Cullen, Reg; Desmond, Greg; Donley, Steve; Emig, Richard; Ferguson, Colleen; Flugum, Jim; Frasier, Forest; Keiran, Paul; Kelly, Sue; Kottage, John; Lewin, Jeff; Mahre, Mark; Maitland, John; Michels, John; Miller, Rita; Musetti, Alfred; 'Noren, David'; Ochoa, Analette; Parsons, Andy; Paty Crespo Orozco; Perez, Alejandro; Phillips, Teryl; Quarles, Nathan; Rodgers, Andy; Rosas, Alex; Short, John; Smith, Mike; Tacata, Eydie; Taylor, Lee; Tennison, Linnea; Tyler, Jim

Subject: MS4 Santa Rosa Area Monthly Meeting Change - 7/20

Attachments: Notes 2006 06 15.pdf

Good morning – This is notice that the MS4 Santa Rosa Area monthly copermittee meeting scheduled for this Thursday, July 20, 2006 will be a copermittee workshop devoted to preparing response to RWQCB comments on T2/Annual Report #2, and to preparing T2/Annual Report 3! The copermittee workshop will be at Santa Rosa Public Works Conference Room #5, 69 Stony Circle, Santa Rosa.

Attached please find notes from the 6/15/06 monthly meeting. Thank you, and please feel free to call if any questions.
Andy

Andy Rodgers

ECON

Post Office Box 123

Cotati, California 94931

Tel 707-789-0262

Fax 707-789-0292

andy@econca.com

MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, August 17, 2006
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 5
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Desmond, Greg	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Miller, Rita	Santa Rosa Public Works
	Philips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development

Welcome/Introductions

Additions to Agenda:

None.

Announcements:

Greg Desmond announced that there is free technical workshop in Novato hosted by the Army Corps and RB2 from September 12 - 14. Contact Greg for more information.

Greg polled the group for attending the upcoming CASQA conference (9/25 thru 9/27/06).

Continued Business

Response to RWQCB T2/AR2 Comments Letter

The group discussed collating the final comments and reviewing for submittal to the RWQCB.

Annual Report Preparation

The copermittees are prepared to submit final edits and information to ECON for final report preparation. Coordinating the schedule for the BOS and City Council agenda items for certification, and preparation for submittal to the RWQCB was reviewed.

Spill Response

Greg Desmond reported that Pete Parkinson has reviewed and commented on the County Spill Response Plan. Greg anticipates a final plan will be ready in the near future.

Channel Forming Discharge

No update.

New Business

I

RB2 Audit

Greg Desmond mentioned that Salina from RB2 will be visiting the County for an audit of municipal operations and private construction.

Miscellaneous Discussions

The group discussed the pros/cons and challenges of numeric limits.

Andy Rodgers asked whether the copermittees wanted to set up a “managers meeting” for this permit year. This has been tried several times in years past. It was determined that one-on-one meetings with managers were much more productive. Colleen said that City staff will be presenting to the Council on the storm water program next month (September).

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Desmond, Greg	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Keiran, Paul	Regional Water Quality Control Board
	Miller, Rita	Santa Rosa Public Works
	Philips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Short, John	Regional Water Quality Control Board
	Taylor, Lee	Santa Rosa Community Development

Additions to Agenda/Announcements

None.

New Business

Fairgrounds Spill: Paul Keiran mentioned the recent diesel spill incident that occurred at the Fairgrounds on August 6, 2006. He said he’s not aware if they have a permit or not, and he hasn’t yet heard back on the status. Paul continued that BTEX and TPH(d) were found in the discharge and there might be off-site sources.

Colleen Ferguson said it’s her understanding that the Fairgrounds falls under Phase I. John Short said his understanding is that the Fairgrounds are a special district, and if the land is owned by the County, the County should exercise authority.

Greg Desmond said he would investigate how to proceed with County council and report back. The group requested to agendize this item for next month’s meeting.

Reclaimed wastewater Irrigation: John Short said that he’s been working with wastewater agencies on reclaimed water overspraying/irrigation that creates runoff. He said there can’t be summertime discharge to streams as it would be a violation of the permit.

If the overspray is accidental, the RWQCB doesn’t want to hold the City liable. John said he wanted the copermittees to come up with a plan to address this issue, and suggested that the storm water permit be amended.

Colleen responded that the City Utilities Department staff have talked to her about the issue. Colleen said she sees how this issue would fall under the permit; however, she wants to ensure that any obligations related to

managing reclaimed wastewater irrigation overspraying stay with the City Utilities Department staff and not shift to the stormwater staff.

John asked that the copermittees add this item as a category. John said that a permit modification would be limited to only this issue, so public review comments would also be limited. Colleen suggested coordinating a meeting with Dave Smith, Pam Jeanne and the City Utilities Department staff.

Environmental Column: John Short asked about purchasing space for the environmental column in the Press Democrat. Colleen expressed concern that purchased space for the column may not be effective as it would be titled "Paid Advertisement" and thus may not be taken seriously. The City's storm water team intends to try another approach with the Press Democrat by creating news with issuing media releases to the local media including the PD.

RRWA

Paul Keiran will be giving a program oversight Phase II presentation to RRWA on August 22, 2006.

RWOCB Announcements

Paul Keiran said he was giving a SUSMP presentation to ASCE on September 13, 2006 and wanted to connect with Reg and City on their approaches.

Future Meetings

The next monthly copermittee meeting is scheduled on September 21, 2006 at 8:30.

10:00 a.m. Adjourn

* * *

MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, September 21, 2006
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 5
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Desmond, Greg	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Miller, Rita	Santa Rosa Public Works
	Philips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Smith, Dave	Santa Rosa Utilities Department

Welcome/Introductions

Additions to Agenda:

None.

Announcements:

Greg Desmond mentioned that he recently had a productive meeting with Kat Kuhlman and John Short. They met to review and discuss County storm water programs.

Rita Miller suggested that the copermittees meet with Don McEnhill, Russian Riverkeeper. The group supported the idea and Rita agreed to set it up.

Greg Desmond announced a bio retention conference taking place in Oakland on October 20.

Continued Business

Quarterly Training

Greg Desmond said that the dates for quarterly training are being pushed back. However, a train-the-trainer session may be held after November of this year.

Reclaimed wastewater Irrigation

Colleen Ferguson summarized the overspray/runoff issue as introduced at last months meeting.

Dave Smith said that the longer term solution to this issue is to amend the Basin Plan. A Basin Plan amendment would allow the irrigation to occur. However, the amendment process is very long, so a shorter term solution is needed such as amending the MS4 permit. Dave said that he would prepare draft BMP's to mitigate runoff and provide for review and input by this group. The group discussed that there aren't general standards to reference for this concern as of yet.

Dave said the exact timing for this work is unknown right now, but it's possible it may move forward before the end of 2006.

Kevin Booker clarified that this issue is only for urban areas and not agricultural lands.

Teryl Philips said that the County does not use irrigation water on County lands in the permit area, other than possibly the airport. She was going to look into the airport facility and report back.

Channel Forming Discharge

Greg Desmond reported that Salina of Region 2 recently suggested to him that the County discuss and coordinate the channel forming discharge study with RB2 prior to proceeding with the Brown & Caldwell scope of work. Greg said he would report back to the group as the discussions progress.

Annual Report Preparation

The 2005-2006 Annual Report was certified by the City Council this week. Rita Miller gave a presentation to the City Council. The annual report is on the County agenda for certification this coming Tuesday 9/26.

Response to RWQCB T2/AR2 Comments Letter

The group discussed coordinating a final review and production of the RWQCB response letter.

New Business

RB2 Audit

Greg Desmond said that the RB2 Audit went well overall. He said that the Board is requesting a full revision to the Storm Water Management Plan, and the County is interested in doing that. Written Board comments from RB2 are expected in approximately six weeks.

Sonoma County Fairgrounds Spill

In regards to a recent spill event, Rita Miller said that samples were being collected from the storm system this week. The group discussed the potential for upstream sources and under what permit the fairgrounds is subject. Greg Desmond said that he has been unable to make contact with someone with specific knowledge of what entity has authority and responsibility for the fairgrounds facility. He said he has discussed the issue with Paul Keiran and will continue to follow up and report back to the group.

Email Complaint

Kevin Booker said that he received an email from a citizen that claims the County is negligent in overseeing storm water practices by commercial operations. The email included pictures and claims of issues, but no specifics of where or who were provided. Kevin planned to speak with his supervisor about responding to the email and will report back to the group.

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Desmond, Greg	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Keiran, Paul	Regional Water Quality Control Board
	Miller, Rita	Santa Rosa Public Works
	Philips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Short, John	Regional Water Quality Control Board

MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, October 19, 2006
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 3
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Desmond, Greg	Sonoma County PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Maitland, John	Sonoma County Public Works
	Marcy, Alex	Sonoma County PRMD
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON

Welcome/Introductions

Additions to Agenda:

None.

Announcements:

Greg Desmond announced he has taken a position with the City of St. Helena. Greg's last day with Sonoma County PRMD will be in late November. *We all wish Greg the best and look forward to keeping in touch!*

Continued Business

Channel Forming Discharge

Greg Desmond contacted Region 2 to discuss the channel forming discharge model in Contra Costa. Greg said that Reg Cullen, PRMD, recently sent a letter to Brown & Caldwell to inquire on concerns Janet O'Hara had expressed. The City of Santa Rosa will be copied on that letter.

County Spill Response Plan

No update.

County Fairgrounds

Greg Desmond said that legal counsel for the Regional Board determined that the Fairgrounds is under County responsibility. The group decided to discuss this item at the Regional Board portion of this meeting.

Reclaimed Wastewater Irrigation Amendment

No update.

New Business

Monitoring

Kevin Booker and Colleen Ferguson discussed possibly adding mercury to storm water sampling protocol. Mercury was not included in this year's first flush. The group discussed the monitoring relevance to the upcoming TMDL process.

Term 2, Annual Report 4

Rita Miller suggested that the copermittees meet before the end of this year to discuss reformatting Annual Report No. 4. The copermittees agreed to meet and discuss. Andy Rodgers said that ECON has budget remaining from AR3 prep, so he can assist if needed.

Russian Riverkeeper

Rita Miller suggested the copermittees set up a meeting with the Don McEnhill, Russian Riverkeeper, to share information. The group agreed it was a good idea and Rita offered to set it up.

First Flush

Steve Brady reported that first flush samples were collected on October 5. The timing of the storm was good for staff and volunteers, as it occurred during the day! Some bioassay results included 90% survival from Colgan, and 75% from Piner. A surprise was 40% survival from Matanzas. Outfall sampling was also completed.

More results are due and will be shared next meeting.

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Desmond, Greg	Sonoma County PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Maitland, John	Sonoma County Public Works
	Marcy, Alex	Sonoma County PRMD
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Short, John	Regional Water Quality Control Board

Additions to Agenda/Announcements:

The copermittees added a discussion regarding the Fairgrounds.

Items Continued from Copermittee Meeting

Sonoma County Fairgrounds: John Short said that the RWQCB is preparing a letter to be sent to the County asking for BMP implementation at the fairgrounds. He said the timeframe will be flexible but there might be some short term, rapid-deployment requirements. Greg Desmond asked and John Short confirmed, that the RWQCB letter is addressed to the County Administrator and not PRMD.

Annual Report 4: Rita Miller summarized the copermittees intent to meet soon and plan a reformatting of Annual Report No. 4.

Colleen Ferguson mentioned that we might want to have a short informational presentation for the Board. John Short said he thinks it's a great idea; however, the Board is losing its quorum next month. John suggested the item be considered for the spring 2007.

The group requested that "Board Presentation" be added to the monthly meeting agenda.

Channel Forming Discharge: Greg Desmond reported that RB2 had concerns about Contra Costa's model, so the County is investigating what those concerns are. The County is considering hiring the consultant that worked with Contra Costa. John Short said that there are lessons learned in San Diego, such as allowing project offsets (restore an off-site area for credit on project land).

Coordinated Permitting: John Short said that perhaps there could be a Clearinghouse for completed projects - such as utilizing the Jones & Stokes information for the water agency.

John Maitland said that one of the difficulties with creek-friendly work is that it cannot get a stamp from an engineer. Projects such as ones located above a public roadway can't get stamped unless it is built with rip-rap or a retaining wall.

The group discussed the difficulty of working with FEMA. John Maitland said that Federal Highways does understand the bio retention concept vs. cement.

New Business

John Short mentioned that the RWQCB may be following through with some SUSMP projects and see how the process is working. John mentioned one project that he has been talking with Lee Taylor about.

The group clarified that the Water Agency performs the hydraulic calculations, but doesn't provide SUSMP compliance review (flows).

John Short said that new road widening projects may be subject to SUSMP. Rita Miller pointed out that Part VI of T2/AR3 lists projects that are subject to SUSMP.

Colleen Ferguson mentioned the City had a couple of recent public outreach efforts including a presence at the Cultural Diversity Festival, the Brush Creek Cleanup and Raccoon Highway. Raccoon Highway is a storm water program where the kids can explore a storm drain and see where the pipes flow.

The group discussed the need for more solid waste awareness/education at the high schools.

John Maitland said that with the help of interns, the inventory project at the County is going very well. The County did an initial review of inlet sedimentation.

RWQCB Discussion/Announcements

John Short mentioned that Paul Keiran was recently quoted in the Press Democrat. John said he followed up with the author of the article who expressed interest in writing more about storm water. Colleen Ferguson added that speaking with individual reporters is an effective approach.

Future Meetings

The next monthly copermitttee meeting is scheduled on November 16, 2006 at 8:30.

10:00 a.m. Adjourn

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, November 16, 2006
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 3
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Desmond, Greg	Sonoma County PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Marcy, Alex	Sonoma County PRMD
	Miller, Rita	Santa Rosa Public Works
	Phillips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Tyler, James	Sonoma County Environmental Health

Welcome/Introductions

Additions to Agenda:

Greg Desmond suggested that the group inquire with the Regional Board on the status of the Phase II permittees.

Announcements:

Rita Miller reported that the City has funded the Master Gardeners (MG) program in years past; however, this year the MG program may itself hire a full time coordinator and not request funds from the City. The City is considering applying these previously earmarked funds toward an integrated pest management project managed by Ann Joseph called "Our Water Our World".

Continued Business

Channel Forming Discharge

Greg Desmond said that the County has not heard back from Brown & Caldwell on a request for information related to Contra Costa.

County Spill Response Plan

No update.

County Fairgrounds

Greg Desmond reported that the County has not yet seen a letter from the Regional Water Board.

Reclaimed Wastewater Irrigation Amendment

Colleen Ferguson said that the City has some questions relating to consistency with the Statewide Phase II permit. One question is whether or not Phase II cities are required to cover reclaimed water through the permit program.

New Business

Decals

Rita Miller reported that the City's public storm drain system currently has 89% decal coverage! The City is planning a pilot study to reach out to additional private property owners and schools to add new decal locations. This pilot study will be funded through oil recycling grant monies in collaboration with Waste Management.

Term 2, Annual Report 4

The group discussed slimming down and focusing the 2006/2007 annual report. The copermittees agreed to meet separately to discuss a new report format for next year.

Russian Riverkeeper

Rita Miller said that a recent meeting with the Russian Riverkeeper (RRK) was very well attended. The meeting had good discussion covering a variety of issues. She said the RRK expressed a specific concern regarding construction sites.

Santa Rosa Creekwide Master Plan

Approximately 40 people attended a public meeting last night. There were good questions asked which led to interesting discussions. Colleen added that the City received a grant from CalTrans to hire *Land People* of Marin County to make maps.

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Desmond, Greg	Sonoma County PRMD
	Dougherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Marcy, Alex	Sonoma County PRMD
	Miller, Rita	Santa Rosa Public Works
	Phillips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Tyler, James	Sonoma County Environmental Health

Additions to Agenda/Announcements:

None.

Items Continued from Copermittee Meeting

Decals and Schools:

Rita Miller recapped the progress of the City's decal program as outlined during the first meeting session, and the groups desire to reach out more to the schools. Mona Dougherty will clarify how school property storm water is regulated in this region. She said the Junior College is the only entity that has been designated as a Phase II permittee.

Irrigation Amendment:

Colleen Ferguson asked Mona about the consistency of the Phase I permit with the Phase II general permit. She said there are some concerns regarding language and logistics inconsistencies. Mona Dougherty agreed to look into this and report back.

RRWA:

The group talked about the function of the RRWA and the general attendance. Steve Brady said that storm water matrix BMP's are currently being discussed.

SUSMP:

Lee Taylor said that private industry is currently struggling with SUSMP. Vegetated swales and other solutions have been very difficult to design and build because of small lots. There are space and utility conflicts making on-site treatment and/or detention difficult. Underground solutions are expensive. Features that are moved below the street cause maintenance concerns and special tax districts have been challenging to form.

The group discussed these issues and the associated challenges.

New Business

Mona Dougherty introduced herself and said she is now working with Paul Kieran on the storm water program. Paul will be covering the field work, and Mona will concentrate on administrative matters. Mona has been involved with enforcement in different water board divisions.

Greg Desmond asked Mona if Paul had started coordinating the Phase II permittees. Mona said she would check with Paul and report back.

Recent Achievements

The group discussed how recent Press Democrat coverage was great though it only included information on monitoring.

Mona Dougherty mentioned that they recently received a call from a citizen who observed cement in the storm drain. She said she called the Fire Department and they responded immediately.

RWQCB Discussion/Announcements

Mona Dougherty reported that the issue pertaining to the JC parking garage illicit discharge has been settled and was reported in the Press Democrat this morning.

Mona mentioned that the copermitttees may see the water board becoming more aggressive with construction site compliance. In the future when construction violators are cited, permittees will get a simultaneous notice. This is a new approach.

Colleen Ferguson said she hopes that these procedures will primarily be to achieve compliance rather than to increase number of enforcement actions. She also encouraged the water board staff to communicate with the City Community Development Director, the County Permit and Resource Management Department Director and the Engineering Contractors Association regarding the change in procedures.

Mona added that the water board is now looking toward a "higher standard". She said following BMP's is fine, but the board expects that BMP's actually work. Mona is working on a letter that will be sent out soon in this regard.

Future Meetings

The next monthly copermitttee meeting is scheduled on December 21, 2006 at 8:30.

10:00 a.m. Adjourn

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, December 21, 2006
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 3
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Chow, Derek	Sonoma County PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	Sonoma County Regional Parks
	Maitland, John	Sonoma County Public Works
	Miller, Rita	Santa Rosa Public Works
	Phillips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Rosas, Alex	Sonoma County PRMD

Welcome/Introductions

Additions to Agenda:

None

Announcements:

None

Continued Business

Channel Forming Discharge

No update.

County Spill Response Plan

No update.

County Fairgrounds

No update.

Coordinated Permitting Program

No update.

Reclaimed Wastewater Irrigation Amendment

No update.

New Business

Colleen Ferguson said that Draft BMP's for reclaimed water were prepared and distributed to the copermitees. The group discussed how to implement BMP's in the meeting. Colleen questioned how to put requests together as the permit lists conditionally exempt discharges. In terms of "overspray," the permit will remove "for potable water," add appropriate BMP's, descriptions of outreach materials, and elements similar to the Storm Water Management Plan. A users' guide will be provided to all users. This item may go to the City in March and Regional Board in May.

The group discussed how they include Rohnert Park when it is not in a Phase I area and that the permit could only apply to Santa Rosa or properties controlled by the City. Colleen said the City has authority to turn off water supply to users if BMP's are not followed.

Kevin Booker said the Water Agency will need to review a draft if it needs to go through approval of the Supervisors/Directors.

Colleen said that in order to be in place by the upcoming summer, the City is hoping to have action by the Board in July of this year.

Kevin asked if there is interest in having this permit area-wide, and how the Regional Board would oversee areas but not incorporate the City.

Colleen stated that a draft of the permit amendment will be ready in February.

John Maitland mentioned that the permit for the City of Walnut Creek now says that even overlays/reconstruction of the City streets could fall under SUSMP.

SWPPP

Kevin Booker said Region 2 areas meet every other month, and that they are putting on a SWPPP workshop in January in Napa.

Teryl Philips said the County has agreed to put on a workshop. The group discussed how SWPPP's are becoming part of designs, but currently SWPPP's are primarily prepared by contractors.

Kevin said that the Water Agency will host the workshop if the County is unable to do so. Colleen Ferguson said she would be interested in this training. Kevin said he would forward on the information.

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Chow, Derek	Sonoma County PRMD
	Dougherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	Sonoma County Regional Parks
	Maitland, John	Sonoma County Public Works
	Miller, Rita	Santa Rosa Public Works
	Phillips, Teryl	Sonoma County Regional Parks
	Rodgers, Andy	ECON
	Rosas, Alex	Sonoma County PRMD
	Short, John	Regional Water Quality Control Board

Additions to Agenda/Announcements:

Rita Miller reported that the City met with the Regional Board. There are some exempt discharges from pipes/tanks. The Regional Board said that these discharges will be covered by the general permit now.

John Short said that short-term discharges, ie. water line breaks, happen and BMP implementation is adequate. For planned discharges, the Regional Board needs characterization of the discharge and monitoring.

John Maitland inquired about the construction dewatering.

Derek Chow requested to set up a SUSMP monthly meeting, perhaps at lunch hour for interested parties. He will send out an email to set this up.

New Business

Derek Chow said Janice Gilligan is interested in new stencils. He will contact John Maitland to provide disks.

Colleen Ferguson said that Zone I is assessing property owners. A consultant is performing a survey to gauge recipients to an assessment to fund for storm water programs.

John Short stated the Regional Board is working with SSU's Professor Jacobson to set up a low impact development center.

Colleen mentioned that a new permit application is needed within the year. She said the City had found a citizens group to help apply for the permit and they want to do it again.

John Short said the Regional Board will send out a letter in the Spring outlining their expectations.

John also said the Regional Board will be performing a comprehensive audit with the EPA and TetraTech this summer.

The Regional Board expects big changes with the next permit cycle. John mentioned the expansion of permit boundaries. Colleen asked if Phase II's within the regional permit are up for consideration. John replied that they are, but it is still early on in consideration.

John Maitland asked John Short if examples can be provided for large area water permits, related to water. John responded that the Regional Board is looking to expand the permit area like the last adjustment, perhaps making a Russian River wide permit.

Mona reported about a meeting with Al Musetti and 2 other inspectors in which concern with some construction projects was discussed. Discussion around issuing notices of violations also occurred along with methods of informing the Regional Board that the violations have been issued.

John mentioned that the Regional Board is looking at citing sites that have muddy discharge even if BMP's are in place.

RWQCB Discussion/Announcements

There is a vacancy on the Regional Board.

Future Meetings

The next monthly copermittee meeting is scheduled on January 18, 2007 at 8:30.

10:00 a.m. Adjourn

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, January 18, 2007
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 3
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Chow, Derek	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	County of Sonoma Regional Parks
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Rosas, Alex	County of Sonoma PRMD
	Taylor, Lee	Santa Rosa Community Development

Welcome/Introductions

Additions to Agenda:

None.

Announcements:

None.

Continued Business

Channel Forming Discharge

Derek Chow said that the County won't be entering into a contract with B&C until issues with Region 2 have been resolved with Contra Costa County. Derek said that Reg Cullen is keeping in touch with Region 2.

County Spill Response Plan

No update.

County Fairgrounds

Derek said that the County recently met with the Fairgrounds Superintendent and Paul Keiran, SWRCB and a compliance timetable is currently being developed.

Coordinated Permitting Program

No update.

Reclaimed Wastewater Irrigation Amendment

Colleen Ferguson said that the permit will need to modify some language in order to keep the program consistent, and so the City is not in permit violation. Colleen plans to ask the RWQCB if the SWMP also needs to be changed. The group discussed the pros/cons of making only one change to the permit.

Water Storage Tank Discharge

The group discussed that all discharges from storage tanks require a permit.

New Business

SWPPP Workshop

Kevin Booker said that the Agency is putting together a SWPPP workshop on "How to Prepare a SWPPP". The workshop will be approximately for 6 hours and consist of City/County staff only (at first). The Agency will evaluate who else may be interested. Kevin is looking at scheduling the workshop during the first part of February.

Rita Miller mentioned that EPA has a good webcast for anyone involved in the SWPPP basics.

Permit Renewal

Colleen Ferguson said that the permit reapplication is due before the end of December 2007. This timeframe includes getting Board of Supervisors/Directors and City Council approvals. The group discussed that a citizens advisory group will need to be formed soon, and copermittee brainstorming for the process should begin in February.

Before the next monthly meeting - be thinking about what the permit reapplication might look like, and what citizens committee/process would be appropriate!

CASQA Meeting

Colleen Ferguson reported on the recent CASQA meeting. She said she observed a very different approach between the Los Angeles region and the Central Valley region. The Central Valley region is more collaborative, and the LA region more enforcement-oriented.

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Chow, Derek	County of Sonoma PRMD
	Dougherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	County of Sonoma Regional Parks
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Rosas, Alex	County of Sonoma PRMD
	Taylor, Lee	Santa Rosa Community Development

Additions to Agenda/Announcements:

None.

Items Continued from Copermittee Meeting

Monthly Meeting Schedule:

For 2007, the group decided to change the monthly meeting date to the second Thursday of every month. Mona Dougherty said that schedule would be fine. Therefore, the next monthly meeting is scheduled for February 8, 2007.

Reclaimed Wastewater Irrigation Amendment

Colleen mentioned that the “potable water” language in the permit is problematic, and the copermittees would like to proceed with modification of this language. She continued that BMP’s are different depending on potable vs. non potable, so there is room to improve the BMP’s regarding runoff in the SWMP. Colleen said she’d like to propose moving forward with revising the permit this spring and update the BMP’s during the reapplication process.

Regional Water Board Presentation:

The group discussed the benefits of having a Board presentation as an informational item one month before the amendment is presented this spring. Mona said she would check the hearing schedule and report back.

SUSMP:

Lee Taylor plans to meeting with Derek and Reg to discuss how to best calculate the hydrograph. They need to refine the calculation because they are getting questions from design engineers.

Recent Achievements

Rita Miller passed around a recent article published in the Russian River Bulletin promoting awareness of drainage to creeks. Rita also pointed to a letter published in the Press Democrat written by a SSU student who was appalled to recently learn that storm culverts drain directly to creeks.

Alex Rosas said that the County created a “drainage permit” for replacing culverts when less than 50 cubic yards is generated.

RWQCB Discussion/Announcements

Mona said that the board currently has a quorum but is still one board member short, and reminded the group that some nominations may not be confirmed.

Mona said that the Regional Board is currently looking for interns.

Future Meetings

The next monthly copermittee meeting is scheduled on February 08, 2007 at 8:30.

10:00 a.m. Adjourn

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, February 08, 2007
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 3
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Chow, Derek	County of Sonoma PRMD
	Cullen, Reg	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	County of Sonoma Regional Parks
	Maitland, John	County of Sonoma Public Works
	Michels, John	CalTrans District Four
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Tyler, James	County of Sonoma Environmental Health

Welcome/Introductions

Additions to Agenda/Announcements:

None.

Continued Business

Channel Forming Discharge

Reg Cullen recalled to the group that Brown & Caldwell had prepared an approach to developing sizing factors for Contra Costa County. He said the approach appeared logical for specifying BMP's and treatment areas. However, the SF water board had concerns about Sonoma County using this approach. Because of County budget constraints and the recent water board input, Reg is recommending that the County not retain B&C at this time.

The group discussed proposing using the Contra Costa County approach on an "interim" basis, perhaps until the RB 2 Bay Area Storm Water Permit is instituted and the Stream Protection Policy is approved.

Reg said he will look into preparing a draft letter report & amendment to the SUSMP document to summarize how copermittees would utilize the B&C sizing factors approach on an interim basis. He offered to research this idea and report back at the next monthly meeting.

Reclaimed Wastewater Irrigation Amendment

Colleen Ferguson distributed a permit modifications draft. Colleen said the Utilities Department is working on specific language to insert. The group discussed the draft modifications and determined that SUSMP would need to be updated to reflect changes.

New Business

SWPPP Workshop

Kevin Booker said a workshop is tentatively being scheduled the 2nd week of March. The date will be determined at the County stormwater meeting.

Colgan Creek Tour

Steve Brady reported that 10 people involved with Riverkeepers recently toured different urban creek settings along Colgan Creek on February 3, 2007. Steve said during the site visits, he was able to explain the various City efforts and programs. The tour was very positive and generated interesting discussions.

Permit Term 3 - Reapplication

Rita Miller discussed some of the City's goals in the new permit and the schedule for reapplication. The group discussed forming a citizens committee to review the permit and make recommendations.

The copermitees will meet separately to brainstorm on the reapplication process. Andy Rodgers will email copermitees to schedule a meeting for the end of February.

Miscellaneous

John Michels said that CalTrans has GIS drainage maps for the Hwy 12/101 interchange. The City was interested in getting a copy. John said they have a number of bioswale installations along the 101 corridor.

John Maitland asked how CalTrans has been arranging for off-site mitigation and the group expressed interest in learning about CalTrans stormwater BMP's for upcoming Santa Rosa area projects. John Michels said he would be happy to report back to us at a future date and answer questions.

9:15 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Chow, Derek	County of Sonoma PRMD
	Cullen, Reg	County of Sonoma PRMD
	Doherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	County of Sonoma Regional Parks
	Maitland, John	County of Sonoma Public Works
	Michels, John	CalTrans District Four
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Tyler, James	County of Sonoma Environmental Health

Additions to Agenda/Announcements:

Reg Cullen announced that the County will not be filling the vacant storm water coordinator position. The responsibilities will be divided between Derek Chow (Phase I point of contact) and Alex Marci (Phase II point of contact). Reg will oversee Derek and Alex.

Items Continued from Copermittee Meeting

Channel Forming Discharge:

Reg Cullen summarized the earlier copermittee discussion and proposed the concept of implementing an interim approach that would utilize sizing factors based on Contra Costa's model. Mona responded that she thought it sounded like a good idea, but would like to see the program. Reg said the document is available on www.ccleanwater.org. The report is called Post Development C3.

SUSMP:

Reg Cullen said that the guidance document is working well. Reg and Lee will be getting together after this meeting to review Chapter 2/Figure 2.

Further, Reg suggested that SUSMP projects could be regularly reviewed immediately following each monthly meeting. Mona agreed this was a good idea as it would provide an opportunity to list/discuss specific projects.

Recent Achievements

Steve Brady recounted the recent successful Colgan Creek tour with 10 people from Riverkeepers. Steve said there was interesting discussion during the tour such as the permitting process for construction projects and setback issues.

Reg Cullen updated the group on the Regional Parks demonstration project. Three types of pavers are being displayed/used at the County Administration Center near the entrance to the Supervisors chambers.

Colleen Ferguson said that the City has recently hired Julia Gonzales, a marketing outreach coordinator. Julia will be engaging with the stormwater group on future outreach efforts.

RWQCB Discussion/Announcements

Mona Doherty reported that she has received a number of recent complaints. One call was regarding Regional Parks pesticide/herbicide spraying. Ken Krout responded that Regional Parks did have a mishap and the issue has since been corrected. Ken said that all sprayers are trained and certified. All Parks staff are invited for training and others are mandated to attend.

A complaint was received regarding someone tapping into the storm drain system in Roseland area. Reg Cullen said that the County is issuing a stormwater violation in addition to a possible building code violation.

Illegal fill/grading was reported on Stony Point at Hwy. 116. Reg Cullen plans to follow up on this issue.

Mona asked about the irrigation amendment. Colleen provided her with a copy of the draft modifications.

Future Meetings

The next monthly copermittee meeting is scheduled on March 08, 2007 at 8:30.

10:00 a.m. Adjourn

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, March 08, 2007
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 4
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Chow, Derek	County of Sonoma PRMD
	Cullen, Reg	County of Sonoma PRMD
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	County of Sonoma Regional Parks
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Tyler, James	County of Sonoma Environmental Health

Welcome/Introductions

Additions to Agenda/Announcements:

Rita Miller mentioned Senate Bill No. 966 that cites a 2002 USGS study indicating 80% of streams contain “measurable” concentrations of pharmaceuticals (the study evaluated 139 streams across 30 states). The bill is calling for pharmaceuticals to create a take-back program so the waste stream is diverted from possible discharge to creeks.

Jim Tyler added that the RRWA had a presentation from an EBMUD representative on environmental impact issues of pharmaceuticals.

Continued Business

Channel Forming Discharge

Reg Cullen distributed for copermittee review a draft letter to the RWQCB outlining an interim plan for addressing channel forming discharge issues. The copermittees will review the letter and provide Reg with feedback.

The group engaged in a technical discussion concerning general pre-development and post development conditions given different flow volumes, velocities and durations.

Recycled Water Irrigation Amendment

Colleen Ferguson said that the City’s consultant is currently working on storm water permit amendment language. The group discussed Windsor’s recycled water system and their management of runoff.

Additions to Agenda/Announcements:

Steve Brady mentioned that the City may receive grant funding for the B Street culvert outfall (at Santa Rosa Creek). The City is anxiously awaiting the State's final decision. Steve described how the unit will remove solids and dissolved petroleum hydrocarbons.

The Water Agency and City of Santa Rosa recently sponsored a cleanup at Doyle Park. Over 500 pounds of trash and 500 pounds of recycled materials were collected!

Items Continued from Copermittee Meeting

Reclaimed Wastewater Irrigation: Colleen Ferguson informed John Short and Paul Keiran that Dave Smith had attended the earlier meeting and the group discussed the wastewater irrigation runoff issue. She said that there is a tentative plan to have a proposed amendment to the program early in 2007.

RB2 Audit: Greg Desmond reported on the RB2 audit of the County. He said that one of the main outcomes of the audit is a request for a new SWMP. Though it will take several years to complete, Greg said the County does plan to rewrite the SWMP.

John Short said that RB1 may schedule an audit next year to precede the third permit term.

Sonoma County Fairgrounds Spill: John Short said RB1 is talking with County counsel about how to proceed and determine who is responsible. If the entity responsible is private, the facility will need to get a permit.

New Business

John Short asked if there was a database available on different storm water controls so that interested parties could visit and evaluate for their own projects. Colleen said that the County recently hosted a tour covering a variety of completed projects. A power point presentation created from that tour is available.

RWQCB Discussion/Announcements

Paul Keiran recently presented an overview of the MS4 program to the RRWA. Paul also presented to ASCE and said this led to very interesting discussions by the attendees.

Paul said that Phase II reports were received from Cotati and Windsor.

John Short said that the Regional Water Board directed the development of a TMDL for the Laguna within the next few years. John continued that the third MS4 permit term will likely be influenced by the TMDL.

Steve Brady said he received a summary of impaired streams and TMDL dates. Some streams show a 2008 due date and some show 2019. John said those dates sound incorrect and will look into it.

Colleen Ferguson asked for clarification on the organizational structure at the Regional Board. John responded that the Regional Board is implementing SUSMP review through the 401 certification process. The group discussed coordinating with Reg Cullen and Lee Taylor and inviting RB1 401 certification staff to a future monthly meeting.

Paul Keiran added that he will remain the primary contact for construction.

Future Meetings

The next monthly copermittee meeting is scheduled on October 19, 2006 at 8:30.

10:00 a.m. Adjourn

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New Business

SWPPP Workshop

Kevin Booker said a workshop is scheduled for March 29. The workshop will be organized in two sessions. The morning portion will be geared toward municipalities “how to prepare” a SWPPP, and the afternoon session will be focused on “how to review” a SWPPP. Kevin is working on a flyer that will be sent out for review.

SUSMP

Reg Cullen shared an email recently received from John Short regarding RWQCB expectations for guidance on SUSMP. Reg was planning to review the comments closer, compare to the existing guidelines, and report back to the group.

9:15 Regional Board Meeting

<u>Present:</u>	Bargsten, Stephen	Regional Water Quality Control Board
	Booker, Kevin	Sonoma County Water Agency
	Brady, Steve	Santa Rosa Public Works Department
	Chow, Derek	County of Sonoma PRMD
	Cullen, Reg	County of Sonoma PRMD
	Dougherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Krout, Ken	County of Sonoma Regional Parks
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Tyler, James	County of Sonoma Environmental Health

Additions to Agenda/Announcements:

None.

Items Continued from Copermittee Meeting

Channel Forming Discharge

Reg Cullen mentioned that the copermittees are considering, on an interim basis, to utilize the sizing calculations referenced in the Contra Costa channel forming discharge guidance prepared by Brown & Caldwell.

Mona Dougherty responded that she had discussed this option with John Short, and agreed that it would be an acceptable approach if used on an interim basis. Mona continued that the RWQCB would be researching how other Regional Boards are incorporating these ideas in the Term 3 permit discussions.

Permit Term 3 - Reapplication

Andy Rodgers reviewed the permit reapplication brainstorming process that the copermittees have engaged in and presented an overview of the schedule and primary milestones.

Rita Miller and Colleen Ferguson summarized the information being requested of City Department Heads (such as what has/has not worked) to consider in the permit reapplication.

The group discussed scheduling a separate meeting with the RWQCB to focus on the reapplication, but resolved to dedicate most of the April MS4 monthly meeting for this purpose.

Mona shared some of the items the RWQCB is talking about in regards to the reapplication:

- How maintenance options and mechanisms are working such as tax districts
- Discussion of specific treatment systems and their effectiveness
- Measurable goals

Mona said that the RWQCB will likely perform an audit/assessment of the current permit this summer with the assistance of Tetra Tech.

Recycled Water Irrigation Amendment

Colleen Ferguson mentioned that the copermittees would like to get Mona and John's input on this issue. Mona said that it is possible this issue may get folded into the next permit term instead of proceeding with a one-issue amendment this term.

RWQCB Discussion/Announcements

Mona announced that there will be a public scoping meeting for the Basin Plan Amendment on April 25, 2007. There will be discussion about incidental runoff during the prohibition period. Holly Lundborg is the contact for this process.

Reg Cullen mentioned that PRMD is reorganizing. The inspection of site grading activities will shift from the building department to the engineering department, so Derek Chow will become a BMP inspector. Reg said the positive result of the reorganization will be that the stormwater team will now be in direct contact with the contractors.

Future Meetings

The next monthly copermittee meeting is scheduled on April 12, 2007 at 8:30.

10:00 a.m. Adjourn Copermittee/RWQCB Meeting

10:00 a.m. to 11:00 a.m. SUSMP Projects Review

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, April 12, 2007
8:15 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 4
69 Stony Circle, Santa Rosa, 95401

8:15 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Chow, Derek	County of Sonoma PRMD
	Cullen, Reg	County of Sonoma PRMD
	Davis Brown, Karen	County of Sonoma Regional Parks
	Ferguson, Colleen	Santa Rosa Public Works Department
	Julene, Michelle	County of Sonoma Regional Parks
	Krout, Ken	County of Sonoma Regional Parks
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Tyler, James	County of Sonoma Environmental Health

Welcome/Introductions

Additions to Agenda/Announcements:

None.

Continued Business

Channel Forming Discharge

Reg Cullen said that he has been evaluating other areas and programs addressing the channel forming discharge issue and will report back findings of interest at a future meeting. Draft Bay Area Regional Storm Water Permit may impact this issue.

Recycled Water Irrigation Amendment

Colleen Ferguson said that the City submitted an April 9 request to the RWQCB for a language change. The RWQCB EO has since responded that a language-change agreement between the Copermittees and the RWQCB was supposed to have been reached before April 9; therefore the amendment may not make a September Board agenda. Colleen continued that Dave Smith had called John Short and learned that the RWQCB is having problems resolving consistency between the basin plan and anti-degradation policy, and they are considering addressing the issue in a “low impact” basin plan amendment next spring.

SWPPP Workshop

Kevin Booker reported that the workshop went well with both sessions well attended (approximately 60% government and 40% private). Reg agreed the workshop was beneficial but was concerned that at times future policy seemed to be promoted rather than focusing on “how to”.

Sonoma County Fairgrounds

Rita Miller asked what was happening at the Fairgrounds since fair season is coming. Reg responded that Larry McClure has submitted a plan for RWQCB (Paul Keiran) review, and he'd provide the City with a copy. Reg asked that this issue can be removed from the meeting's standing agenda.

New Business

Term 3 Permit Reapplication

Rita Miller said the City and County developed a potential citizen's advisory group (CAG) list and invitations will be sent soon. Dates for the two CAG meetings are:

Meeting #1: Thursday, May 10, 2007 from 6:00-8:00 PM. *This meeting is general information sharing and orientation on the permit program and application. There will be overview presentations from the copermittees and RWQCB.*

Meeting #2: Thursday, May 24, 2007 from 6:00-8:00 PM. *This meeting is a workshop to elicit input from the CAG on the application.*

The group discussed next month's monthly meeting expressing the hope that Bruce Ho would attend and provide the copermittees with a perspective on how the riparian policy being developed may affect the permit reapplication.

Reg Cullen mentioned that he talked briefly with John Short about a geographic permit division between the City and County/Agency. The group deliberated on the challenges and timing of this approach.

Kevin Booker said that the Agency was considering not sampling Mark West Creek in order to balance out the cost of more sampling of the Laguna.

9:00 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Chow, Derek	County of Sonoma PRMD
	Cullen, Reg	County of Sonoma PRMD
	Davis Brown, Karen	County of Sonoma Regional Parks
	Dougherty, Mona	Regional Water Quality Control Board
	Drescher, Brianna	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Julene, Michelle	County of Sonoma Regional Parks
	Krout, Ken	County of Sonoma Regional Parks
	Leland, David	Regional Water Quality Control Board
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Short, John	Regional Water Quality Control Board
	Tyler, James	County of Sonoma Environmental Health

Additions to Agenda/Announcements:

None.

Recycled Water Irrigation Amendment:

Still under discussion at RB. John Short advised that BMPs are still under review and that all Copermittees would be affected. A meeting with the RB EO is expected shortly.

Term 3 Permit Reapplication: *Update and Impact to Permit from Laguna TMDL*

Dave Leland provided an overview of the Laguna's listed impairments (sediment, dissolved oxygen, temperature, nitrogen, phosphorus - mercury recently added) and status of the process. Currently, the focus of the work is to gain an understanding of the watershed and its functions, and to develop a conceptual site model (CSM). The funding for the work is derived from a legal settlement. The Laguna de Santa Rosa Foundation,

recipient and manager of the funds, hired TetraTech/Phil Williams Associates to develop the CSM. A deliverable will be available for review sometime during the next few months.

John Short added that the Laguna was referenced in the Term 2 permit, and SUSMP plays a role in the TMDL process.

Colleen mentioned she is a storm water representative on the conceptual site model technical advisory group. She said sediment and nitrogen are two primary impairments currently being discussed, and that it will be interesting to look at new summer generated data.

Colleen asked if atmospheric deposition as a nitrogen loading source was being considered. Dave responded that perhaps it should be. He continued saying that the overall effort of a TMDL is to understand and regulate mechanisms of pollutant loading.

John Short mentioned other issues that will be considered during the reapplication process:

- Outreach & education - Review fertilizer use to ensure proper management, managing debris in storm drains (leaves, etc.)
- Monitoring - revise efforts to characterize pollutants in storm water - in both wet and dry season (outfall vs. stream)
- SUSMP Program Review - address all potential sources of pollutants, decrease criterion related to increase in impervious area (thereby affecting smaller developments)
- Permit Boundary - no decisions yet. Possible "county-wide" application, however, county may want to separate from regional permit.

Dave Leland said that the work on the Klamath TMDL will continue a few more years, then those staff will be committed full time on the Laguna TMDL. Dave stated that the Laguna TMDL is scheduled to be complete in spring 2011 or 2012. There will be many workshops and hearings in 2010 on a draft.

Rita Miller updated the RWQCB on the plan for engaging the citizen's advisory group (CAG) and suggested the RWQCB make a presentation to the CAG at the first meeting. The copermitees will also be presenting.

The group discussed scheduling a possible meeting date of May 31 to review the storm water management plan exclusively and discuss the reapplication process. Andy Rodgers will send out an email to coordinate this meeting.

RWQCB Discussion/Announcements

John Short said that the RWQCB will be hosting a "low impact development" presentation/workshop at Sonoma State University sometime in July. There are a handful of workshops occurring around the State and Region 1 is one of them.

Mona Dougherty mentioned that the RWQCB recently met with CalTrans. She said that they are interested to attend these monthly meetings since they are currently developing mitigation measures for runoff that will result from Hwy. 101 improvements.

Rita Miller said that the Press Democrat covered the Prince Memorial Greenway this past Sunday. John Short said they are monitoring Santa Rosa Creek and may increase monitoring for pathogens - Total Coliform & E. coli. Not sure how many locations will be done.

Reg Cullen mentioned PRMD hosted BMP tours for County employees - storm drain inserts, fiber rolls, 3 types of pervious pavement, swales, etc. Regional Parks will be putting up a BMP display soon as part of training.

Kevin Booker updated the group on the SWPPP workshop. Two sessions, "how to" and "how to review", comprised the workshop. Approximately 35 attendees were at each session.

John Short said that the RWQCB met with the Russian River Watershed Association and Phase II permittees. The City of Cotati is doing some innovative work on pervious pavement. The group discussed the elements of the Lowe's parking lot project.

Future Meetings

The next monthly copermittee meeting is scheduled on May 10, 2007 at 8:30.

10:00 a.m. Adjourn Copermittee/RWQCB Meeting

10:00 a.m. to 11:00 a.m. SUSMP Projects Review

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, May 10, 2007
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 5
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Cullen, Reg	County of Sonoma PRMD
	Davis Brown, Karen	County of Sonoma Regional Parks
	Ferguson, Colleen	Santa Rosa Public Works Department
	Julene, Michelle	County of Sonoma Regional Parks
	Krout, Ken	County of Sonoma Regional Parks
	Maitland, John	County of Sonoma Public Works
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Smith, Dave	Merritt Smith Consulting

Welcome/Introductions

Additions to Agenda/Announcements:

None.

Continued Business

Channel Forming Discharge - No change.

Recycled Water Irrigation Amendment

Colleen Ferguson reported that a draft amendment is scheduled for City Council hearing on May 15, 2007.

Dave Smith said the purpose of the amendment is to keep the City and County in compliance with respect to current irrigation practices. The RWQCB may request that BMP's be part of the new permit. The copermittees expressed their preference for BMP's to be included in the SWMP rather than in the permit, and to not distinguish between types of water. Colleen added that it is not appropriate for recycled water restrictions to apply to storm water.

Term 3 Permit Reapplication

The copermittees discussed the pro's/con's of a cooperative copermittees permit vs. separate City and County permits.

9:00 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Cullen, Reg	County of Sonoma PRMD
	Davis Brown, Karen	County of Sonoma Regional Parks
	Dougherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Julene, Michelle	County of Sonoma Regional Parks
	Krout, Ken	County of Sonoma Regional Parks
	Maitland, John	County of Sonoma Public Works
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Short, John	Regional Water Quality Control Board
	Smith, Dave	Merritt Smith Consulting

Additions to Agenda/Announcements:

None.

Recycled Water Irrigation Amendment:

John Short said that the EO has decided the amendment won't be moving forward in September. Santa Rosa's Urban Re-use Program will not proceed until they have the RB's demonstrated support. There will be a meeting with the EO, Agency, City and County to find out if a Board resolution can resolve the issue. He said that modifications to the SWMP are being considered for inclusion in the permit.

There was group discussion regarding the difference between potable and non potable. Colleen said there shouldn't be a difference between types of water - BMP's in the permit should be written to apply to all types. BMP's that do discern between water types should be outlined in the SWMP.

Proposed Wetland and Riparian Area Protection Policy

John Short provided a brief overview of the riparian policy process. He said Bruce Ho will be giving an update to the Board on June 13 or 14. Before that presentation, it is difficult for John and Mona to comment how the proposed policy changes will or will not affect the permit reapplication.

If a regional policy is adopted and it's more protective than the State-wide policy, it will take precedent and influence the MS4 permit accordingly. John said that he doesn't see that the riparian policy will take effect during this coming permit reapplication. However, regardless of the riparian policy process, John said that hydromodification will be an element closely reviewed in the reapplication.

Reg Cullen asked if levees will be affected by the policy changes. Mona responded that the RWQCB has been considering "taking over" responsibility for waters of the State that the Army Corps is not involved with any more.

Term 3 Permit Reapplication

Rita Miller summarized the plans and invitees for the first scheduled citizen's advisory meeting. The first meeting intends to inform the committee and the second meeting will be a workshop to solicit input from the committee.

For the first meeting, a meeting facilitator will welcome everyone and provide an overview and review the purpose of the committee. Mona Dougherty will present an overview of the RWQCB and the elements of the regional storm water permit. The copermittees will then present their permit programs.

Following the presentations, the facilitator will review questions posed by the copermittees that the copermittees would ultimately like answers to.

John encouraged the copermittees take a new look at the monitoring program. He said he'd like to see a discussion about what is going on - what direction the program is going - and to highlight benefits and tangible improvements. He said after 10 years of data, the copermittees should look at the big picture.

Colleen mentioned that the community survey through RRWA is coming up. Reg said that the same questions should be asked of the sample people, so measurements can be made and conclusions drawn. The purpose of the survey is to provide specific direction for the new permit term's outreach programs.

John said the RWQCB will also be looking at SUSMP. John said the Bay Area threshold is now 5,000 square feet, and he expects this region to eventually follow suit with the understanding that criteria such as land use would be considered.

John mentioned the permit boundaries may change. However, he is not sure where the Board is on that.

Reg and Rita posed a discussion of having three permits versus one cooperative permit. Reg said hydromodification is a good example of where urban differs greatly from rural. Mona said that the County would need to do some work to show the differences, and how separating the permits would be beneficial.

John suggested that the Copermittees review stormwater permits that have been recently adopted by other RB's.

RWQCB Discussion/Announcements

John Short said the basin plan currently has prohibitions on point source summer discharges such as car washing/irrigation etc. The RWQCB has held a scoping meeting for a Basin Plan Amendment to allow Low Threat discharges. This would allow these general discharges to continue, but be managed.

Colleen Ferguson said she thought the City supported the comments, but there were some language concerns. Rita Miller added that reporting on these discharges is also an unrealistic requirement.

John said support letters from copermittees would be helpful, or the amendment may likely be disregarded. The copermittees agreed to consider preparing support letters.

Future Meetings

The next monthly copermittee meeting is scheduled on June 14, 2007 at 8:30. This meeting will include a review of rough draft SWMP's and a discussion of the Annual Report.

10:00 a.m. Adjourn Copermittee/RWQCB Meeting

10:00 a.m. to 11:00 a.m. SUSMP Projects Review

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MS4 NPDES STORM WATER DISCHARGE PERMIT MEETING NOTES

Thursday, June 14, 2007
8:30 a.m. - 10:00 a.m.

City of Santa Rosa Public Works Department – Conference Room 4
69 Stony Circle, Santa Rosa, 95401

8:30 Copermittee Meeting

Present:	Booker, Kevin	Sonoma County Water Agency
	Cullen, Reg	County of Sonoma PRMD
	Davis Brown, Karen	County of Sonoma Regional Parks
	Ferguson, Colleen	Santa Rosa Public Works Department
	Jensen, Robert	County of Sonoma Regional Parks
	Krout, Ken	County of Sonoma Regional Parks
	Lahman, Sara	ECON
	Maitland, John	County of Sonoma Public Works
	Michels, John	CalTrans District Four
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Tyler, James	County of Sonoma Environmental Health

Welcome/Introductions

Additions to Agenda/Announcements

None.

Continued Business

Channel Forming Discharge - No change.

Recycled Water Irrigation Amendment

Colleen Ferguson reported she met with Cat Kuhlman on May 31, 2007 to discuss how incidental runoff poses a conflicting issue for the City. Board staff did indicate a commitment to supporting irrigation with recycled water. A resolution will be proposed for Regional Board approval this fall.

Three tasks were agreed to at the May 31 meeting:

1. Provide input to the RWQCB regarding urban reuse with reasonable BMP's to be included in the SWMP
2. work with the community to build consent, and
3. draft a support letter for the RWQCB.

The copermittees discussed different approaches and ideas to build community consent. Colleen mentioned she recently attended consent building training, and that she may schedule a meeting with Brenda Adelman to discuss her concerns.

The RRWA and the City's Public Works Department are preparing support letters that will be copied to the County and the SCWA.

Term 3 Permit Reapplication

Rita Miller distributed a copy of comments summarized from the citizen's advisory committee meetings. The group discussed the input received from the committee.

Kevin Booker reported that for the Term 3 reapplication, the Agency will only be altering their monitoring plan. Kevin plans to talk to Reg to potentially devise a creek stewardship "kit" for use throughout the year, but mainly in the summer.

The group proposed scheduling an additional meeting to discuss the Reapplication Permit on either June 25 or during the week of July 9, 2007. Andy Rodgers will email these dates, as well as copying the RWQCB input on the reapplication prior to this meeting.

Colleen Ferguson said that she would like to have an upper management meeting in order to present the Reapplication and get feedback. Reg Cullen offered the PRMD hearing room as a possible location for this meeting. The copermittees discussed various locations and the difficulties of scheduling this meeting.

Reg Cullen added that the County has decided not to pursue an individual direction for the permit, and at this point intends to continue as a copermittee.

New Business

Annual Report T2/AR4

Reg Cullen reported that the County will be challenged to put together a draft as they are currently short-staffed.

Earlier this year the copermittees met to discuss making the Annual Report organization simpler. Robert Jensen requested a copy of the notes from this meeting. Andy Rodgers will send.

As a starting point for this year's report, Andy Rodgers will distribute to the copermittees completed sections from last year's T2/AR#3.

Colleen spoke about collaborating with Julie Gonzalez, the City's marketing and outreach coordinator, to produce a promotional piece on storm water in the creeks. The "brochure" could possibly be featured in the *Press Democrat*. She said that it will focus on the City's program, but could be expanded to include the County and Agency, and thus the production costs can be divided. The copermittees agreed and Colleen will have more information in regards to the matter at the next meeting. Information related to CalTrans efforts towards storm water pollution prevention may also be included as a promotional effort.

9:00 Regional Board Meeting

<u>Present:</u>	Booker, Kevin	Sonoma County Water Agency
	Cullen, Reg	County of Sonoma PRMD
	Davis Brown, Karen	County of Sonoma Regional Parks
	Dougherty, Mona	Regional Water Quality Control Board
	Ferguson, Colleen	Santa Rosa Public Works Department
	Jensen, Robert	County of Sonoma Regional Parks
	Krout, Ken	County of Sonoma Regional Parks
	Lahman, Sara	ECON
	Maitland, John	County of Sonoma Public Works
	Michels, John	CalTrans District Four
	Miller, Rita	Santa Rosa Public Works
	Rodgers, Andy	ECON
	Taylor, Lee	Santa Rosa Community Development
	Tyler, James	County of Sonoma Environmental Health

Additions to Agenda/Announcements

None.

Recycled Water Irrigation Amendment

There was a meeting amongst the board for discussion on whether the permit would be re-opened to include the irrigation amendment. At this point it does not seem likely. Mona Dougherty said that the staff did not think that a September meeting would be possible. Colleen responded that due to the financial significant investment, the City doesn't want to move forward with a recycling program if RWQCB is not in support. Mona said there is a pressing need for more support letters if the Low Threat Discharge Basin Plan Amendment is to move forward.

Proposed Wetland and Riparian Area Protection Policy

Mona mentioned that the June 2007 staff presentation to the Board is now available on the Region 1 website: http://www.waterboards.ca.gov/northcoast/programs/basinplan/060525swspp/070618_Stream_and_Wetlands_Update.pdf. At the presentation, an outline for the adoption of this policy was presented with a schedule to draft the amendment by September 2007 and make publically available by December 2007. The adoption hearing would occur around March 2008.

Mona identified three uses of this policy: flood water attenuation, slowing the peak flow; wetland habitat, concerning various endangered species in the areas; and water quality enhancement, concerning the filtering and accumulation of pollutants in the wetlands while cleaner water flows to the rivers and streams.

Mona discussed the amendment process. Bruce Ho is working on water quality objectives and developing performance criteria. He will be presenting a rigorous scientific approach. The State is developing a permit for restoration activities.

Mona reported that many of the Board members appear opposed to this policy at this time. If the Board opposes the policy, the RWQCB will continue review on a case-to-case basis.

Mona added that there does not appear to be much of the proposed policy at this point that will affect the Term 3 permit reapplication.

Reg Cullen announced that the County previously passed Ordinance 5666 for exempting restoration projects from drainage permits, if the projects benefit fisheries and water quality. For this exemption, a different agency would have to accept full responsibility. Mona said this sounds like a good opportunity for the Board to collaborate with the County.

RWQCB Discussion/Announcements

Mona Dougherty said that an updated version of the Excess Sediment Discharge Basin Plan Amendment is to be circulated for comment. She clarified that the amendment will impact areas not currently covered under NPDES MS4 permits and, at this time, is unsure of what effects, if any, it will impose on Santa Rosa's MS4 permit. If there is an effect on construction and re-construction areas, there will be an implementation schedule to ensure compliance. Mona advised that almost all of the waterways in the RB1 and RB2 areas are impacted for both sediment and temperature. Proposed Regional Sediment Basin Plan Amendment Language, June 11, 2007:

http://www.waterboards.ca.gov/northcoast/agenda/06_2007/items/02/DraftSedimentAmendment6_4_07.pdf

Colleen Ferguson mentioned the possibility of developing a promotional piece for the *Press Democrat* this fall. The piece could include input from the RWQCB and will focus on storm water management programs/pollution prevention and creeks - the Citywide Creek Master Plan, recent restoration efforts, etc. Mona responded that perhaps January or early spring may be a more opportune time since there may be a number of new board members appointed by then.

Cat Kuhlman, the Regional Board's current EO, will be taking a leave of absence from her position, and is scheduled to return as permanent in Spring 2008. Luis Rivera will likely be filling this role temporarily.

Rita Miller shared recent publicity from a recent issue of the *Press Democrat* that focused on public awareness of fertilizers and pest control chemicals used in gardening.

Colleen said that the copermittees will be conducting a storm water awareness survey for public outreach, modeled from two recent surveys completed within the past 5 years. She said that the survey will be similar to the RRWA survey with general questions regarding storm water runoff. If a new survey is designed, it will be submitted to the board to verify that it meets the intent of storm water language. Mona commented that she would discuss this with John Short, but the City would likely get a written approval from the board.

It was called to attention that the Agency called for a mandatory 15% reduction in water consumption to take effect on July 1, 2007.

Future Meetings

The next monthly copermittee meeting is scheduled on July 12, 2007 at 8:30 a.m.

10:00 a.m. Adjourn Copermittee/RWQCB Meeting

10:00 a.m. to 11:00 a.m. SUSMP Projects Review

* * *

Appendix II County of Sonoma

- II.A Policy and Procedures Adopted in FY 06-07
 - 1. Pre-Construction Meeting Requirements for PRMD Storm Water Inspectors
 - 2. Construction Site Storm Water Violation and Compliance
- II.B Scantron Inspection Data Entry Form
- II.C Summary of Storm Water Training Provided to Sonoma County Employees in Winter 2006/2007
- II.D Regional Parks Project Detail and Summary Matrix
- II.E DTPW Construction Site Inspection Form
- II.F Water Conservation Project – Phase I Summary
- II.G Regional Parks Storm Drain Inventory
- II.H Russian River Watershed Association Activities
- II.I PRMD Picture Board

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POLICY AND PROCEDURES

Appendix II.A

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**PRE-CONSTRUCTION MEETING REQUIREMENTS FOR PRMD
STORM WATER INSPECTORS**

Appendix II.A.1

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*Pre-construction Meeting Requirements for
PRMD Storm Water Inspectors*

PURPOSE

This policy provides direction to staff regarding pre-construction meeting requirements for grading projects within the County's Municipal Storm Water (MS4) permit boundary.

GENERAL

PRMD Storm Water section staff perform construction site inspections for compliance with applicable federal and state laws, and local ordinances within the County's MS4 permit boundary. In addition to these regular inspections, staff is required to hold pre-construction meetings on grading projects. The purpose of the pre-construction meeting is to review the erosion and sediment control plans and requirements, discuss critical buffer areas and other site-specific topics before construction begins. The primary construction concern is sediment and other construction related pollutants, and post-construction impacts.

A pre-construction meeting is scheduled between the inspector and the owner/developer, engineer, responsible construction personnel, and any necessary sub-contractors. Pre-construction meetings allow staff to work pro-actively with the developer prior to any land disturbance in an effort to avoid any storm water concerns.

AUTHORITY

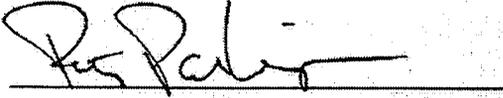
Section 3316 and 3317 of the California Building Code

PROCEDURE

- A. Pre-construction meetings will be conducted on all grading permits within the MS4 permit boundary. Grading projects in the MS4 boundary that are considered significant and/or sensitive will be given priority over other projects within the MS4 boundary. Considerations to determine whether or not a project is significant and/or sensitive include (but are not limited to) the following:
1. Projects having one or more acres of land disturbance.
 2. Projects that disturb less than one acre of land but are adjacent to or in proximity to an intermittent or perennial stream.

3. In the Flood Prone Urban Area.
 4. In a Flood Hazard Zone.
 5. As designated by Engineering Division plan review staff.
- B. Prior to the pre-construction meeting:
1. Conduct an office review. Obtain and review the site permit history, current permits and/or plans, topographic maps, FIRM maps, NOI database, and discuss the matter with the Building Plans Examiner.
 2. Telephone the owner to schedule an appointment. Explain who you are, that you would like to schedule a pre-construction meeting, what topics the meeting may include, and who should be present at the meeting.
- C. Items to be discussed during the meeting can include (but are not limited to):
1. Establish the lead contact person for BMPs and storm water control maintenance, including phone number and email address.
 2. Request a 7-day notice if the contact person changes.
 3. Sequence or phasing of construction.
 4. Limits of disturbance being clearly marked on site.
 5. Any changes to the approved plans that are needed (i.e. stockpile and/or staging areas, drainage, etc.)
 6. Flow patterns and active drainage areas onsite where water will concentrate.
 7. Storm water run-on and/or de-watering.
- D. Follow up from meeting:
1. Transcribe what was discussed or recommended and send a summary to owner and lead contact.
 2. Record brief comments, including the site review date in the appropriate inspection item area (items 650-657) within Permits Plus.

Approved by:



Pete Parkinson, Director

Lead Author: Janice Gilligan

Co-Author: Greg Desmond

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**CONSTRUCTION SITE STORM WATER VIOLATION AND
COMPLIANCE**

Appendix II.A.2

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*Construction Site Storm Water
Violation and Compliance*

PURPOSE

To establish policies and procedures for the identification and abatement of storm water code violations.

GENERAL

This policy shall only apply within the Municipal Storm Water NPDES Permit boundaries as defined in the Sonoma County Code, Chapter 11, Article 3.

The Storm Water Section inspects construction sites that have been issued a grading and/or a building permit. The inspections are intended to determine project compliance with storm water regulations. The section also investigates internal and external referrals, public complaints, and resolves storm water code violations.

This document details the procedure for achieving timely compliance once a violation is discovered and provides an outline to implement a progressive enforcement. Staff shall use verbal warnings and a *Correction Notice* for minor violations, and a *Correction Notice* and *Notice of Violation* for more extensive violations, such as multiple minor violations on one site, recent discharges, and active discharges. Administrative Hearings will be held for property owners who refuse to comply with a *Notice of Violation*.

Notice of Violation letters must be signed by the Senior Engineer before transmitting them to the owner. Compliance time schedules contained in a *Notice of Violation* shall not exceed 30 days. *Notice of Violation* letters shall require the owner to produce, submit and implement a remedial plan. Remedial plans shall be approved by the Senior Engineer before the owner can implement them.

Administrative Hearings shall be held if an owner does not comply within 30 days of the compliance date established within the *Notice of Violation*. If compliance is achieved within 30 days of the due date, staff will evaluate the need for an Administrative Hearing. However, if staff costs exceed \$4,000 per case, an Administrative Hearing shall be held to recover, at a minimum, staff costs.

If an owner refuses to comply with the Hearing Officer's Decision and Administrative Order, staff shall record a *Notice of Abatement Lien* on the property for all accrued administrative costs and civil penalties. If noncompliance continues, the Division Manager shall consider referring the matter to counsel for legal action.

Staff shall attempt to contact the owner as often as warranted by the alleged violation. For example, if there is an alleged discharge, one attempt to contact the owner is sufficient. If the

alleged violation is minor, no more than three attempts shall be made prior to conducting the site review.

Follow-up inspections shall be conducted within three days of the compliance date contained in the previous enforcement action. Follow-up inspections shall be conducted on the specified date if possible, or within three days thereafter. Follow-up inspections do not require additional notification, since notice will be given in the enforcement action.

AUTHORITY

- Sonoma County Code, Chapter 11, Article 3, Section 11-33. Enforcement.
- Sonoma County Code, Chapter 1, Section 1-7.1. Civil penalty for violation of certain building, zoning, public health, drainage and storm water regulations.
- Sonoma County Code, Chapter 1, Section 1-7.3. Administrative procedure for abatement of certain violations of this code.

FORMS

- A. Erosion/Sediment Control Compliance Quick Check Form
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 A-Quick Check Form)
- B. Violation Complaint Form
(S:\Handouts\CDE\CDE-001.cdr)
- C. Regional Water Board Referral Template
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 C-Water Brd Referral)
- D. Correction Notice Template
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 D-Correction Notice)
- E. Notice of Violation Template
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 E-Notice of Vio)
- F. File Closure Template
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 F-File Closure)
- G. Agenda Request Sheet
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 G-Agenda Request)
- H. Notice of Partial Abatement Lien Template
(S:\OFCFORMS\POL-PROC\STRM WTR\9-7-3 H-Notice Partial Lien)

PROCEDURE

A. General Enforcement Action Procedure

1. Conduct an office review. Obtain and review the case referral, site permit history, current permits and/or plans, topographic maps, FIRM maps, and Thomas Guide; discuss the matter with the plan reviewer. Record brief summary of findings and make a note in the NPDES screens in Permits Plus.
2. Conduct a site review.
 - a. Telephone the owner to schedule an appointment. Explain who you are, that you wish to conduct a site review, and what you want to inspect or investigate. Schedule

a date and time to conduct the site review. If the owner can not be contacted, leave a message(s) if possible, and conduct the site review.

- b. Notify the owner when you arrive. Identify yourself, explain why you are there, describe what you are investigating, describe where and how you will be conducting the site review, and give an estimated length of time you will be on-site.
 - c. Conduct the site review. Use the *Erosion/Sediment Control Compliance Quick Check Form* during the site review. Determine if a violation exists, identify the actions needed to clear the violation(s), and determine the next enforcement action(s), if any. Take photos. Try to capture the source of pollution as well as any downstream or off-site effect.
 - d. Contact the owner prior to leaving the site. Discuss the site review and case resolution with the owner. Leave a business card with the owner or on the site. If the owner is not available, telephone the owner upon your return to the office and either discuss the case with the owner or leave a message.
 - e. Record brief comments, including the site review date, in Permits Plus or temporary tracking system (hereinafter Permits Plus).
3. Violation determination.

Review the following considerations and answer accordingly for the individual site. If none of the responses indicate a violation, then a SCC storm water violation likely has not occurred.

If 3.(a) is true and if one or more responses for the individual site matches the response in the column entitled, "Potential Violation Response," then a SCC storm water violation likely has occurred. Continue to step 4., below.

If 3.(a) is false and there is a violation response to any of the other listed considerations, then initiate a discussion with your immediate supervisor. This case may be referred to the Code Enforcement Division using a *Violation Complaint Form* and/or appropriate outside agencies, most notably the appropriate Regional Water Board using the *Regional Water Board Referral Template*.

The following shall be considered to assist in determining if a violation exists:

	Consideration	Potential Violation Response
a.	Does Sonoma County Code (SCC), Chapter 11, Article 3 have jurisdiction? i. location (within permit boundary – SCC Section 11- 46) ii. construction activity subject to BMPs (SCC, Section 11-32)	Yes Yes
b.	Was there a recent pollutant discharge?	Yes
c.	Is there an active pollutant discharge?	Yes
d.	Is there a potential for a pollutant discharge?	Yes
e.	Is there an adequate erosion control plan or pollution prevention plan?	No
f.	Is the plan on site (if required)?	No
g.	Has the plan been implemented correctly?	No
h.	Has maintenance been conducted adequately?	No

4. Select an enforcement action or case closure. The following enforcement actions are available to achieve compliance.

- a. Verbal warning
- b. *Correction Notice*
- c. *Notice of Violation*
- d. Administrative Hearing
- e. Legal action

The enforcement action should be commensurate with the violation. The following factors shall be considered in determining the level of enforcement:

- a. The severity of recent or active discharge (volume, duration, toxicity, etc.).
- b. The violation history of responsible party.
- c. The culpability of responsible party.
- d. The cause of the violation: intentional, negligence, act of nature, etc.
- e. Previous enforcement actions for the violation under review.

5. Issue the enforcement action or case closure. Procedures for issuing the various enforcement actions are detailed below.

- a. For a case closure, send a *File Closure* letter to the owner. Start with the *File Closure template*. Fill in the required fields, review with supervisor, and have clerical produce the letter. Record brief comments, including the date of *File Closure* letter and completed site review, in Permits Plus. Route a copy of the *File Closure* letter to the file.

6. Follow-up Inspection (for open cases not subject to a *File Closure* letter)

Conduct a follow-up inspection on or within three days of the compliance date contained in the previous enforcement action. Follow the procedural steps A.2.b through A.5 to conduct a follow-up inspection.

B. Enforcement Actions

1. Verbal warning/*Correction Notice*

The contents of a verbal warning and *Correction Notice* are the same. Both of these enforcement actions need to be documented. Verbal warnings should be documented in Permits Plus, and *Correction Notices* should be documented in Permits Plus and in the file. The difference between these two enforcement actions is the method of delivery. Prior to issuing a *Correction Notice*, all information contained in the *Notice* shall be discussed with the owner, refer to A.2.d.

Verbal warnings and *Correction Notices* shall include the following information:

- a. Explain the who, what, where, when, why and how of the current incident.
- b. Explain why you are using this enforcement tool.
- c. Explain the next enforcement level.
- d. Explain what you expect and by when.
- e. Inform owner of the follow-up inspection date.
- f. If applicable, use the *Correction Notice* form to document the above items.
- g. Have the owner sign the *Correction Notice* and give him a copy. If owner refuses to sign, make a note on the notice: "Unwilling to Sign" or "Not Available" as appropriate.

Upon return to the office: 1) document the verbal warning or *Correction Notice* in Permits Plus, including a description, issuance date, compliance date, and re-inspection date; 2) file a copy of the *Correction Notice* in the file; and, 3) inform your immediate supervisor of the violation and enforcement action.

2. *Notice of Violation* preparation and issuance

- a. Complete a draft *Notice of Violation*.
- b. Save as a new document, using Department naming convention for the current case.
- c. Review document with immediate supervisor.

Permit and Resource Management Department
POLICY AND PROCEDURE

Number 9-7-3

- d. Obtain supervisor's approval of the *Notice of Violation*.
 - e. If necessary, request clerical assistance to produce the final *Notice of Violation*.
 - f. Obtain supervisor's signature prior to mailing the final document.
3. Administrative Hearing
- a. Submit an *Agenda Request Sheet* and work with Code Enforcement clerical support to schedule a hearing with an Administrative Hearing Officer.
 - b. Produce, post, and mail all required public notices pursuant to Sonoma County Code, Chapter 1, Section 1-7.3.
 - c. Write a draft abatement staff report.
 - d. Obtain supervisor's approval of staff report.
 - e. Send staff report by certified mail to the owner at least seven days prior to the scheduled hearing.
 - f. Supervisor will conduct the presentation. Inspector will attend and participate if necessary.
 - g. Conduct any applicable actions as required by the hearing officer.
 - h. Record a *Notice of Abatement Lien* against the property for all accrued administrative costs and civil penalties.
4. Referral to County Counsel
- a. Confer with Senior Engineer and Division Manager to evaluate whether the matter warrants legal action.
 - b. If so, contact the appropriate Deputy County Counsel and advise him or her that the Department wishes to refer the matter for legal action.
 - c. Arrange to have the entire case file copied and transmitted to the appropriate Deputy County Counsel.

Approved by:



Pete Parkinson, Director

Lead Author: Nathan Quarles
Co-Author: Janice Gilligan

Make available on Intranet only

Make available on Intranet and Internet

SCANTRON INSPECTION DATA ENTRY FORM

Appendix II.B

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INSPECTOR: Z GRADING

STATUS: ISSUED
TO EXPIRE: 10/01/2009

ITEMS: 101

ADDRESS: 500 AURORA LN GLE

PERMIT #									
G	R	D	0	6	-	0	1	8	1
A	A	C	0	0	0	0	0	0	0
B	E	1	1	1	1	1	1	1	1
D	L	L	2	2	2	2	2	2	2
E	N	M	3	3	3	3	3	3	3
P	N	4	4	4	4	4	4	4	4
O	P	5	5	5	5	5	5	5	5
S	U	R	6	6	6	6	6	6	6
T	T	7	7	7	7	7	7	7	7
W	V	8	8	8	8	8	8	8	8
	W	9	9	9	9	9	9	9	9
	X								

INSPECTED			
0	1	2	3
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

HIST:

SAMPLE

BALANCE: \$ 0

REQ PHONE:
REQUESTOR: *OWNER2
SUB-TYPE: GRDG
OCC:
APN: 054160023

APPLICANT:
GIBBS ELLEN H
OWNER:
GIBBS ELLEN H

SAMPLE

(L)ock (H)old (N)otice (C)omment on
(AS)=APN (AD)=ADDRESS or (AP)=PERMIT:

- N AS 10/23/2006 2ND UNIT IS 510 AURORA LN. PER DILYS RANGER OKAY PER OWNER REQUEST OF
- N AS 04/28/2006 SUSUMP FEE COLLECTED 4-28-2006 (WEL06-0150)
- N AS 06/15/2000 SEE COMMENTS RE ADDRESS
- C AS 07/18/2007 78 FORM 54-160-21 & PT TO 24 25 26 PM 5594 FROM 054-160-23 9 04/
- C AS 01/24/2007 NOTICE OF ADD'L STREET ADDRESS ASSIGNMENT MAILED
- C AS 01/09/2007 NOTICE OF ADD'L STREET ADDRESS ASSIGNMENT MAILED 1/8/07
- C AS 11/17/2005 ROAD NAME AND ADDRESS CHANGE LETTER DATED 06/13/2000.
- C AS 06/15/2000 PREVIOUS ADDRESS WAS 14025 HWY 12
- N AP 06/26/2006 RETAINING WALLS WILL BE UNDER ANOTHER PERMIT
- C AP 09/20/2006 RECEIVED AN E-MAIL REGARDING THE STATUS OF THIS PERMIT. RESPONDED BAC

GRADING FOR DRIVEWAY/SFD & 2ND UNIT PADS

STORM WATER TRAINING

Appendix II.C

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PRMD Training on Storm Water for FY 2006-2007

Training on construction runoff control: two categories from Measurable Goals:

A. Supervisors and senior staff in the following divisions: Engineering, Well & Septic, Building, and Code Enforcement

B. Inspectors, engineers, engr. techs., environmental health specialists, and "other employees whose jobs include land development permitting."

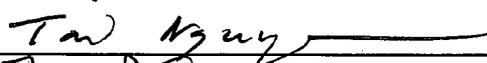
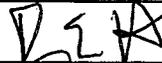
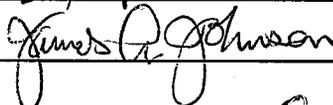
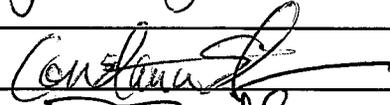
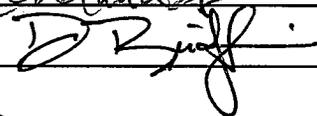
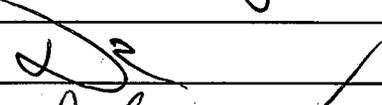
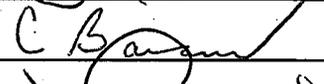
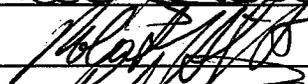
Those listed would be trained from Wed 21 March through Friday 23 March on controlling sediment at construction sites, use of straw wattle, use of geo-fabric, installation of catch basin inserts, and use of pervious concrete, permeable pavement, and unit pavers to allow infiltration of storm water as a source control best-management practice (BMP).

Cat.	Person	DIV	signature
A.	Supervisors and senior staff		
	Gary O'Connor	ENGR	<i>G O'Connor</i>
	Eric Doble		
	Reg Cullen		<i>Reg Cullen</i>
	Nancy Loomis		
	Bob Swift	Well & Septic	
	Suzanne Grant		
	Rebecca Ng		
	Carrie Muller		
	Chuck Jones	BLD	
	Scott Burkett		
	Fred Lustenberger		
	Shems Peterson		
	Kevin Ruybal		
	Don Folsom		
	Kevin Berger		<i>Kevin Berger</i>
	Bill Casebeer		

	John Cherne /	
	Jo Ann Barker	
	Nancy Lingafeldt	Code Enforcement
	Dale Hawley	
	Michael Lueders	
	March Franceschi	
	Chelsea Holup	
	Janet McKenna	
B.	B. Inspectors, engineers, engr. techs., environmental health specialists, and "other employees whose jobs include land development permitting."	
Insp	John Caron	Eng
	Kristen Larsen	
	Stephen Liner	
	Iveta Moore	
	Janice Gilligan	
Engr	Alex Rosas	
	John Rainwater	
	Alex Marcy	
	Derek Chow	
	Charlie Ozanich	
	Dave Caldwell	
	Kevin Lopeman	
	Chris Anderson	
	Laurel Putnam	
	Patricia Wagner	
	Rick Meyer	
EHS	Tracey Fitzgerald	Well & Septic
	Elsa Frick	

Nancy Lingafeldt
Joe Baum
M.F.

John Caron
Kristen Larsen
Stephen Liner
Iveta Moore
Janice Gilligan
Alex Rosas
John Rainwater
Alex Marcy
Derek Chow
Charlie Ozanich
Dave Caldwell
Kevin Lopeman
Chris Anderson
Laurel Putnam
Patricia Wagner
Rick Meyer
Tracey Fitzgerald
Elsa Frick

	Sam. Baumgartner		
	Tai Nguyen		
	Bob Herr		
	James Johnson		
	Wiles Edison		
	Constance Stavros		
	Deborah Bridenstien <i>...stine</i>		
	Pamela Benyak		
	David Donovan		
	Christine Baranov		
	Leslye Choate		
	Bob Swift		
	Rebecca Ng		
Plnr	David Hardy	Project Review	
	Nick Chase		
	Cynthia Demidovich		
	Steve Padovan		
	Sigrid Swedenbord		
	Traci Tesconi		
	Catherine Young		
	Scott Hunsperger		
	Ken Ellison		
	Melinda Grosch		
	Paula Stamp		
	Karin Theriault		
	Shelley Mills		
	Jim Maertz		
ESp	Chris Seppeler	Environmental Review	

Steve Dee	Steve Dee
Laura Peltz	Laura Peltz
Crystal Acker	Crystal Acker
Diane Lerma	
Gary Helfrich	
Richard Stabler	Richard Stabler
Denise WARD	Denise Ward
MICHAEL LARBY	Michael Larby
NANCY ATWELL	Nancy Atwell
Reg Cullen	Reg Cullen
Chuck Jones	Chuck Jones
Connie Brown	Connie Brown
Rebecca Mateja	Rebecca Mateja
Carrie Miller	Carrie Miller
Randy Leach	Randy Leach
Pamela Benyah	Pamela Benyah
Shobna Kumar	S Kumar
Nancy Loomis	Nancy Loomis
Scott Briggs	Scott Briggs

PRMD Training on Storm Water for FY 2006-2007

Training on construction runoff control: two categories from Measurable Goals:

A. Supervisors and senior staff in the following divisions: Engineering, Well & Septic, Building, and Code Enforcement

B. Inspectors, engineers, engr. techs., environmental health specialists, and "other employees whose jobs include land development permitting."

Those listed would be trained from Wed 21 March through Friday 23 March on controlling sediment at construction sites, use of straw wattle, use of geo-fabric, installation of catch basin inserts, and use of pervious concrete, permeable pavement, and unit pavers to allow infiltration of storm water as a source control best-management practice (BMP). Also included is a discussion and tour of the county Regional Parks water conservation program including a demonstration walkway that infiltrates water through soil replenishing ground water.

Sonoma County Regional Parks	
Print Name	Please sign
TIM HARDESTY	<i>Tim Hardesty</i>
Brian Welch	<i>Brian Welch</i>
RICK GRANT	<i>Rick Grant</i>
KARY STEFENONI	<i>Kary Stefenoni</i>
Gustavo Calderon	<i>Gustavo Calderon</i>
Jesse Espinoza	<i>Jesse Espinoza</i>
LAWRENCE McElFRESH	<i>Lawrence McElfresh</i>
Kristine M. Jones	KRISTINE M. JONES
Dave Paniagua	<i>D. Paniagua</i>
Allen Marshall	<i>Allen Marshall</i>
Jason Wildman	<i>Jason Wildman</i>
Mel Shoemaker	MEL SHOEMAKER
Isabell Ramos	Isabell Ramos
CYNTHIA DEMIDOUCA	<i>Cynthia Demidouca</i>
Melinda Grosch	<i>Melinda Grosch</i>
Steve Rickabaugh	<i>S. Rickabaugh</i>
Mark Williamson	<i>Mark Williamson</i>

Sonoma County NPDES/Storm Water Training

Date: Wednesday, April 25, 2007

Time: 8:30 - 9:00 a.m.

Location: DTPW Santa Rosa Yard Meeting Room

Presenter: Janice Gilligan

Last Name	First Name	Department	Division	Signature
1 SILVA	Rob	DTPW	Road Maintenance	
2 ROSS	JEFF	DTPW	Road Maintenance	
3 MASZK	REN	DTPW	Road Maintenance	
4 Orio	John	DTPW	Road Maintenance	
5 Weber	ROSS	DTPW	Road Maintenance	
6 JOHNSON	TOM	DTPW	Road Maintenance	
7 WEBER	TED	DTPW	Road Maintenance	
8 CATENACCI	JOHN	DTPW	Road Maintenance	
9 ELORIDGE	JAY	DTPW	Road Maintenance	
10 Souza	SIAM	DTPW	Road Maintenance	
11 Gatenell	Mark	DTPW	Road Maintenance	
12 Dammiller	David	DTPW	Road Maintenance	
13 Guovameth	Ken	DTPW	Road Maintenance	
14 James Love		DTPW	Road Maintenance	
15 Franceschi	Ron	DTPW	Road Maintenance	
16 AHOERS	ROBERT	DTPW	Road Maintenance	
17 DeCarly	Rick	DTPW	Road Maintenance	
18		DTPW	Road Maintenance	
19		DTPW	Road Maintenance	
20		DTPW	Road Maintenance	
21		DTPW	Road Maintenance	
22		DTPW	Road Maintenance	
23		DTPW	Road Maintenance	

17
18
35

Sonoma County NPDES/Storm Water Training

Date: Thursday, April 26, 2007
 Time: 8:30 - 9:00 a.m.

Location: DTPW Santa Rosa Yard Meeting Room
 Presenter: Janice Gilligan

Last Name	First Name	Department	Division	Signature
1	O'CARANZA	DTPW	Road Maintenance	
2	Foulesha	DTPW	Road Maintenance	
3	Honoring	DTPW	Road Maintenance	
4	HURT	DTPW	Road Maintenance	
5	TOM	DTPW	Road Maintenance	
6	Thomson	DTPW	Road Maintenance	
7	Russell	DTPW	Road Maintenance	
8	Chioffi	DTPW	Road Maintenance	
9	Miller	DTPW	Road Maintenance	
10	Gollardo	DTPW	Road Maintenance	
11	FESTER	DTPW	Road Maintenance	
12	Zirbel	DTPW	Road Maintenance	
13	SAYOP	DTPW	Road Maintenance	
14	Recess	DTPW	Road Maintenance	
15	Gonzalez	DTPW	Road Maintenance	
16	Sani	DTPW	Road Maintenance	
17	Klausmann	DTPW	Road Maintenance	
18	HEEMER	DTPW	Road Maintenance	
19		DTPW	Road Maintenance	
20		DTPW	Road Maintenance	
21		DTPW	Road Maintenance	
22		DTPW	Road Maintenance	
23		DTPW	Road Maintenance	

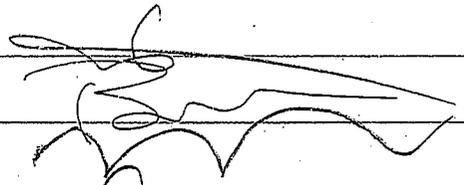
Storm Water training
4-25-2007 30 min
illicit discharge

attending

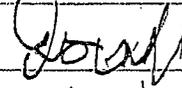
print name

signature

Cacorus
NEUMAN



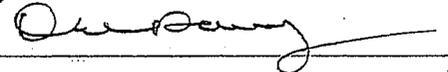
John
Cull



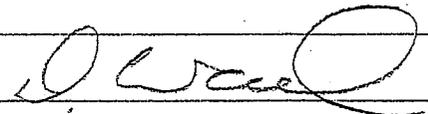
Mark Francischi

Mark Francischi

DALE HAWLEY



Marcy Langefeldt



Denise Ward

Denise Ward

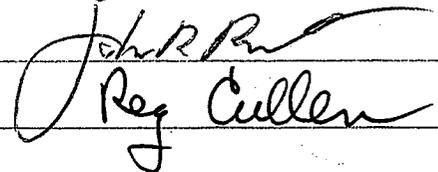
Nancy Atwell



DEREK CHON

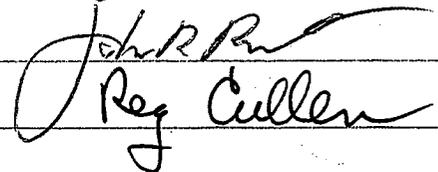


Iveta Moor



John Rainwater

Reg Cullen



SUMMARY OF TRAINING ATTENDED BY PRMD STORM WATER STAFF IN FY '06-'07

PRMD had 5 storm water staff attend a Storm Water Pollution Prevention Plan Workshop on March 29, 2007. This training was sponsored by the Sonoma County Water Agency and presented by Lucinda Dustin of Mud Hen Environmental. The focus was on local regulations and enforcement of BMPs on construction sites.

PRMD storm water staff attended a Science Symposium on the Laguna de Santa Rosa watershed on March 30, 2007.

PRMD storm water staff attended a Water Pollution Control Training for Construction Sites on May 10, 2007. This workshop was sponsored by the RRWA and presented by AEI-CASC consulting and included demonstration site visits.

PRMD storm water staff attended a lunch time presentation by ERTEC Environmental Systems demonstrating new erosion and sediment control products. This event took place at the regional Water Board on June 20, 2007.

PRMD storm water staff attended a lunch time presentation on Enhancement of Pavement Performance with Synthetic Aggregate, and Permanent Turf Reinforcement Mats. This event took place at Stevenson Supply and was presented by KriStar Enterprises.

PRMD had 2 storm water staff attend an Inspector Training on April 9, 2007, at the NCRWQCB. This training included basic interviewing skills for regulators and was presented by the California Department of Environmental Protection.

PRMD had 3 storm water staff attend an erosion and sediment control training presented by Paul Keiran at the Regional Water Board.

PRMD had 3 storm water staff attend a class on Soils Engineering for Non-Soils Engineers and Technicians by the University of Wisconsin on March 26-27, 2007. Among the topics presented were Stability of Soils, Landslides, Construction Procedures for Earthworks, Geosynthetics and Soils, Soil Classification and behavior, and Soils Erosion Control.

NPLES for Field Operations

1.31.07

In-service training

<u>Name</u>	<u>Title</u>	<u>Div</u>
KRISTINE JONES	PGMW Supervisor	Central
MICHAEL CHIESA	PARK RANGER II	NORTH COAST
Gretchen Jay	PMW II	North Coast
Jesse Cabik	P.R. Trainee	Central
Bill Trunick	Park Ranger II	CENT
BRANDON BLED.	PR III	CENT OPS
SCOTT BOLIN	PARK RANGER II	BODERA BAY
SCOTT Beck	Park Ranger I	Central OPS.
JOFF TAYLOR	Park Ranger I	CENTRAL OPS.
Jonathan Umholtz	Park Ranger I	Sonoma Valley
Rebecca Feickert	Park Ranger I	Sonoma Valley
Brett Thurman	Park Ranger I	Sonoma Valley
James McMillan	PR III	Bodega Bay
Pamela	MWR I	CENTRAL
Kevin	PGMW II	CENTRAL
Peter Murphy	PGMW II	Central
Isabella Ramos	PGMW II	Central
Phil McEachern	PGMW II	Central
Wally Houshagen	PGMW II	SPRING LAKE
Steve	DIRECTOR	
TIM HARDESTY	P.G.M. Supervisor	SLP/Sonoma Valley
DONNA DEBAETS	PARK RANGER III	NORTH COAST
Dave Tichau	PGMW II	West County
Matt Hutchins	Park Maint. wk II	L.G.
OWA Montgomery	PGMW II	L.G./VOM
Larry Urmini	Park Maint. II	L.G.

<u>Name</u>	<u>Title</u>	<u>Division</u>
Fernando Espinoza	PGMWII	SLP/Sonoma Valley
Will Brattlers	PGMWII	West Co.
Gustavo Calderon	PM	West Co.
Bill Arenander	PGMWII	Bodega Bay
Ken KROUT	PGMWII	NPDES
REX Holdren	PGMWII	SLP
LARRY VITTORI	PMWI	West Co
Phath Khatoon	PMWI	W.C
Javier Ortiz	Maint I	WC
Jesse Espinoza	M II	W.C.
MATT MOORE	PII	Sonoma Valley
Carol Presho	PRIII	So. Valley
Mary Stefani	M. I	Central
Joe Lopez	MAINT I	SLP
JASON WILDMAN	PGMWII	CENTRAL
Tiffany Wolkov	Ranger I	Bodega Bay
Mark Williamson	PGMW I	Central
Rob [Signature]	MAINT I	CENTRAL
Rich Crumley	PR I	Bodega

APPENDIX II.C.

NPDES for Field Operations 1-31-07 In-Service Training

<u>Name</u>	<u>Title</u>	<u>Division</u>
Kristine Jones	PGMW Supervisor	Central
Michael Chiesa	Park Ranger II	North Coast
Gretchen jay	PGMW II	North Coast
Jesse Cablk	Park Ranger Trainee	Central
Bill Trunick	Park Ranger II	Central
Brandon Bredo	Park Ranger III	Central Ops
Scott Bolin	Park Ranger II	Central Ops
Scott Beck	Park Ranger I	Bodega Bay
Jeff Taylor	Park Ranger I	Central Ops
Jonathan Umholtz	Park Ranger I	Sonoma Valley
Rebecca Feickert	Park Ranger I	Sonoma Valley
Brett Thurman	Park Ranger I	Sonoma Valley
James Macmillian	Park Ranger III	Bodega Bay
Dave Paniagua	PGMW I	Central
Lawrence McElfresh	PGMW II	Central
Peter Murphy	PGMW II	Central
Isabel Ramos	PGMW II	Central
Mel Shoemaker	PGMW II	Central
Terry Hourigan	PGMW II	Spring Lake
Stuart Hotaling	PGMW II	Sign Shop
Tim Hardesty	PGMW Supervisor	SLP/Sonoma Valley
Donna DeBaets	Park Ranger III	North Coast
Dave Tichava	PGMW II	West County
Matt Hutchins	PGMW II	LG
Oona Montgomery	PGMW II	LG
Larry Urmini	PGMW II	LG
Fernando Espinoza	PGMW II	SLP/Sonoma Valley
Will Broaders	PGMW II	West County
Gustavo Calderon	PGMW II	West County

Bill Arenander	PGMW II	Bodega Bay
Ken Krout	PGMW II	NPDES
Rex Holdren	PGMW II	Spring Lake
Larry Vittori	PGMW I	West County
Phath Khaoon	PGMW I	West County
Javier Ortiz	PGMW I	West County
Jesse Espinoza	PGMW II	West County
Matt Moore	Park Ranger II	Sonoma Valley
Carol presho	Park Ranger III	Sonoma Valley
Kary Stefani	PGMW I	Central
Joe Loza	PGMW I	Spring Lake
Jason Wildman	PGMW II	Central
Tiffany Wolvek	Park Ranger I	Bodega Bay
Mark Williamson	PGMW I	Central
Karl Grant	PGMW I	Central
Rich Crumley	Park Ranger I	Bodega Bay

SUMMARY OF STORM WATER TRAINING PROVIDED TO SONOMA COUNTY EMPLOYEES IN FY06/07

From March 21, 2007 to April 26, 2007, the County of Sonoma PRMD provided training to 156 County employees on construction runoff control, post-construction measures, and department responsibilities within the SWMP. Training on March 21, 22, & 23 included a hands on approach outside several County buildings with a demonstration and discussion on straw wattles, silt fences, use of geo-fabric, and installation of catch basin inserts. The post-construction measures included the use of pervious concrete, permeable pavement, and unit pavers to allow infiltration of storm water as a source control best management practice. PRMD had 88 County staff attend the 3 day training period. This accomplishment fulfills Provision 40 of Order No. R1-2003-0062, NPDES No. CA0025054, California Regional Water Quality Control Board, North Coast Region.

Alex Rosas and Janice Gilligan of Sonoma County's PRMD gave a NPDES presentation to the County Department of Transportation and Public Works (DTPW) on April 25 and 26, 2007. Each presentation covered an introduction to storm water pollution basics, a brief history of the NPDES program and the County's MS4 permit, individual department's responsibilities under the SWMP, erosion prevention, and sediment control measures. The total number of DTPW staff attending the presentation was 35.

On April 25, 2007, the Storm Water section in conjunction with the City of Santa Rosa gave a presentation to the Code Enforcement staff at PRMD on illicit discharges. The training included examples of direct and indirect illicit discharges, accidental spills, discharge flow types, and storm water regulations. The County spill response plan was also discussed. The total number of Code staff attending the presentation was 10.

**ATTENDEE LIST FOR ANNUAL TRAINING ON STORM WATER
INSPECTIONS AT RETAIL FOOD FACILITIES – FEBRUARY 7, 2007**

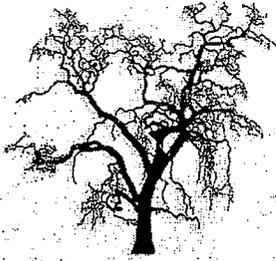
NAME	TITLE
John Anderson	Environmental Health Specialist III
Erendira Aparicio	Environmental Health Specialist II
Steve Carey	Environmental Health Specialist II
Peggy Carr	Environmental Health Specialist II
Gary Holtz	Environmental Health Specialist II
Terry Macute	Environmental Health Specialist II
David Mesagno	Supervising Environmental Health Specialist III (temporary)
Susan Oshiro	Environmental Health Specialist II (extra help)
Mark Ruddick	Environmental Health Specialist II
Korosh Saadloui	Environmental Health Specialist II
Carol Swain	Environmental Health Specialist Trainee
Jennifer Sylvester	Environmental Health Specialist II
James Tyler	Environmental Health Specialist III
Rebecca VerMeer	Environmental Health Specialist II
Susan Weinstein	Environmental Health Specialist III (temporary)

TRAINING

PI

FY 06/07

Log Keller



Friday March 30, 2007

Focus on Laguna de Santa Rosa watershed

JV Francisco

9:00 Water Quality

Characterizing the impacts of the 2006 New Year's flood in the Laguna de Santa Rosa floodplain, Sonoma County, CA. *Lorraine E. Flint, Jennifer A. Curtis, and Alan L. Flint (U.S. Geological Survey, Sacramento, CA)*

Land use modeling of non-point source nutrient input using remote sensing. *Chris Potter (NASA/AMES), Seth Hyatt (CSU Monterey Bay)*

Laguna de Santa Rosa Total Maximum Daily Loads and Conceptual Model Development Process and Status. *Matt St. John (NCRWQCB)*

Laguna de Santa Rosa: Initial Conceptual Model Development

Water Quality: *Clayton Creager (Tetra Tech, Inc), Limin Chen (Tetra Tech, Inc)*

Hydrology & Sedimentation: *Betty Andrews (PWA), Setenay Bozkurt (PWA)*

Ecosystem: *Joe Honton (Laguna Foundation), Christina Sloop (Laguna Foundation)*

10:25 Break

10:40 Wetland Biodiversity

Distribution and abundance of the invasive Louisiana crayfish (*Procambarus clarkii*) and its relationship with the invasive *Ludwigia* in the Laguna de Santa Rosa. *Mara Evans (UC Davis)*

Distribution and Habitat use of Western Pond Turtles in a Summer Impounded River. *David Cook (SCWA)*

Amphibian Decline and Environmental Context: Proposed Research into Links Between Water Quality, Invasive Species and Disease. *Laura Saunders (SSU)*

Fish distributions in the Mark West and Santa Rosa Creek watersheds. *Shawn Chase (SCWA)*

11:45 Lunch

501 Regional Parkway
Santa Rosa, CA 95403

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Engineers Presentation On

RoadDrain – “Enhance Pavement Performance with Synthetic Aggregate”

Permanent Turf Reinforcement Mats – “Take Vegetation to the Max”



Tuesday June 26, 2007

Noon-1:00

No. Coast Water Quality
Control Board Office

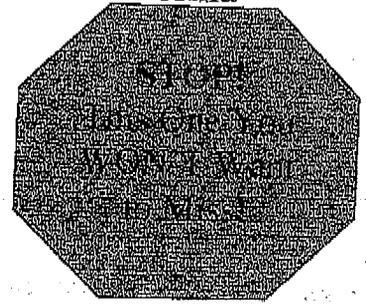
RoadDrain

Bobget Highway

Presented by

Rod Stevenson – Stevenson Supply and Erosion Control Specialist One
Dr. Tim Bauters, PHD – Tenax Corporation, Western Regional Manager
John Towns – North American Green & Mirafi, Northern California Representative

R.S.V.P Paul Keiran



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TOPCON

UnionTools
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Husqvarna

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Diamond Blades
Razorback Tools
Erosion Control Blankets
Traffic Safety Products
Surveying Supplies
Stabilization Fabric

Laser Levels
Marking Paint
Abrasive Blades
Geogrid
Straw Wattles
Hard Hats
Sand bags

Silt Fence
Asphalt Rakes
Safety Fence
T-Posts
Jute Netting
Staples
Cutoff Saws

AERIDE



TENSAR Earth Technologies Inc.

MIRAFI



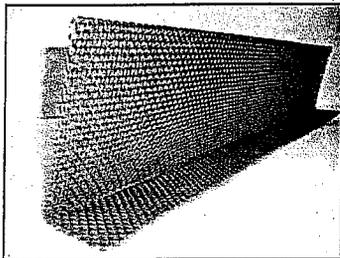
ERTEC Environmental Systems

Protecting the Integrity of Global Lands and Waterways™

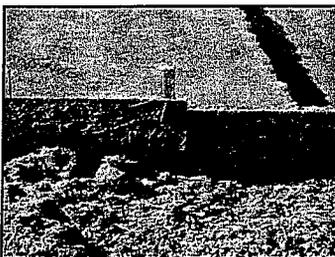
Case Study ProWattle™



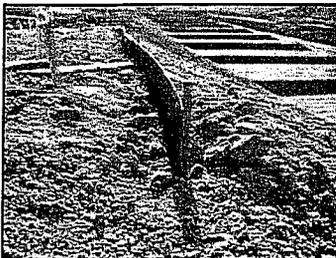
- > Lower Project Costs
- > Better Performance



3" Flap, 6" of freeboard height



1/2" x 1/2" stakes on downstream side



Side view—trenched, backfilled and staked

Application: Slope Stabilization
Product: ERTEC ProWattle™
Customer: William Lyon Homes, Pittsburg, CA
SWPPP Planner: Stevens, Ferrone & Bailey, Corcord, CA
Project Date: Winter 2006/2007

ERTEC ProWattle is a tested, patented, high performing and low cost system to protect slopes from erosion during construction. Due to its dramatically reduced logistics costs, ProWattle is fast to install and remove. Unlike wattles, ProWattle tends to spread rather than concentrate flow.

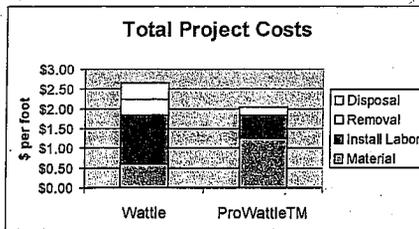
ProWattle:

- Is an important part of a comprehensive BMP system to keep soil in place
- Spreads water and significantly reduces water velocity
- Is made from durable and recyclable HDPE and is reusable for 4+ years



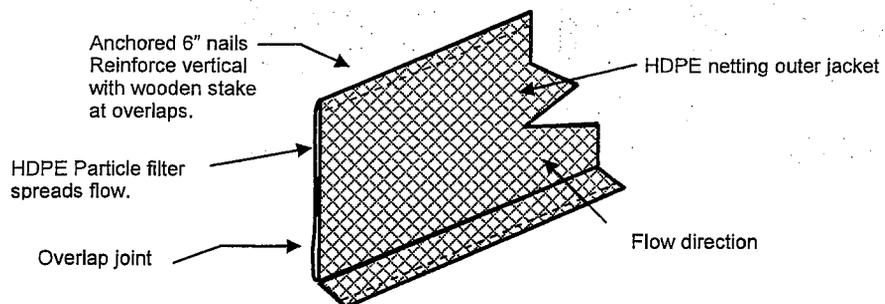
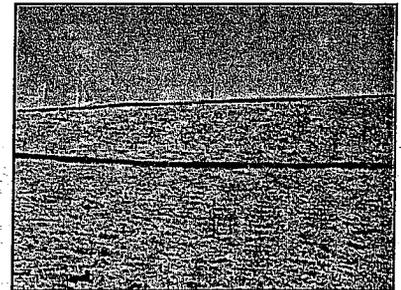
The Challenge: Current best practice is to use wattles or silt fence placed along freshly graded slope contours spaced evenly and parallel. The purpose is to form velocity checks to prevent the water from forming rills and gullies which can destroy a newly graded slope. In this application, wattles or silt fence can sometimes be ineffective by allowing damming and undercutting. As the straw or fence material decays, storm water flow through becomes common. In most cases, wattles cannot be reused in a multi-phase project.

Results: "The initial material cost was twice as much, but the labor to install was less than half. Because ProWattle packs more than 10 times denser than wattles, our trips back and forth to the stockpile was reduced dramatically. The slope stabilization results were excellent. Used in combination with a bonded fiber matrix,



we had very little soil movement during the storms this season. We

expect to be able to remove this installation quickly, much faster than wattles, and then store reuse most of it onsite. I expect we can reuse 100% of the material." - Erosion Control Installation Lead



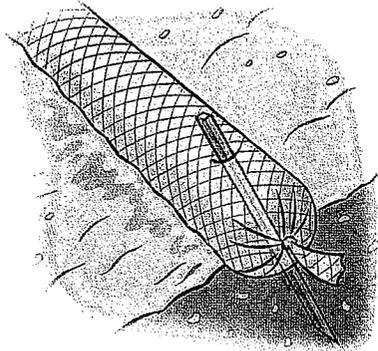
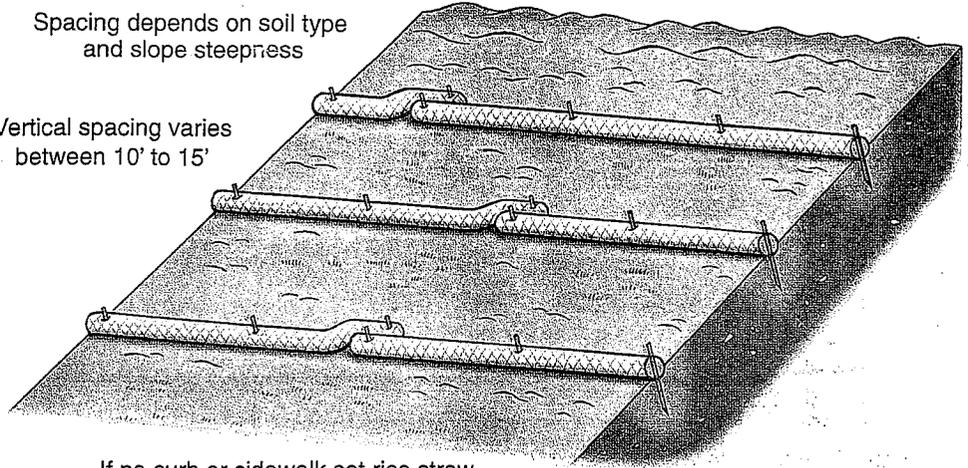
ERTEC Environmental Systems
 1150 Ballena Blvd. Suite 250, Alameda, CA 94501
 phone: 510-521-0724, fax: 510-521-3972
 sales@ertecsystems.com, www.ertecsystems.com



Wattles Installation Diagrams

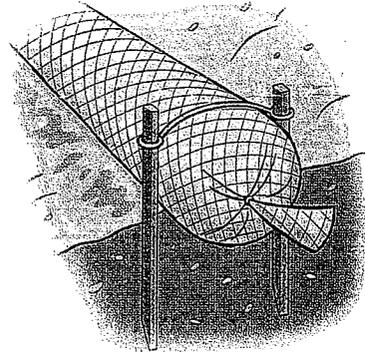
Spacing depends on soil type and slope steepness

Vertical spacing varies between 10' to 15'

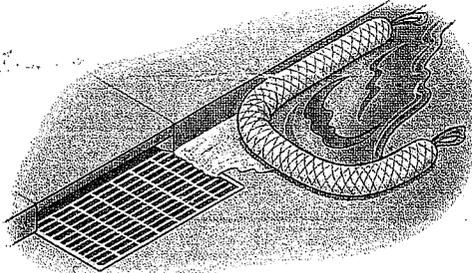


Typical rice straw wattle center staking

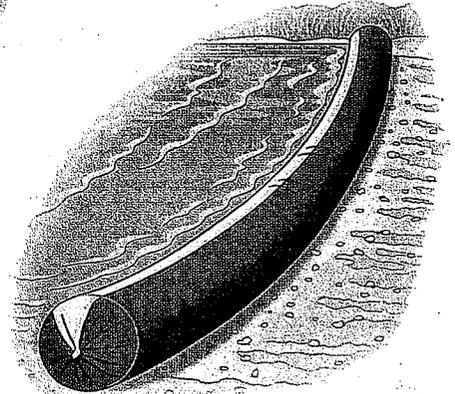
If no curb or sidewalk set rice straw wattle 5' to 10' from toe of slope



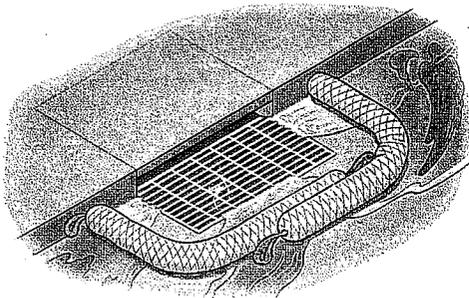
Typical rice straw wattle rope restraint staking



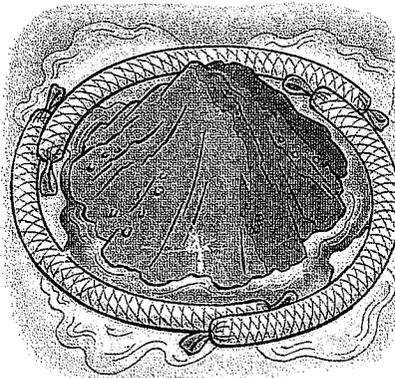
Paved drain inlet using weighted SlopeGard[®]3 (steep slope)



Typical check dam using reusable SlopeGard[®]2



Paved drain inlet using weighted SlopeGard[®]3



Stock pile containment using weighted SlopeGard[®]3



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• PH: 800-579-8819 • FAX: 707-524-8186 • www.kristar.com

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Course #J603

January 23-24, 2008

Univ. of California Extension*, 1180 Bordeaux Drive, Sunnyvale,
California

Course Fee: \$895

Enroll Now

Topics

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- Importance of Water in Soils
- Effective Stress and Shear Strength of Soils
- How and Why Soil Compresses and Settles
- Vertical Earth Pressures and Stresses
- Lateral Earth Pressure on Walls and Basements, Trenches, and Bracing
- Soil Improvement with Mechanical Stabilization
- Construction Procedures for Earthworks
- Slope Stability and Landslides
- Soil Magic Demonstration
- Geosynthetics and Soils
- Subsurface Explorations: In the Absence of Magic, How Do We Discover What is Beneath Us?

Audience

- Non-soils engineers
- Technicians and inspectors

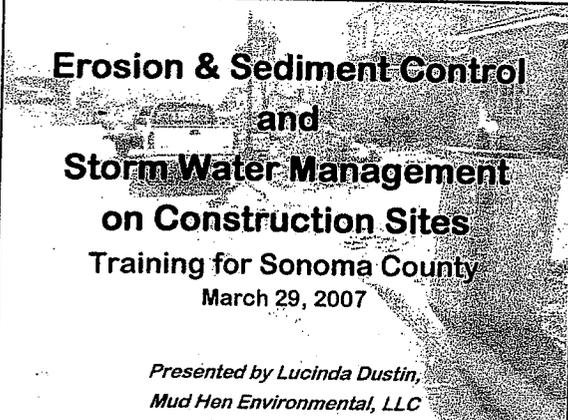
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Erosion & Sediment Control and Storm Water Management on Construction Sites

Training for Sonoma County
March 29, 2007

Presented by Lucinda Dustin,
Mud Hen Environmental, LLC

Your Facilitator

- Lucinda Dustin
- 20 Years in Construction and Green Industry
- 11 Years in Erosion, Sediment and Storm Water Management
- Instructor for IECA, BIA, private industry
- lucinda.dustin@comcast.net
- (916)995-6717

Today's Plan of Activities

Ground Rules

- Be on time from breaks
- Pagers/Phones off or vibrate
- No sidebar conversations
- No silly or stupid questions
 - Be kind to each other
 - Have fun, learn

Activities (cont)

- Trades Represented
- Group Breakouts
- Sustenance
- Time Keepers
- Group Exercise
- Certificate of Training

Today's Presentation

- *The New Enforcement.*
- *There are the no longer common construction site problems observed by local and state inspectors.*
- *What are your responsibilities and are there practical solutions available to reduce the problems?*

Did You Know?

It is Illegal to Discharge These Materials
Into Storm Drains, Road Ditches or Creeks

- | | |
|-------------------------------|--|
| ✓ Soil, Dirt & Sediment | ✓ Concrete compounds |
| ✓ Paints and Solvents | ✓ Asphalt compounds |
| ✓ Pesticides and Herbicides | ✓ Petroleum products
fuel, oil, and grease |
| ✓ Fertilizers | ✓ Hazardous chemicals
acids, lime, glues,
adhesives, and curing
compounds |
| ✓ Detergents | |
| ✓ Plaster or related products | |

Remember, sediment can be a carrier for most other construction site pollutants.



RUSSIAN RIVER WATERSHED ASSOCIATION
Water Pollution Control Training for Construction Sites:
Preventing Stormwater Pollution from Construction Sites
and Proper Installation of Construction BMPs

May 10, 2007, 8:00 AM – 4:00 PM
Laguna Treatment Plant
4300 Llano Road, Santa Rosa, CA

A G E N D A

- 8:00 Registration Begins**
Bagels and breakfast pastries
- 8:20 Greetings and Introductions**
(Dave Richardson - Executive Director, RRWA)
- 8:30 Welcome and Slideshow**
"Burn on Big River"
- 9:00 Regulations and Responsibilities**
State and Federal Regulations Enforcement (CWA, NPDES, SWPPP)
- 9:45 Break**
- 10:00 Erosion and Sediment Control**
Best Management Practices
- 11:20 Inspections and Monitoring**
- 12:00 Lunch Break** (lunch provided)
- 12:30 Job Photos Presentation**
- 1:00 Vendor Presentations**
- 1:30 Depart for Demonstration Site Visit**
- 2:00 Site Visit Demonstrations**
- 4:00 Questions and Adjourn**

Training Presented by AEI-CASC Consulting

The Russian River Watershed Association complies with ADA requirements and will attempt to reasonably accommodate individuals with disabilities upon request.

Please contact Christy Kennedy at (707) 833-2553 with any questions.

REGIONAL PARKS MATRIX SUMMARY AND PROJECT DETAIL

Appendix II.D

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**APPENDIX II.D
REGIONAL PARKS PLANNING PROJECTS**

Goal	Spring Lake Children's Memorial Grove	Sonoma County Administration Water Conservation	Schopflin Fields Field Prep Phase III
4.1 public Construction Activities			
4.1.1a	Continue to reference appropriate BMPs in construction documents for public construction projects	Yes	Yes
4.1.1b	Review and update Construction Standard Documents to ensure they include the most recent BMPs	Yes	Yes
4.1.2a	Continue to submit NOIs for projects and attachments for the General Permit for public construction for projects that disturb 1 acre or more	N/A	Yes WDID#: 149C344700 WDID#: 149C344700
4.1.3a	Continue to inspect public construction sites during construction activities on an ongoing basis	Yes	Yes
4.1.1a	Continue to enforce the construction documents including the provisions set forth regarding failure to carry out orders given or to perform the provisions of the contract	N/A	Yes
4.1.5a	Continue to provide training to all applicable staff involved in Public Construction projects	Yes	Yes
4.2 Landscape and Recreational Facilities			
4.2.1-3b	Continue to follow the current practices regarding retention and planting of native vegetation and water conservation	Yes	N/A

Project Descriptions

Spring Lake Children's Memorial Grove

Spring Lake Children's Memorial Grove is a site in Spring Lake Park established as a place of remembrance by the community for Sonoma County children who have died. The project has been constructed and funded by donation and the dedicated volunteer work of county businesses, Scouts, and citizens. Project *Ground Breaking* began in early 2004 and a receipt of the Notice of Intent was recorded with the State Water Resources Control Board (SWRCB) (WDID#: 149C324641), on 11/4/03. During this phase of the project the site was cleared and grubbed, graded, trees were planted, and pathways installed. Work was completed by November of 2004 and the Notice of Termination per the SWRCB was filed on 1/21/05.

The sculpture project was the first project undertaken in July of 2006. The sculpture was a concrete feature 9'd and 18"h. This project was funded by donation and carried out by Art Start of Santa Rosa. Three youth and one professional artist designed and installed this piece. The sculptures foundation was constructed using County Supervised Adult Crews. The work was accomplished during the dry season, and a concrete washout was used on the day of work, to contain excess concrete and clean used tools. No construction vehicles, tools, or chemicals were stored on site. Vehicles used in construction were free from leaks and there were no spills of any kind.

An Eagle Scout and a crew of volunteers completed the last of the tree planting in the fall of 2006. One Saturday in October the crew of motivated volunteers planted, including installing protective barriers and staking, 44 flowering pear trees. The original design of the project included an all native planting plan. The dogwood trees in the original design were replaced with the pear trees because there was a need to find a species better equipped to handle the sites flood conditions. The pears retained the ornamental quality and size of the dogwoods but are more adaptable to flooding conditions. The planting was completed before the first rains so stormwater protection was taken such as installing wattles on the culvert draining to the lake. Soil conditioner used for the tree planting was delivered to the site the day of planting and the street, where soil was stockpiled, was swept clean at the end of the day. No vehicles were used on site for this project and no tools or chemicals were stored on site.

The last project of the year was the installation of the entry arbor. Materials were purchased with donated funds and volunteer local contractors completed construction. An approximately 20'x20' area was cleared and graded for installation of the arbor. The entry arbor includes two raised concrete planters, a concrete walkway, two steel posts, and steel and wood lattice. The arbor was installed at the end of the wet season so some light drizzle occurred during the project but there was no stormwater runoff during the project. Storm Water BMP's such as wattles were used around the project work area as well as using straw wattles to protect the on site culvert. There was some tracking from the vehicles used on site but A/C trails where tracking occurred were swept clean at the end of the day. Vehicles and tools were stored on site in designated areas and were inspected daily for leaks. No leaks or spills occurred during this project. On the day of the concrete pour a concrete washout was used for excess concrete and tool cleaning.

Sonoma County Administration Water Conservation

The Administration Water Conservation project is the first phase of redesign for the greater county complex's aging landscape. Redesign to a water-wise landscape for the County Administration Building began in the spring of 2006 and installation began in July of that year. The motivating factor for the project was to lower landscape water use. The design intent also included that the landscape be used as a water conservation and storm water BMP demonstration garden, for passive and educational use by the public, as well as the enjoyment of the County of Sonoma staff.

In the first phase of the project, 80% of the turf at the Administration Building was removed and replaced with trees, shrubs, and perennials to minimize water use. The overhead spray of lawn sprinklers was replaced with a low-pressure drip system. Plants were chosen for ornamental quality and organized for best suitability to the varying microclimates surrounding the building, allowing for like plant types to be placed on the same irrigation valve with the same water timing.

This project also includes several demonstration areas exhibiting a constructed landscape for an artist's eye yet a less invasive impact on the environment. The demonstration includes a porous paving exhibit with two kinds of porous pavers and a porous concrete installation. Included in the garden is a California native plants section. There is also a rainwater collection demonstration, using a wine barrel to collect water from the rooftop. Two areas in the landscape, where turf is being reinstalled, are designed also as vegetated swales. And finally the overall theme of the garden is a lower water use Mediterranean\California planting plan.

Project construction went on throughout the year so storm water runoff precautions were kept up daily. All DI's were gravel bagged and those remained in place throughout the wet season. Straw wattles were used to border areas of on going work with current soil disturbance and remained in place through the duration of the project. No visible erosion occurred in any location on site during the project. All stockpiles were covered with tarp and gravel bagged at the end of each day. Streets and sidewalks were swept daily to discount tracking. Upon the completion of planting each section of the project, all exposed soil was covered with 2" of mulch. The day of the concrete pour, a concrete washout was used to dispose of excess concrete and to clean tools. The storage of all vehicles, tools, chemicals, and materials were stored at the designated, off-site parks maintenance facility. Vehicles, equipment, and tools were checked daily for leaks and no leaks or spills occurred on site during the project.

Schopflin Fields Phase II Field Prep and Phase III

It was hoped that Schopflin Fields Phase II field prep would be completed in December of 2006. The SWRCB filed the receipt of Notice of Intent on December 4, 2006 (WDID#: 149C344700). But due to rains the project was delayed until the spring of 2007. The project includes clear and grub, rough grade, and 3" compacted shale base, drainage, and final grade of 3.9 acres of land. The project is continuing into the 2007-08 year and only the clear and grub, rough grade, and rock base were completed in 2006-07. During rough grade of the site excess soil and garbage accumulated. The soil was stockpiled at an undeveloped location at Schopflin Fields.

Work began near the end of the wet season. All DI's on site were protected with straw wattles. Straw wattles also bordered the constructed channel along the southwest end of the site. The stockpile (approximately 2000ydrds of excess soil) has wattles on each end protecting the drainages from unexpected rains. The stockpile will be hydro-seeded closer to and before the next wet season. Dust suppression was conducted with water trucks consistently dispersed throughout the day. The existing construction entrance was reinforced with 2" minus drain rock at the beginning of construction to eliminate tracking at the entrance to the site. Trash collected during field rough grade was stockpiled and removed from site to a license disposal facility. Vehicles, equipment, and tools stored on site were checked daily for leaks and no spills or leaks occurred on site during project construction. The Storm Water Pollution Prevention Plan inspection checklists were completed on schedule and the site plans were updated monthly.

Schopflin Fields Phase III construction project includes parking lot, restroom/concession building, trash enclosure, A/C trail, and pedestrian bridge. The SWRCB filed the receipt of the Notice of Intent on May 16, 2007 (WDID#: 149C346711). Construction began that same month on the 3.4 acres of land. This project also runs into the 2007-08 year. The items completed by June 30, 2007 are as noted:

sewer installation - from building to pump and on street connection

bridge - footings and abutments

parking lot - curbs, DI's and drainage, sub-compaction

building - underground (electric, sewer, irrigation, water), building concrete pad, and trash concrete pad

The project began at the end of the wet season. All existing DI's have protective wattles around them. Newly installed DI's are protected with filter fabric. Dust suppression was conducted with water trucks consistently dispersed throughout the day. The project uses the same construction entrance as the field prep project so the entrance was reinforced as noted above. All exposed soil will be hydro-seeded closer to and before next years wet season. Vehicles, equipment, and tools stored on site are checked daily for leaks and no spills or leaks occurred on site during project construction. The Storm Water Pollution Prevention Plan inspection checklists were completed on schedule and site plans were updated monthly.

**DEPARTMENT OF TRANSPORTATION
AND PUBLIC WORKS**

CONSTRUCTION SITE INSPECTION FORM

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Attachment H

Stormwater Quality Construction Site Inspection Checklist

GENERAL INFORMATION				
Project Name				
Caltrans Contract No.				
Contractor				
Inspector's Name				
Inspector's Title				
Signature				
Date of Inspection				
Inspection Type (Check Applicable)	<input type="checkbox"/> Prior to forecast rain			<input type="checkbox"/> After a rain event
	<input type="checkbox"/> 24-hr intervals during extended rain			<input type="checkbox"/> Other _____
Season (Check Applicable)	<input type="checkbox"/> Rainy			<input type="checkbox"/> Non-Rainy
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min.	Hr.	Days
			Approximate Rainfall Amount (mm)	

PROJECT AREA SUMMARY AND DISTURBED SOIL AREA (DSA) SIZE LIMITS FROM SPECIAL PROVISIONS			
Total Project Area	_____	Hectares	_____ Acres
Rainy Season DSA Limit	_____	Hectares	_____ Acres
Field Estimate of Non-Active DSAs	_____	Hectares	_____ Acres
Field Estimate of Active DSAs	_____	Hectares	_____ Acres

OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Preservation of Existing Vegetation				
Is temporary fencing provided to preserve vegetation in areas where no construction activity is planned?				
Location:				
Temporary Soil Stabilization				
Does the applied temporary soil stabilization provide 100% coverage for the required areas?				
Are any non-vegetated areas that may require temporary soil stabilization?				
Is the area where temporary soil stabilization required free from visible erosion?				
Location:				
Temporary Linear Sediment Barriers				
Are temporary linear sediment barriers properly installed in accordance with the details, functional and maintained?				
Are temporary linear sediment barriers free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced?				
Are fiber rolls installed and maintained on required slopes in accordance with the details, functional and maintained?				
Location:				
Storm Drain Inlet Protection				
Are storm drain inlets internal to the project properly protected with either Type 1, 2 or 3 inlet protection?				
Are storm drain inlet protection devices in working order and being properly maintained?				
Location:				



OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Location:				
Desilting Basins				
Are basins maintained to provide the required retention/detention?				
Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) in working order?				
Location:				
Stockpiles				
Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				
Are stockpiles located at least 50 ft from concentrated flows, downstream drainage courses and storm drain inlets?				
Are required covers and/or perimeter controls in place?				
Location:				
Concentrated Flows				
Are concentrated flow paths free of visible erosion?				
Location:				
Tracking Control				
Are points of ingress/egress to public/private roads inspected, swept, and vacuumed daily?				
Are all paved areas free of visible sediment tracking or other particulate matter?				
Is rock at Temporary Construction Entrance(s) 12-inches or more in thickness?				
Does sediment need to be removed from the rock, or does the rock need to be replaced?				
For Type 2 Construction Entrance, does sediment need to be removed from ribbed plates?				
Location:				

OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Wind Erosion Control				
Is dust control implemented in conformance with Section 10 of the Standard Specifications?				
Location:				
Dewatering Operations				
Is dewatering handled in conformance with the dewatering permit issued by the RWQCB?				
Is required treatment provided for dewatering effluent?				
Location:				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?				
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?				
If no, are drip pans used?				
Are dedicated fueling, cleaning, and maintenance areas located at least 15 m away from downstream drainage facilities and watercourses, and protected from run-on and runoff?				
Is wash water contained for infiltration/ evaporation and disposed of outside the highway right of way?				
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?				
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?				
Location:				
Waste Management & Materials Pollution Control				
Are material storage areas and washout areas protected from run-on and runoff, and located at least 50 ft from concentrated flows and downstream drainage facilities?				
Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?				

OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?				
Are bagged and boxed materials stored on pallets?				
Are hazardous materials and wastes stored in appropriate, labeled containers?				
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?				
Are temporary containment facilities free of spills and rainwater?				
Are temporary containment facilities and bagged/boxed materials covered?				
Are temporary concrete washout facilities designated and being used?				
Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system?				
Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations?				
Are the temporary concrete washout facilities' PVC liners free from punctures and holes?				
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?				
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is the site free of litter?				
Are trash receptacles provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				
Is litter from work areas within the construction limits of the project site collected and placed in watertight dumpsters?				
Are waste management receptacles free of leaks?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Location:				
Temporary Water Body Crossing or Encroachment				
Are temporary water body crossings and encroachments constructed as shown on the plans or as approved by the engineer?				
Does the project conform to the requirements of the 404 permit and/or 1601 agreement?				
Location:				
Location:				

OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
Location:				
Location:				
Illicit Connection/Illegal Discharge Detection and Reporting				
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Engineer been notified?				
Location:				
Discharge Points				
Are discharge points and discharge flows free from noticeable pollutants?				
Are discharge points free of any significant erosion or sediment transport?				
Location:				
WPCP/SWPPP Update				
Do the WPCP/SWPPP, Project Schedule/Water Pollution Control Schedule and WPCDs adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown on the WPCDs installed in the proper location(s) and according to the details for the plan?				
Location:				
General				
Are there any other potential water pollution control concerns at the site?				
Location:				
Storm Water Monitoring				
Does storm water discharge directly to a water body listed as impaired for sediment/sedimentation or turbidity in the General Construction Activity Permit?				



OTHER REQUIREMENTS				
Requirement	Yes	No	N/A	Corrective Action
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the sampling and analysis plan, if required, during rain events?				
Were there any BMPs not properly implemented, or breaches, malfunctions, leakages or spills observed, which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Were soil amendments (e.g., gypsum) used on the project?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
Did storm water contact stored materials or waste and resulted in a discharge from the construction site? (Materials not in watertight containers, etc.)				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				

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**SONOMA COUNTY WATER CONSERVATION PROJECT
PHASE 1 SUMMARY**

Appendix II.F

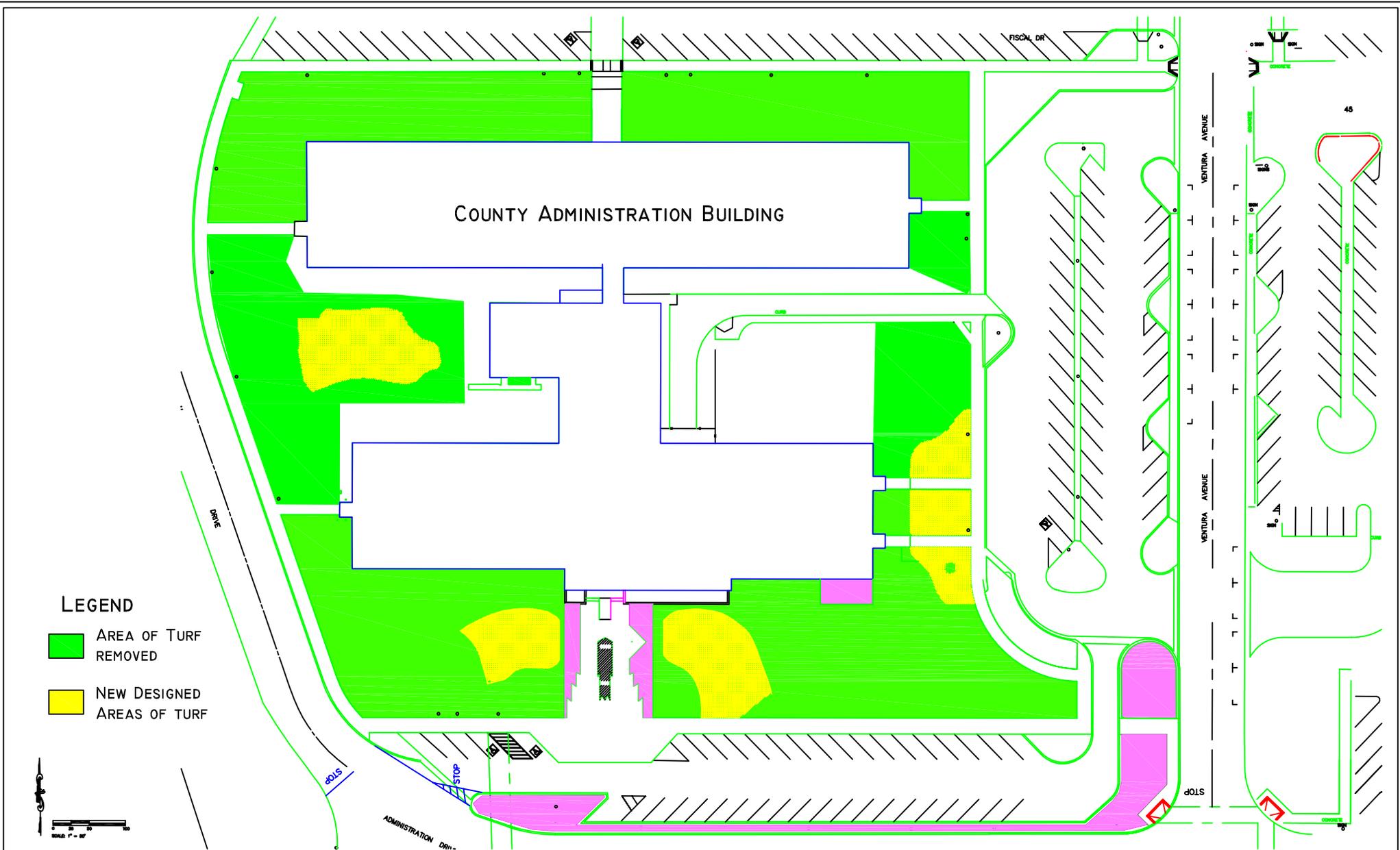
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SONOMA COUNTY
WATER CONSERVATION PROJECT
PHASE 1 SUMMARY

Phase one of the Water Conservation Project replaced the existing turf and shrubs at the County Administration Center with walking paths and drought-resistant perennials and trees. The turf area was reduced from 47,000 square feet down to 10,000 square feet, nearly an 80% reduction. Broadcast irrigation was also replaced with drip irrigation throughout the Center. Sonoma County PRMD joined efforts with Regional Parks by contributing Low Impact Development (LID) demonstration features as part of the project. LID's at the site include a vegetated swale, porous pavers and a rain barrel (see photographs below). The Water Conservation Project also doubles as a demonstration garden that exemplifies aesthetically pleasing water conservation techniques to enhance understanding and awareness of storm water issues to the public and County staff.







LEGEND

- AREA OF TURF REMOVED
- NEW DESIGNED AREAS OF TURF

COUNTY ADMINISTRATION WATER CONSERVATION LANDSCAPE PROJECT

REGIONAL PARKS STORM DRAIN INVENTORIES

Appendix II.G

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High Priority Storm Drain System Culvert Inventory

CHANATE CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Flow	Type - Other	Materials	Materials - Other	Corrugated/Smooth	Trash rack	Apron	Size	Size in feet - Other	Condition	Condition - Other	
-122.701035	38.46808152	Round	SE'LY		Concrete		Corrugated	No	Yes	12"		Good (no problems)		
-122.7009972	38.46803941	Round	SE'LY		Concrete		Smooth	No	No	12"		Good (no problems)		
-122.7036725	38.46920815	Round	SWLY		Plastic		Smooth	No	No	6"		Good (no problems)		
-122.703625	38.46918235	Round	SWLY		Plastic		Smooth	No	No		4 inches	Good (no problems)		
-122.7012736	38.46885505	Round	NELY	cast iron pipe	Metal		Smooth	No	No	8"		Good (no problems)		
-122.7012364	38.46889906	Round	NELY		Metal	cast iron	Smooth	No	No	8"		Good (no problems)		
-122.70863	38.46738221	Round	WESTERLY		Metal		Corrugated	No	Yes	12"		Good (no problems)		
-122.7089843	38.46739939	Round	WESTERLY	down stream end	Metal		Corrugated	No	No	12"		Good (no problems)		
-122.7071018	38.46758632	Round	EASTERLY		Metal		Smooth	No	Yes	6"		Fair (minor issues)	easily clogged	
-122.7074464	38.46794966	Round	NELY		Metal		Corrugated	No	Yes	12"		Good (no problems)		
-122.7053734	38.46801745	Round	SOUTHERLY		Plastic		Smooth	No	No	6"	two 6 inch pvc pipes			
Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.6995495	38.46797111	Round	24"	SWLY	Concrete	Smooth	No	No	Poor (big issues)	Limiting				
-122.7002188	38.46864774	Round	12"		Metal	Smooth	No	No	Fair (minor issues)	Limiting				
-122.7002796	38.46872094	Round	12"		Concrete	Smooth	No	No	Fair (minor issues)	No problems				
Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7083783	38.47041536	Oval	12"	WESTERLY	Metal	Corrugated	No	Yes	Good (no problems)					
Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7083713	38.47040549	Round	8"	SWLY	Metal	Corrugated	No	Yes	Good (no problems)	No problems				
-122.7085201	38.47093062	Round	24"	SOUTHERLY	Metal	Corrugated	No	No	Fair (minor issues)	Vegetation			Flared inlet 15 oval	
-122.7084859	38.47065769	Round	24"	SOUTHERLY	Metal	Corrugated	No	No	Fair (minor issues)	Vegetation			outlet	
-122.706768	38.47000458	Round	12"	WESTERLY	Metal	Corrugated	No	Yes	Good (no problems)	Rip-Rap			armor	
-122.7068889	38.47005322	Round	12"	WESTERLY	Metal	Corrugated	No	No	Good (no problems)	Rip-Rap			outlet	
-122.7069096	38.47006331	Round	24"	SWLY	Metal	Corrugated	No	No	Good (no problems)	Rip-Rap				
-122.7066692	38.46995446	Round	12"	WESTERLY	Metal	Corrugated	No	No	Good (no problems)	No problems			outlet	
-122.7062246	38.46967834	Round	12"	WESTERLY	Metal	Corrugated	No	Yes	Good (no problems)	No problems				
-122.7056171	38.469608	Round		SWLY	Plastic	Smooth	No	Yes	Good (no problems)	Limiting		outlet	4" x 15'	
-122.7055768	38.46961345	Round		SWLY	Plastic	Smooth	No	Yes	Good (no problems)	No problems			4" x 15'	
-122.7059098	38.4694432	Round		SOUTHERLY	Plastic	Smooth	No	No	Fair (minor issues)	Limiting			2 -- 3" pvc draining plante	
-122.705916	38.46941638	Round		SOUTHERLY	Plastic	Smooth	No	No	Fair (minor issues)	Limiting	outlet		2 -- 3" pvc draining plante	

COUNTY CENTER CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Type - Other	Materials	Materials - Other	Corrugated/Smooth	Trash rack	Apron	Size	Size - Other	Condition	Condition - Other
-122.7265601	38.46837348	Round		Plastic		Smooth	No	No	8"		Good (no problems)	
-122.7265888	38.46837105	Round		Plastic		Smooth	No	No	8"	6 foot sidewalk	Good (no problems)	
-122.7272356	38.46721566	Round	2 inch pvc handicapped ramp	Plastic		Smooth	No	No			Good (no problems)	
-122.7251051	38.46742373	Box	24 inches wide by 3 inch high	Concrete	6 foot sidewalk	Smooth	No	Yes	24"		Good (no problems)	
-122.7252163	38.46783124	Box	24 inch wide by 3 inch high	Concrete	6 foot sidewalk	Smooth	No	Yes	24"		Good (no problems)	

HAROUTUNIAN NORTH (OUTFALL) CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7741266	38.5122409	Round	48"	SOUTHERLY	Metal	Corrugated	No	No	Fair (minor issues)	Vegetation				
-122.7741668	38.51220487	Round	48"	SOUTHERLY	Metal	Corrugated	No	No	Fair (minor issues)	Vegetation				
-122.7733656	38.51266011	Round	12"	SOUTHERLY	Metal	Corrugated	No	No	Fair (minor issues)	Vegetation				
-122.7733094	38.51268877	Round	12"	SOUTHERLY	Metal	Corrugated	No	No	Fair (minor issues)	Vegetation				
Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7742528	38.5121392	Round		NORTHERLT	Concrete	Smooth	No	No	Good (no problems)				42" culvert outlet from freeway	

HAROUTUNIAN SOUTH (OUTFALL) CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7201388	38.37620885	Round	48"	SOUTHERLY	Concrete	Smooth	No	No	Good (no problems)				at roadway	
-122.7186859	38.37546284	Round	24"	SWLY	Concrete	Smooth	No	No	Good (no problems)				at railroad	
-122.7186805	38.37545059	Round	24"	SWLY	Concrete	Smooth	No	No	Good (no problems)				at railroad	

ORENDA CENTER CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.6861276	38.43291871	Round	6"	NORTHERLT	Plastic	Smooth	No	No	Good (no problems)				under sidewalk	5.5
-122.6861276	38.43293454	Round	6"	NORTHERLT	Plastic	Smooth	No	No	Good (no problems)				under sidewalk	5.5
Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.6867544	38.43351556	Round	12"	NORTHERLT	Concrete	Smooth	No	Yes	Good (no problems)	Vegetation				

High Priority Storm Drain System Culvert Inventory

CRAMER (OPEN SPACE) CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7774595	38.42809805	Round	24"	SOUTHERLY	Concrete	Smooth	No	No	Good (no problems)	No problems			15" x 21" oval	
-122.7774197	38.42808683	Round	24"	SOUTHERLY	Concrete	Smooth	No	No	Good (no problems)	No problems			15" x 21" oval	

EVERGREEN (OPEN SPACE) CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

KEEGIN AND COPPIN (OPEN SPACE) CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.6499155	38.41219614	Round		WESTERLY	Concrete	Smooth	No	No	Good (no problems)				15" x 18'	
-122.6499526	38.41218282	Round		WESTERLY	Concrete	Smooth	No	No	Good (no problems)				15" x 18'	

MATTERI (OPEN SPACE) CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.6956883	38.40050259	Round	24"	SW'LY	Metal	Corrugated	No	No	Good (no problems)	Perched				
-122.6957354	38.40047363	Round	24"	SW'LY	Metal	Corrugated	No	No	Good (no problems)	Perched				
-122.6979557	38.40371532	Round	12"	SE'LY	Metal	Corrugated	No	No	Good (no problems)	No problems				
-122.6980119	38.40379109	Round	12"	SE'LY	Metal	Corrugated	No	No	Good (no problems)	No problems				
-122.6950475	38.4009201	Round		SW'LY	Metal	Corrugated	No	No	Good (no problems)	No problems			30"	
-122.6951343	38.40083402	Round		SW'LY	Metal	Corrugated	No	No	Good (no problems)	No problems			30"	
-122.6919434	38.40351425	Round	18"	WESTERLY	Metal	Corrugated	No	No	Good (no problems)	No problems				
-122.6920177	38.40353201	Round	18"	WESTERLY	Metal	Corrugated	No	No	Good (no problems)	No problems				
-122.6895206	38.39954941	Round	18"	SW'LY	Metal	Corrugated	No	Yes	Good (no problems)	Rip-Rap				

RINCON VALLEY LIBRARY CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

SEBASTOPOL VETERANS BUILDING CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

SAN FRANCISCO ARCHDIOCESE (OPEN SPACE) CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

SANTA ROSA VETERANS BUILDING CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

STANLEY CEMETERY CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.7035049	38.45624978	Round	18"	NW'LY	Metal	Corrugated	No	No	Good (no problems)	Rip-Rap			18" x 12.1'	
-122.7035	38.45626869	Round	18"	NW'LY	Metal	Corrugated	No	No	Good (no problems)	Rip-Rap			18" x 12.1'	

YOUNG AND AMOS (OPEN SPACE) CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

NORTHWEST SANTA ROSA REGIONAL LIBRARY CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

COTATI VETERANS BUILDING CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

SANTA ROSA VETERANS BUILDING CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

OKEN (OPEN SPACE) CULVERT INVENTORY COORDINATES

Longitude	Latitude	Type	Size	Flow	Materials	Corrugated/Smooth	Trash rack	Apron	Condition quality	Other conditions	Type - Other	Condition - Other	Size in feet - Other	Materials - Other
-122.6763764	38.37123981	Round			Concrete	Smooth	No	Yes	Good (no problems)	Rip-Rap	Armored		60" D inlet	
-122.6764095	38.37237834	Round		SW'LY	Concrete	Smooth	No	Yes	Good (no problems)	Rip-Rap	Armored		54" D inlet	
-122.6764427	38.37236441	Round		SW'LY	Concrete	Smooth	No	Yes	Good (no problems)	Rip-Rap	Armored		54" D inlet	
-122.6824078	38.37229396	Round	24"	SOUTHERLY	Concrete	Smooth	Yes	No	Good (no problems)	No problems	Wooden box			

HO (OPEN SPACE) CULVERT INVENTORY COORDINATES

No Regional Parks culverts present at facility.

High Priority Storm Drain System Drop Inlet Inventory

CHANATE DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in feet	FLOW	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts
-122.7011387	38.46791278	12		12	Bicycle	plastic	1
-122.7013746	38.46784012	24	SOUTHERLY	18	Bicycle		2
-122.7013643	38.46782468	24	WESTERLY	18	Bicycle		2
-122.7014739	38.46778783	16	SW'LY	14	Bicycle		2
-122.7015121	38.4677403	18	WESTERLY	14	Bicycle	B9 box	2
-122.7029407	38.46901953	40	NE'LY	26		welded pipe grate	1
-122.7031779	38.46916359	36	NORTHERLT	0			2
-122.7032378	38.46921574	36	WESTERLY	0			3
-122.7032189	38.46926212	36	WESTERLY	0			2
-122.703204	38.46926488	12	NORTHERLT	12	Heal Proof	plastic	1
-122.7033871	38.46915579	36	NORTHERLT	24	Bicycle		2
-122.7034962	38.46906206	30	NORTHERLT	24	Heal Proof		1
-122.703728	38.46906276	96	SOUTHERLY	96	Heal Proof	12 x 96	2
-122.700973	38.46844043	18		14	Bicycle		1
-122.7009544	38.46836963	15		15	Bicycle	welded pipe	2
-122.7082014	38.46727653	36	NW'LY	0			2
-122.7082697	38.46728973	36	NW'LY	0			2
-122.7084848	38.46734915	36	WESTERLY	0			2
-122.709246	38.4676504	36	NORTHERLT	24	Bicycle		1
-122.7092366	38.46814579	36	WESTERLY	24	Bicycle		2
-122.7093024	38.46817616	60	WESTERLY	48	Bicycle	off property	3
-122.7086441	38.46792091	6		6	Heal Proof	round 6 inch at door	1
-122.7085138	38.46801256	6		6	Heal Proof	6 inch round grate at vent	1
-122.7084259	38.46801232	6		6	Heal Proof	6 inch round grate at door	1
-122.7081749	38.46808186	6		6	Heal Proof	6 inch round grate at vent	1
-122.708108	38.46810506	6		6	Heal Proof	6 inch round grate at door	1
-122.7076827	38.46830288	42	NORTHERLT	36	Bicycle		1
-122.7081834	38.46790089	60	SE'LY	0			1
-122.7084302	38.46779802	16	SE'LY	16	Bicycle		2
-122.7085978	38.46767613	60	SE'LY	0			2
-122.7090033	38.46754436	24	NW'LY	16	Bicycle		1
-122.7091374	38.46762391	24	NW'LY	18	Bicycle		2
-122.7083878	38.46678829	36	SE'LY	0			1
-122.7082506	38.46681743	36	SW'LY	0			1
-122.7078428	38.46669004	18	WESTERLY	16	Bicycle	welded pipe	1
-122.7068607	38.46738766	12	EASTERLY	12		welded pipe	1
-122.7077507	38.46733367	24	WESTERLY	16	Bicycle		1
-122.7062077	38.46862774	36	EASTERLY	36		welded steel into 36 culvert	2
-122.7062219	38.46859446	24	NORTHERLT	24		welded pipe	1
-122.7058108	38.4680578	36	SE'LY	0			1
-122.7051973	38.46844345	36	SE'LY	0			1
-122.705303	38.4685997	36	SE'LY	24	Bicycle		1
-122.7063494	38.46791178	36		0			1
-122.7257305	38.46807595	24	NORTHERLT	16	Bicycle	2nd attempt at truck bay	1

High Priority Storm Drain System Drop Inlet Inventory

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.6991387	38.46795674	60	WESTERLY	Creek		0			1	No
Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.7084906	38.46735247	38	SW'LY	Creek	19-Jun-07				2	Yes
-122.7075672	38.46855342	12	SW'LY	Creek		12	Heal Proof		1	No
-122.7075815	38.46854531	72	SW'LY	Creek					2	Yes
-122.708867	38.46851613	34	SOUTHERLY	Unmarked					2	No
-122.7088157	38.46851048	34	WESTERLY	Unmarked					1	No
-122.7089665	38.46835085	34	SOUTHERLY	Unmarked					2	No
-122.7083366	38.46856243	34	SOUTHERLY	Creek	19-Jun-07	26	Bicycle		2	Yes
-122.7081713	38.46857121	34	SW'LY			26	Bicycle		2	No
-122.7083214	38.47029409	34	WESTERLY	Creek					2	Yes
-122.7081951	38.47015805	34	WESTERLY	Creek					3	Yes
-122.7081661	38.47019568	12	SOUTHERLY			12	Heal Proof	Round	1	No
-122.7083241	38.47012538	38	WESTERLY	Creek					1	No
-122.7083334	38.4700617	22	NW'LY			16	Bicycle		1	No
-122.7082406	38.47043266	38	SW'LY	Creek					1	Yes
-122.7082748	38.47055337	36	SOUTHERLY			27	Bicycle		1	No
Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.7075586	38.4685603	12	SW'LY	Unmarked		12	Heal Proof	Plastic	1	No
-122.706449	38.468904	40	EASTERLY	Unmarked		22	Bicycle	Custom welded	2	No
-122.7068035	38.46955105	32	SE'LY	Unmarked		24	Bicycle		2	No
-122.7070448	38.46999371	60	SE'LY	Unmarked				Diamond plate	1	No
-122.7070901	38.46942754	26		Unmarked		24	Bicycle		1	No
-122.70704	38.46974574	6	EASTERLY	Unmarked		6	Heal Proof	round	1	No
-122.707441	38.47012298	25	SOUTHERLY	Unmarked		25	Bicycle	Round	1	No
-122.7078044	38.47030387	19	NW'LY	Unmarked		15	Bicycle	12 x 15	1	No
-122.7078107	38.47032444	38	WESTERLY	Creek					3	Yes
-122.7078705	38.47031093	25	WESTERLY	Unmarked		2	Bicycle	18 x 21	3	No
-122.707829	38.47038297	20	SE'LY	Unmarked		2	Bicycle	12 x 15	2	No
-122.7078898	38.47044875	20	SE'LY	Unmarked		15	Bicycle	12 x 15	3	No
-122.7079315	38.47056175	20	SE'LY	Unmarked		15	Bicycle	12 x 15	2	No
-122.7078875	38.47041555	176		Unmarked		168	Bicycle	08" x 168" at bldg edge	1	No
-122.7078185	38.4706337	38	NW'LY	Creek	22-Jun-07				1	Yes
-122.7080333	38.47056991	56		Unmarked		47	Bicycle	08" x 47" at bldg edge	1	No
-122.7080955	38.47055463	20	NE'LY	Unmarked		15	Bicycle	12 x 15	1	No
-122.7071127	38.46911108	56		Unmarked		47	Bicycle	08" x 47" edge of bldg	1	No
-122.7082725	38.47055027	36	SOUTHERLY	Unmarked		27	Bicycle		1	No
-122.7082431	38.47043594	38	SW'LY	Unmarked					2	Yes
-122.7077214	38.47033129	27	WESTERLY	Unmarked		21	Bicycle	18 x 21	3	No
-122.7076954	38.47030233	24		Unmarked		12	Heal Proof		1	No
-122.7075968	38.47020349	14		Unmarked		12	Heal Proof		1	No
-122.7055369	38.46959926	19		Unmarked		16	Bicycle	10" x 15.5" flows up <roof>	1	No
-122.7050999	38.46950004	19	SE'LY	Unmarked		16	Bicycle	10" x 15.5" flows up <roof>	2	No
-122.7052336	38.46954089	3	SE'LY	Unmarked		3	Heal Proof	3" round	1	No
-122.7074934	38.4710161	38	WESTERLY	Unmarked				wooden top	1	No
-122.7080206	38.47155004	38	WESTERLY	Unmarked				wooden top	2	No
-122.7082605	38.47171057	38	SOUTHERLY	Unmarked				wooden top	1	No
-122.7078437	38.46984337	46	NW'LY	Unmarked		36	Bicycle	27" x 36"	1	No
-122.7077172	38.46990434	20		Unmarked		15	Bicycle	12" x 15"		No
-122.7080617	38.46968366	46	NORTHERLT	Unmarked		36	Bicycle	36 x 27	1	No

High Priority Storm Drain System Drop Inlet Inventory

COUNTY CENTER DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	Grate Size	Grate Style	Grate Style - Other	Number of Culverts				
-122.7262168	38.46825221	60	0			1				
-122.7263402	38.46812535	60	0			1				
-122.7261992	38.46819231	60	0			1				
-122.7259437	38.46819821	36	0			1				
-122.7255271	38.46814226	36	24	Bicycle		4				
-122.7268091	38.46834405	60	0			1				
-122.7269277	38.46826319	24	16	Bicycle		1				
-122.7271271	38.46832633	60	0			1				
-122.7270938	38.46827985	60	0			1				
-122.7270931	38.46827037	24	16	Bicycle		3				
-122.7274094	38.46789691	36	24	Bicycle		3				
-122.7273649	38.46778372	36	24	Bicycle		2				
-122.727241	38.46772247	36	24	Bicycle		2				
-122.7270923	38.46734693	48	0			1				
-122.7270438	38.4673622	24	16	Bicycle		3				
-122.7268522	38.467263	60	40	Bicycle		2				
-122.726771	38.4672887	36	16	Bicycle		1				
-122.7266135	38.46722883	36	16	Bicycle		2				
-122.7264961	38.46719045	1	1	Heal Proof	3 inch inlet with 8 inch grate	1				
-122.7275098	38.46733248	36	0			1				
-122.7274872	38.46811917	60	0			1				
-122.7274432	38.46806645	60	0			1				
-122.7259829	38.46877459	48	36	Bicycle		1				
-122.7255049	38.46813051	36	16	Bicycle		1				
-122.724079	38.46823063	48	36	Bicycle	36x40	1				
-122.7240924	38.46815534	48	36	Bicycle	36x40	2				
-122.7240883	38.46747083	60	48	Bicycle	48x52	3				
-122.7239676	38.46746386	36	0			1				
-122.7237616	38.46745625	36	0			1				
-122.725396	38.4672683	60	0			1				
-122.725336	38.46730793	24	16	Bicycle		2				
-122.7252279	38.46733814	36	24	Bicycle		2				
-122.7251533	38.4674172	36	24	Bicycle		2				
-122.7250519	38.46772971	36	24	Bicycle		1				
-122.7252726	38.46786546	36	24	Bicycle		2				
-122.7253355	38.4670778	60	0			1				
-122.7253606	38.46692457	36	0			1				
-122.724381	38.46730004	36	36	Bicycle	24x36	1				
-122.7245417	38.46725868	60	0			1				
-122.7245446	38.46693378	24	24	Bicycle		1				
-122.7244147	38.46699832	36	0			1				
-122.7244153	38.46685074	36	0			1				
-122.7244065	38.46551583	24	24	Bicycle	curb & grate	1				
-122.7242624	38.46552212	24	24	Heal Proof	curb & grate	1				
Longitude	Latitude	Box Size in inches	FLOW	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts			
-122.7257305	38.46807595	24	NORTHERLT	16	Bicycle	2nd attempt at truck bay	1			
Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.7230815	38.4674818	38	SOUTHERLY	Creek	28-Jun-07				1	Yes

High Priority Storm Drain System Drop Inlet Inventory

COTATI VETERANS BUILDING DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.7024436	38.32269154	12	NORTHERLT	Unmarked		12	Heal Proof	Plastic DI plus roof drainage	2	No
-122.7024524	38.32236364	516	NORTHERLT	Unmarked		516	Heal Proof	43' linear grate	2	No

SANTA ROSA LIBRARY DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.7112625	38.44117585	20	EASTERLY	Unmarked		16	Bicycle		2	No
-122.7110984	38.44122571	34	NORTHERLT	Unmarked		24	Bicycle		3	No
-122.7109692	38.44105382	34	NORTHERLT	Unmarked		24	Bicycle		2	No
-122.7113405	38.44156761	168	NORTHERLT	Unmarked		162	Bicycle	12" x 162"	1	No
-122.7113892	38.44160142	36	WESTERLY	Unmarked		36	Bicycle	27 x 36'	2	No

ORENDA CENTER DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.6855546	38.4331869	32	NW'LY	Unmarked		27	Bicycle	24 x 27	1	No
-122.6860798	38.43316435	26	NORTHERLT	Unmarked		20	Bicycle	20 x 20	2	No
-122.6861271	38.43290791	26	NORTHERLT	Unmarked		20	Bicycle	20 x 20	1	No
-122.6856976	38.43341799	26	NORTHERLT	Unmarked		19	Bicycle	16 x 19	1	No

CRAMER (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

KEEGIN AND COPPIN (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

MATTERI (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

RINCON VALLEY LIBRARY DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.6620108	38.47879263	26	SW'LY	Creek	25-Jun-07	21	Bicycle		5	Yes
-122.6621149	38.47895188	22	SE'LY	Creek	25-Jun-07	15	Bicycle		1	Yes
-122.6618636	38.47893909	22	SOUTHERLY	Creek	25-Jun-07	15	Bicycle		1	Yes
-122.6612705	38.47875883	22	WESTERLY			15	Bicycle		2	No
-122.6610474	38.47894949	36	SW'LY					diamond plate	2	No
-122.6610633	38.47924275	18	WESTERLY			12	Bicycle		1	No
-122.6612708	38.47924835	18	WESTERLY			12	Bicycle		2	No

High Priority Storm Drain System Drop Inlet Inventory

SEBASTOPOL VETERANS BUILDING DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.825043	38.39997024	19		Unmarked		14	Bicycle	B-9; 9" x 14.5"	1	No

SAN FRANCISCO ARCHDIOCESE (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

SANTA ROSA VETERANS BUILDING DROP INLET INVENTORY COORDINATES

Longitude	Latitude	Box Size in inches	FLOW	Signage type	New sign inst date	Grate Size in feet	Grate Style	Grate Style - Other	Number of Culverts	Bilingual signage?
-122.7017611	38.434719	30	SW'LY	Unmarked		24	Bicycle		1	Yes
-122.7005419	38.4336707	30	SW'LY	Unmarked		21	Bicycle	18X21'	1	No
-122.7005943	38.43364747	38	SOUTHERLY	Creek	14-Jun-07	21			2	Yes
-122.7014685	38.43353542	38	SOUTHERLY	Creek	14-Jun-07					Yes
-122.7019182	38.43355768	46	SOUTHERLY	Creek	14-Jun-07	36	Bicycle	27x36	3	Yes
-122.7024893	38.43358926	58	SW'LY	Creek	14-Jun-07		Bicycle		1	Yes

STANLEY CEMETERY DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

YOUNG AND AMOS (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

NORTHWEST SANTA ROSA REGIONAL LIBRARY DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

HAROUTUNIAN NORTH DROP (OPEN SPACE) INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

HAROUTUNIAN SOUTH (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

OKEN (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

HO (OPEN SPACE) DROP INLET INVENTORY COORDINATES

No Regional Parks drop inlets present at facility.

High Priority Storm Drain System Outfall Inventory

CHANATE COMPLEX

Longitude	Latitude	Type of Water Body	Condition	Condition - Other
-122.7008678	38.46768394	Drainage ditch/swale	Rip-Rap	rip-rap at end concrete swale
-122.701577	38.46759522	Drainage ditch/swale	Scoured	
-122.7034292	38.46913332	Perennial Stream	Vegetation	
-122.7035719	38.46899611	Perennial Stream	Perched	4 inch pipe corroded
-122.701073	38.46820755	Drainage ditch/swale	Scoured	
-122.7009128	38.46854168	Drainage ditch/swale		
-122.7085433	38.46733487	Drainage ditch/swale	Rip-Rap	
-122.7075514	38.46824094	Drainage ditch/swale	Rip-Rap	flows to curb
-122.708353	38.46675286	Drainage ditch/swale	Limiting	
-122.7083119	38.46675414	Drainage ditch/swale	Vegetation	
-122.7081032	38.46662685	Drainage ditch/swale	Vegetation	
-122.7067561	38.46745092	Drainage ditch/swale	Perched	
-122.7071117	38.46766102	Drainage ditch/swale	Rip-Rap	asphalt amoured
-122.7079878	38.46723081	Drainage ditch/swale	Limiting	
-122.7073342	38.46800084	Drainage ditch/swale	Rip-Rap	
-122.7057866	38.4680093	Drainage ditch/swale	Vegetation	
-122.7050462	38.46839388	Drainage ditch/swale	Rip-Rap	
-122.7053049	38.46861129	Drainage ditch/swale	Rip-Rap	

Longitude	Latitude	Type of Water Body	Condition	Condition - Other
-122.708463	38.46840019	Drainage ditch/swale	No problems	

Longitude	Latitude	Type of Water Body	Condition	Condition2	Condition3	Condition - Other
-122.705128	38.46926947	Drainage ditch/swale	No problems			roof drainage
-122.7059767	38.46940928	Drainage ditch/swale	No problems			roof drainage

COUNTY CENTER

Longitude	Latitude	Type of Water Body	Condition	Condition - Other
-122.727638	38.46732744	Drainage ditch/swale	Vegetation	
-122.7278793	38.46811357	Drainage ditch/swale	Vegetation	headwall 10 feet long

COTATI VETERANS BUILDING

Longitude	Latitude	Type of Water Body	Condition	Condition2	Condition3	Condition - Other
-122.7023886	38.32283288	Drainage ditch/swale	No problems			Street curb outfall
-122.7020894	38.32242614	Drainage ditch/swale	No problems			Street curb outfall

High Priority Storm Drain System Outfall Inventory

HAROUTUNIAN NORTH (OPEN SPACE)

Longitude	Latitude	Type of Water Body	Condition	Condition2	Condition3	Condition - Other
-122.7723172	38.51299862	Drainage ditch/swale	No problems			3" flex outlet 2' from fence
-122.7725991	38.51316912	Drainage ditch/swale	Vegetation	Limiting	No problems	

HAROUTUNIAN SOUTH OUTFALL (OPEN SPACE)

No Regional Parks outfalls present at facility.

ORENDA CENTER

Longitude	Latitude	Type of Water Body	Condition	Condition2	Condition3	Condition - Other
-122.6860403	38.43345775	Drainage ditch/swale	Limiting			

CRAMER (OPEN SPACE)

No Regional Parks outfalls present at facility.

EVERGREEN (OPEN SPACE)

No Regional Parks outfalls present at facility.

KEEGIN AND COPPIN (OPEN SPACE)

No Regional Parks outfalls present at facility.

MATTERI (OPEN SPACE)

No Regional Parks outfalls present at facility.

RINCON VALLEY LIBRARY (OPEN SPACE)

No Regional Parks outfalls present at facility.

SEBASTOPOL VETERANS BUILDING

No Regional Parks outfalls present at facility.

SAN FRANCISCO ARCHDIOCESE (OPEN SPACE)

No Regional Parks outfalls present at facility.

High Priority Storm Drain System Outfall Inventory

SANTA ROSA VETERANS BUILDING

No Regional Parks outfalls present at facility.

STANLEY CEMETERY

Longitude	Latitude	Type of Water Body	Condition	Condition2	Condition3	Condition - Other
-122.7034986	38.45626286	Perennial Stream	Perched	Rip-Rap	No problems	

YOUNG AND AMOS (OPEN SPACE)

Longitude	Latitude	Type of Water Body	Condition	Condition2	Condition3	Condition - Other
-122.6949439	38.37313173	Drainage ditch/swale	No problems			

NORTHWEST SANTA ROSA REGIONAL LIBRARY

No Regional Parks outfalls present at facility.

SANTA ROSA LIBRARY

No Regional Parks outfalls present at facility.

OKEN (OPEN SPACE) OUTFALL INVENTORY COORDINATES

No Regional Parks outfalls present at facility.

HO (OPEN SPACE) OUTFALL INVENTORY COORDINATES

No Regional Parks outfalls present at facility.

**RUSSIAN RIVER WATERSHED ASSOCIATION
2006-07 STORM WATER ACTIVITIES**

Appendix II.H

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Memorandum



Subject: 2006-2007 RRWA Stormwater Activities

Prepared For: RRWA Member Agencies

Prepared by: Christy Kennedy, RRWA Deputy Director

Reviewed by: Dave Richardson, RRWA Executive Director

Date: 23 July 2007

1 Background

The Russian River Watershed Association is a group of nine cities, counties and special districts with operations within the Russian River watershed. These agencies have come together to collaborate on regional programs such as the stormwater awareness program to enhance watershed resources. In the 2006-2007 year, RRWA agencies have completed a number of stormwater awareness activities to increase the public's awareness of their activities that impact stormwater quantity and quality, share resources, and promote regional programs and messages.

Stormwater related activities that took place between July 1, 2006 and June 30, 2007 are listed in the table below.

Table 1: RRWA 2006-2007 Stormwater Activities

Activity	Date	Notes
<i>Illicit Discharge Detection and Elimination; Post-Construction Stormwater Management</i>		
Phase II NPDES Forum	August 22, 2006 December 4, 2006 March 27, 2007	Quarterly forum meetings include Phase II agencies, the regional board, and other interested parties (Planning staff, Phase I agencies, etc). Topics: <ul style="list-style-type: none"> • 8/22/06 – BMPs, Post Construction BMPs, Annual Reporting, presentation from Paul Kieran, RWQCB • 12/4/06 – Post Construction BMPs and Ordinances, ordinance discussion, financing • 3/27/07 – Presentation from David Woltering, City of Cotati Planning Director on Lowe's Improvement Store Project and Cotati's ordinances; Lori Urbanek, City of Santa Rosa discussed SUSMP Guidelines development and intent
Stormwater Ordinance Sharing	December 2006	Collection and distribution of member agencies Stormwater Ordinances. Discussion of key ordinance items in Phase II NPDES Forum
Interdepartmental Outreach	March 2007	Outreach to planners to take part in a Phase II NPDES Forum specific to planning.
<i>Construction Site Stormwater Runoff Control; Post-Construction Stormwater Management</i>		
Stormwater Training	May 10, 2007	8-hour training including indoor course and field training. Training included rules and regulations, BMPs, inspections and monitoring.

Activity	Date	Notes
<i>Pollution Prevention; Public Involvement/Participation</i>		
Mercury Thermometer Exchange	2007: May 22 nd – Cloverdale; June 5 th – Santa Rosa; June 19 th - Windsor	Conducted 3 exchanges, ran advertisements in the Press Democrat and Cloverdale Revillre and utility bills in Sebastopol, Cotati, Santa Rosa, and Rohnert Park. Informed the public about proper disposal of household items containing mercury and allowed residents to exchange thermometers containing mercury for digital thermometers.
Residential Fats, Oils and Grease (FOG) Source Control Program	Sept 2006 – Jan 2007	Residential FOG program included website, grease scraper and door-hanger development and distribution, and a holiday campaign. Regional message used in Sonoma County Phone Book Recycling Guide. Door-hangers/scrapers are distributed by maintenance crews in areas where SSOs have recently occurred. Door-hanger/scrapers are also distributed as part of public outreach by agencies at events/fairs, etc.
RRWA Student Video Contest	Jan-May 2007	RRWA ran a high school student video contest in which students developed one-minute videos to be used as public service announcements on local TV stations and member agency websites and at outreach events. The topic for 2007 was “Proper disposal of cooking oil and grease”. Twenty-five students participated in 2007 contest and a total of 13 videos were received. Prizes were given out to 1-3 rd places at the May 3, 2007 RRWA Board of Directors meeting.
<i>Public Outreach and Education</i>		
Environmental Column	July 2006 – June 2007	The environmental column is generally published monthly in: <ul style="list-style-type: none"> • Sonoma West Times • Healdsburg Tribune • Windsor Times • Russian River Times • The Community Voice • West County Gazette • Ukiah Daily Journal All columns can be viewed at www.rwatershed.org
Water Conservation	July 2006	
Coastal Cleanup and Pollution Prevention	August 2006	
Integrated Pest Management	September 2006	
Trash in the Streets Gets in the Creeks	October 2006	
Proper Disposal of Cooking Oil and Grease	November 2006	
Recycling Tips and Tricks for the Holidays	December 2006	
Recycled Water	January 2007	
Pick Up After Your Pet	February 2007	Article also published in the Press Democrat – “Let the Public Speak” section
Treat Stormwater as an Important Resource	March 2007	

Activity	Date	Notes
Is Your Creek Healthy?	April 2007	
Mercury Pollution Prevention	May 2007	
Low-Water Usage Native Plants	June 2007	
Russian River Watershed Cleanup	September 2006	Developed flyers for the Russian River Watershed Cleanup effort and donated funds for flyer printing and purchasing cleanup supplies
Coastal Cleanup – Sonoma County	September 2006	Help with printing costs for posters and flyers
Coastal Cleanup – Mendocino County	September 2006	Donated funds for flyer printing and purchasing cleanup supplies
RRWA Stormwater Awareness Website Page	November 2006	Website page that discusses stormwater and storm drains, stormwater pollution prevention, and lists stormwater resources.

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**PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
PICTURE BOARD**

Appendix II.I

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EROSION & SEDIMENT CONTROL MEASURES FOR CONSTRUCTION SITES



This is a good example of a concrete curb with vegetation. Once the cement has dried it can be placed in the trash or recycled.



This site incorporated seed and straw, erosion control blankets, straw rolls, and rock filter bags to prevent pollutants from leaving the site.



Sedimentation basins can be installed in many situations, but need to be maintained to work effectively.



Erosion control blankets were trenched in at the top - rolled down the slope, and anchored to the soil. This arrangement provides additional protection.



Soil fences are trenched into the ground, installed along a contour, and setback 2'-0" from the top of a slope. Maintenance includes restoring the accumulated sediment when necessary.



This construction access has a silt fence and 2' x 4" rock filter bags present for tracking in the roadbed.

Before & After

Mulchmats, straw, and erosion control blankets were used to stabilize the soil on this site. These measures are appropriate for covering large areas or steep slopes.



Appendix III City of Santa Rosa

- III.A Active Grading Permits/ NPDES SWMP Site Inspections
- III.B RRWA Storm Water Training – Attendance List
- III.C Facilities Listings That May Need to File an NOI
- III.D RGO Inspections During Year 4 2006-2007 and Inspection Form
- III.E SEQAC Meeting Agendas and Attendees
- III.F Spill Response Procedures
- III.G Storm Water Incident Report
- III.H RRWA Letter to *Press Democrat* Regarding Pet Waste
- III.I *Press Democrat* Newspaper Articles
- III.J New Creek Protector Stickers
- III.K Advertisements for “Our Water, Our World” program
- III.L High School Program - Aquatic Macroinvertebrate Bioassessment Report
- III.M EDC”Down the Drain” – Poster

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GRADING PERMITS/ NPDES SWMP SITE INSPECTIONS

Appendix III.A

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APPENDIX III.A

**City of Santa Rosa
Storm Water Management BMP Inspections
for Active Grading Permit Sites & Non-Grading Permit sites
July 1, 2006 - June 30, 2007**

North & South Area Summary

As detailed on the following tabulation sheets:

Total number of sites with *grading permits*: 74

Total number of *Site inspections for grading permit sites*: 1,911

Total number of *Site inspections for sites without grading permits*: 780

<i>Grand total of NPDES SWMP inspections during Year 4: <u>2,691</u></i>

APPENDIX III.

**City of Santa Rosa
Storm Water Management BMP Inspections for Active Grading Permit Sites
July 1, 2006 - June 30, 2007
North Santa Rosa Area**

The following sites have grading permits and were inspected for adherence to applicable Storm Water Management Plan BMP's:

<u>Project Name/Site Location</u>	<u># Site Inspections</u>
1. The Burbank	24
2. Camden Place	24
3. Centurion Subdivision	3
4. Chanate Village	28
5. College Village	25
6. Dennis and Barnes	30
7. Fountainveiw 4 Lots 1-13	27
8. Fountaingrove Village	27
9. Jennings Ave. Subdivision	26
10. Juillard Townhomes	22
11. Khiroya Subdivision	22
12. Meadow Park	28
13. Meadowlark Village 4&5	28
14. Montage I	31
15. Montage II	30
16. Northview Subdivision	28
17. North Village 1	24
18. North Village II	26
19. Parker Hill Ct. Phase II	25
20. Pinnacle Grove	27
21. Sandra's Place	20
22. Skyfarm at Fountaingrove unit 2 A,B,C	40
23. The Summit at Fountaingrove Lots 1-43	30
24. Varena: Aegis Senior living	40
25. WoodBridge	25
26. PM 625	24
27. PM 629	24
28. PM 656	24
29. PM 658	26
30. PM 665	24
31. PM 670	27
32. PM 681	21

**Total NPDES Inspections for Grading Permit sites
in North Santa Rosa: 832**

Total Grading Permit sites in North Santa Rosa: 32

APPENDIX III.A

City of Santa Rosa
Storm Water Management BMP Inspections for *Non-Grading* Permit Sites
July 1, 2006 - June 30, 2007
North Santa Rosa Area

The following sites do not have grading permits but were inspected for adherence to applicable NPDES Storm Water Management Plan BMP's as required under their respective City building permits

<u>Project Name/Site Location</u>	<u># Site Inspections</u>
1. Baldwin Way	20
2. 259 Brush Creek Rd.	30
3. 2222 Cleveland Ave	30
4. 301 College Ave.	20
5. The Cannery	12
6. 3912 Flintridge	24
7. 3917 Flintridge	24
8. Fountaingrove Park	12
9. 2250 Fountaingrove Parkway	30
10. 615 Healdsburg Ave.	30
11. 1090 Jennings Ave.	28
12. Jennings and Cleveland	28
13. Kaiser	29
14. 3605 Kelsey Knolls	28
15. 4241 Los Olivos Ct.	29
16. Olive Grove	23
17. Redwood Credit Union	28
18. 3978 Skyfarm Dr.	28
19. 3982 Skyfarm Dr.	28
20. 4012 Skyfarm Dr.	26
21. 4000 Splitrail Ct.	27
22. 4001 Splitrail Ct.	28
23. 4004 Splitrail Ct.	27
24. 4005 Splitrail Ct.	26
25. 3966 Clearbrook Ct.	34
26. 3971 Clearbrook Ct.	28
27. 3974 Clearbrook Ct.	28
28. 3600 Crownhill	21
29. West College Apts.	30
30. 305 10 th St	24
Total NPDES Inspections for <i>Non-Grading</i> Permit sites in <i>North Santa Rosa</i>:	780

Total *Non-Grading* Permit sites in *North Santa Rosa*: 30

APPENDIX III.A

City of Santa Rosa
Storm Water Management BMP Inspections for Active Grading Permits
July 1, 2006 - June 30, 2007
South Santa Rosa Area

The following sites have grading permits and were inspected for adherence to applicable Storm Water Management Plan BMP's:

<u>Project Name/Site Location</u>	<u># Site Inspections</u>
1. Annadel Estates	30
2. Aston Place	28
3. Aston Way Townhomes	28
4. Bellevue Ranch park	24
5. Bellevue Ranch 6	24
6. Bennett Valley Sub.	30
7. Brookwood Sub.	30
8. Calistoga 980	50
9. Dauenhuer Ranch	30
10. Gordon Ranch	32
11. Hidden Meadow	30
12. Kawana Springs 6	31
13. Kali Subd.	18
14. Esplanada	31
15. Lands of Victoria	30
16. Linwood Phase I	30
17. Linwood Phase II	32
18. Meda	32
19. Millbrook	30
20. Oak hollow	35
21. Orchard at Oakmont	20
22. Orchard at Oakmont II	30
23. PM 619	15
24. PM 634	8
25. PM 639	18
26. PM 646	8
27. PM 657	30
28. PM 662	18
29. PM 668	12
30. PM 673	6
31. Skyhawk 8	12
32. Streamside Place	26
33. Trombetta	35
34. Village Station	30 (continued)

APPENDIX III.A

**City of Santa Rosa
Storm Water Management BMP Inspections for Active Grading Permits
July 1, 2006 - June 30, 2007
South Santa Rosa Area**

The following sites have grading permits and were inspected for adherence to applicable Storm Water Management Plan BMP's:

<u>Project Name/Site Location</u>	<u># Site Inspections</u>
35. Village Gardens	20
36. Village Square at Courtside	30
37. Western Gardens	30
38. 565 Barham	30
39. 233 Bellvue	28
40. 698 Benicia	30
41. 1835 Kawana	30
42. 1777 West Ave.	8
Total NPDES Inspections for Grading Permit sites in <i>South Santa Rosa</i>:	1,079
Total Grading Permit sites in <i>South Santa Rosa</i>: 42	

RRWA STORM WATER TRAINING - ATTENDANCE LIST

Appendix III.B

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**RRWA Stormwater Training
May 10, 2007**

Attendee Name	Agency	Title	Sign-in
Holsinger, Steve	Cloverdale	Asst to City Manager	x
Misti Harris	Cotati	Planning Technician	x
Nommsen, Steve	Cotati	Public Works Supervisor	x
Woltering, David	Cotati	Planning Director	
Woods, Mark	Cotati	Building Inspector	x
Duley, Dusty	MCWA	Planning and Building Services	x
Slota, Dennis	MCWA		x
Speka, John	MCWA	Planning and Building Services	x
Kennedy, Christy	RRWA		x
Richardson, Dave	RRWA		x
Cadman, Denise	Santa Rosa		x
Chen, Danny	Santa Rosa		x
Cole, Steve	Santa Rosa		x
Curiel, Eddie	Santa Rosa		x
Dwyer, Greg	Santa Rosa		x
Foster, Jeff	Santa Rosa	Supervising Engineer	x
Gundy, Jeremy	Santa Rosa		x
Gundy, Renae	Santa Rosa		x
Hutchins, Ken	Santa Rosa		x
Lopez, Randy	Santa Rosa	Civil Engineering Technician I	x
Mirich, Mike	Santa Rosa		x
Oller, Robert	Santa Rosa		x
Puder, Greer	Santa Rosa	Civil Engineering Technician II	x
Rosas, Gerardo	Santa Rosa	Supervisor - Street Department	x
Schiavone, Joe	Santa Rosa		x
Seaman, Donna	Santa Rosa		x
Simi, Ron	Santa Rosa		x
Taylor, Bruce	Santa Rosa	Env Compliance Inspector II	x
Tennison, Linnea	Santa Rosa	Quality Control Associate	x
Williams, Doug	Santa Rosa	Civil Engineering Technician II	x
Winterlin, Jerry	Santa Rosa	CE Technician	x
West, Michael	Santa Rosa - CH2MHill		x
Gillian, Janice	Sonoma County PRMD	Engineering Tech III	x
Hasty, Alan	Ukiah	Assistant Engineer	
Kageyama, Ben	Ukiah	Senior Civil Engineer	x
Whitaker, Jerry	Ukiah	Street Superintendent	x
Lundborg, Kevin	Windsor		x
Perez, Alejandro	Windsor		x
Pieraccini, Jan	Windsor		x
Tolbert, Jan	Windsor		x
*Note: Vendors + Trainers = 4 staff			

FACILITIES LISTINGS THAT MAY NEED TO FILE AN NOI

Appendix III.C

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APPENDIX III-D

Term 2, Annual Report 4
July, 2007

LIST DERIVED FROM BUSINESS LICENSE DATABASE

May need to file NOI for coverage under State Industrial Storm Water permit
Based on reported SIC codes

BUSINESS NAME		ADDRESS		CITY		ZIP	SIC
AERO CAB	5221	OLD REDWOOD HWY	#6	SANTA ROSA	CA	95403	4121
AFTON MEDICAL LLC	3731	SWETZER RD	#C	LOOMIS	CA	95650	3999
ALMENDANIZ MUFFLERS	1975	RUSSELL AVE		SANTA ROSA	CA	95401	3714
AMERICAN TRASH MANAGEMENT INC	1388	SUTTER ST	#920	SAN FRANCISCO	CA	94109	5093
AMERIGAS PROPANE LP	845	GRAVENSTEIN HWY N		SEBASTOPOL	CA	95472	4212
ARISTOCRAT WOOD PRODUCTS	300	KENNEDY LN		HEALDSBURG	CA	95448	4213
BARBER SIGN COMPANY	321	SECOND ST		PETALUMA	CA	94952	3993
BLAKE'S DELIVERY SERVICE	599	1ST ST WEST		SONOMA	CA	95476	4215
BLOOD RUNNERS	585	SILVA AVE		SANTA ROSA	CA	95404	4215
BLUE RIBBON SOAP COMPANY	451	JAMIE CT		SOUTH SAN FRANCISCO	CA	94080	4212
BUCHANAN FOOD SERVICE	5980	STATE FARM DR		ROHNERT PARK	CA	94928	4212
CALIFORNIA SHINGLE AND SHAKE COMPANY	156	UTILITY CT		CONCORD	CA	94526	4212
CANYON ROCK CO INC	7525	HIGHWAY 116		FORESTVILLE	CA	95436	1429
CARDINAL HEALTH 110 INC	81	BLUE RAVINE RD		FOLSOM	CA	95630	4212
CARL'S READY MIX	5900	PRUITT AVE	#120	WINDSOR	CA	95492	4212
CHERYL'S DELIVERY SERVICE	7831	VALENTINE AVE		SEBASTOPOL	CA	95472	4212
CLOVER STORNETTA FARMS INC	0	PO BOX 750369		PETALUMA	CA	94975	4212
COCA COLA ENTERPRISES WEST	530	GETTY CT		BENICIA	CA	94510	4212
COLUMBUS DISTRIBUTING INC	30977	SAN ANTONIO ST		HAYWARD	CA	94544	4212
CONCIERGE CONNECTIONS OF WINDSOR	9632	ORION DR		WINDSOR	CA	95492	4121
CRAIG JOHNS	3860	MARIN ST		CLEARLAKE PARK	CA	95424	4121
DARRELL BOOTS TRUCKING	5301	DENVER LN		SEBASTOPOL	CA	95472	4212
DE BEL ROOFING SUPPLY INC	747	PETALUMA BLVD S		PETALUMA	CA	94952	4213
DEDICATED COURIER SERVICE	880	PINER RD		SANTA ROSA	CA	95403	4215
ELLIS AND ELLIS SIGN SYSTEMS	1111	JOELLIS WAY		SACRAMENTO	CA	95815	3993
FARMERS BROTHERS COFFEE COMPANY	20333	NORMANDIE AVE		TORRANCE	CA	90502	4212
GREG SHERRILL	9469	FOX LN		SEBASTOPOL	CA	95472	4121
HAGEL SERVICES	80	BELVEDERE WAY		SAN RAFAEL	CA	94901	4212
HEALDSBURG SIGNS INC	1200	HEALDSBURG AVE	#A	HEALDSBURG	CA	95448	3993
HILTI FASTENING SYSTEMS INC	5400	S 122ND EAST AVE		TULSA	OK	74146	4212
IMAGE POINT	445	SOUTH GAY ST		KNOXVILLE	TN	37902	3993
IODYNAMIX INC	1200	DIAMOND CIR	#F1	LAFAYETTE	CO	80026	3572
JANCO	14750	EAGLES NEST RD		GUERNEVILLE	CA	95446	4215
JOHNSTON ELECTRIC SIGNS	3627	MT VERNON RD		SEBASTOPOL	CA	95472	3993
KRAFT FOODS NORTH AMERICA INC	887	WRIGLEY WY		MILPITAS	CA	95035	4212
LACE HOUSE LAUNDRY AND LINEN	949	LINDBERG LN		PETALUMA	CA	94952	4212
LASER EXCEL	3310	COFFEY LN		SANTA ROSA	CA	95403	3999
METRAWELD METAL FABRICATORS	2335	RADIO LN		REDDING	CA	96001	3446
MIKE HUDSON DISTRIBUTING	2237	S MCDOWELL BLVD EXT		PETALUMA	CA	94954	4212
MILLER AND SONS	410	NORTH 200 WEST		HYRUM	UT	84319	4212
MILLER'S CAB	5030	GRAVENSTEIN HWY S		SEBASTOPOL	CA	95477	4121
MISSION LINEN SUPPLY INC	506	STONE RD		BENICIA	CA	94510	4212
MOTHER'S CAKE AND COOKIE COMPANY	2430	COMINO RAMON	#122	SAN RAMON	CA	94583	4212
MULLER CONSTRUCTION SUPPLY	1230	YARD CT		SAN JOSE	CA	95133	4212
NORTHBAY TRANSIT GROUP	95	ALAMEDA ST		VALLEJO	CA	94590	4121
OPEX CORPORATION	305	COMMERCE DR		MOORESTOWN	NJ	8057	3579
OTICON INC	29	SCHOOLHOUSE RD		SOMERSET	NJ	8875	3999
PACIFIC INTEGRATED HANDLING	2536	SEABOARD AVE		SAN JOSE	CA	85281	3999
PACIFIC SIGNS AND LIGHTING	860	PINER RD	#19	SANTA ROSA	CA	95403	3993
PETTIGREW AND SONS CASKET COMPANY	6151	POWER INN RD		SACRAMENTO	CA	95824	3995
PIAZZO CUSTOM CABINETS	3340	HARRISON GRADE RD		SEBASTOPOL	CA	95472	2434
POWER GENERATION AND ENGINEERING INC	736	WAKEFIELD CT		OAKDALE	CA	95361	3621
PRUDENTIAL OVERALL SUPPLY	1661	ALTON PKWY		IRVINE	CA	92714	4212
RELS FOOD	955	WEST GRAND AVE		OAKLAND	CA	94607	4212
RICKSHAW RUDY'S BIKE TAXI SERVICE	682	MCCLELLAND DR		WINDSOR	CA	95492	4121
SACRAMENTO A1 DOOR	4330	JETWAY CT		NORTH HIGHLANDS	CA	95660	4212
SANTA ROSA HARDWARE	4180	SOUTH MOORLAND AVE		SANTA ROSA	CA	95407	4212
SANTA ROSA SYSTEMS INC	119	WEST 9TH ST		SANTA ROSA	CA	95401	3499
SANTA ROSA WHOLESALE FLORISTS	674	BRANNAN ST		SAN FRANCISCO	CA	94107	4212
SEALY MATTRESS COMPANY	1130	SEVENTH ST		RICHMOND	CA	94801	4212
SEBASTOPOL READY MIX INC	385	MORRIS ST		SEBASTOPOL	CA	95472	4212
SHADA PROPERTIES	100	E ST	#304	SANTA ROSA	CA	95404	3999
SKYWORKS	120	STONY POINT RD	#105	SANTA ROSA	CA	95401	3674
SOLID WOOD	365	SUTTON PL		SANTA ROSA	CA	95407	2434
STONE AND SON	6111	LAMBIE RD		SUISUN	CA	94585	4212
SYSCO FOOD SERVICES OF SAN FRANCISCO INC	5900	STEWART AVE		FREMONT	CA	94538	4212
TERRY A DAVIS	2550	CALISTOGA RD		SANTA ROSA	CA	95404	4121
THE FACILITATION	6544	FORESTVILLE LN		FORESTVILLE	CA	95436	4212
TM COBB COMPANY	500	PALMYRITA AVE		RIVERSIDE	CA	92507	4212
TODD'S EXPRESS DELIVERY SERVICE	13825	VILLAGE AVE	#B	HEALDSBURG	CA	95448	4215

APPENDIX III-D

Term 2, Annual Report 4
July, 2007

LIST DERIVED FROM BUSINESS LICENSE DATABASE							
May need to file NOI for coverage under State Industrial Storm Water permit Based on reported SIC codes							
BUSINESS NAME		ADDRESS		CITY		ZIP	SIC
TONY'S TAXI CAB	7217	RUBY CT		ROHNERT PARK	CA	94928	4121
UNISOURCE WORLDWIDE INC	4225	HACIENDA DR	#B	PLEASANTON	CA	94588	4212
VALLEY STAIRWAY INC	5684	EAST SHIELDS AVE		FRESNO	CA	93727	3999
VAN BEBBER BROTHERS INC	729	PETALUMA BLVD S		PETALUMA	CA	94952	4213
VARNER TRUCKING	795	FERGUSON RD		SEBASTOPOL	CA	95472	4212
FUNNY FARM CREATIONS	1550	OLIVET RD		SANTA ROSA	CA	95401	3873
INNOVATIVE PROSTHETICS AND ORTHOTICS	65	MONTGOMERY DR		SANTA ROSA	CA	95405	3842
WINDWOOD DESIGNS	715	TUPPER ST		SANTA ROSA	CA	95404	3999
JOHN D FITZGERALD	1744	CORK TREE LN		SANTA ROSA	CA	95404	3993
MACNETWORKS	456	10TH ST		SANTA ROSA	CA	95401	3571
ZAP MANUFACTURING INC	501	4TH ST		SANTA ROSA	CA	95401	3714
DAUENHAUER MFG INC	125	5TH ST		SANTA ROSA	CA	95401	3999
FLEA AWAY NEW AWARENESS ENVIRONMENTALS	24	10TH ST		SANTA ROSA	CA	95401	3999
LASERLINE MFG INC	24	10TH ST	#G	SANTA ROSA	CA	95401	3559
ALEXANDERS VAN AND STORAGE	5	WEST 9TH ST		SANTA ROSA	CA	95401	4214
MODERN WOOD WORKS	40	MAXWELL CT	#5	SANTA ROSA	CA	95401	2434
COASTLINE DISTRIBUTORS INC	29	MAXWELL CT		SANTA ROSA	CA	95401	3999
BO DEAN CO INC	1060	MAXWELL DR		SANTA ROSA	CA	95401	1442
MR JIM'S	1036	MAXWELL DR		SANTA ROSA	CA	95401	3999
707 EXPRESS COURIERS	235	WEST 6TH ST		SANTA ROSA	CA	95401	4215
DOUBLE C STEEL CONSTRUCTION	101	CHESTNUT ST		SANTA ROSA	CA	95401	3317
ABLE FRAMES AND HARDWARE INC	429	OLIVE ST	#F	SANTA ROSA	CA	95407	3999
HARRY D KINDORF CO	429	OLIVE ST	#C	SANTA ROSA	CA	95407	3999
ACCPAC INTERNATIONAL	120	STONY POINT RD	2ND FLR	SANTA ROSA	CA	95401	3999
BERNDT CONSTRUCTION	1054	NORTH DUTTON AVE		SANTA ROSA	CA	95401	3999
DUNHAM BERGQUIST AND ASSOCIATES INC	131	STONY CIR	#475	SANTA ROSA	CA	95401	3999
LUX METALS INC	90	RIDGWAY AVE		SANTA ROSA	CA	95401	3316
SIGNS NOW	1257	CLEVELAND AVE	#C	SANTA ROSA	CA	95401	3993
CONCEPT DEVELOPMENT ASSOCIATES INC	1375	CENTRAL AVE		SANTA ROSA	CA	95407	3999
WATERMAN RACING COMPONENTS INC	55	RIDGWAY AVE	#A	SANTA ROSA	CA	95401	3999
HESO'S SCRAPPING AND CLEANINIG	3507	SPRING CREEK DR		SANTA ROSA	CA	95405	5093
JUDY'S STONEWARE POTTERY	3621	OREGON DR		SANTA ROSA	CA	95405	3263
STIFFNECK DRIVING	779	SUMMERFIELD RD		SANTA ROSA	CA	95405	4215
LOOSE ELECTRONICS	5135	NEWANGA AVE		SANTA ROSA	CA	95405	3679
GIAMBRONE	3828	LITTLE ROCK AVE		SANTA ROSA	CA	95405	3911
AL LEWIS TRUCKING INC	1721	DITTY AVE		SANTA ROSA	CA	95403	4212
DAVID HAWLEY COURIER SERVICE	1053	FULKERSON ST		SANTA ROSA	CA	95404	4215
SECURITY PUBLIC STORAGE-SANTA ROSA	1021	HOPPER AVE		SANTA ROSA	CA	95403	4226
AIR MONITOR CORPORATION	1050	HOPPER AVE		SANTA ROSA	CA	95403	3999
HOPPER SELF STORAGE	1170	HOPPER AVE		SANTA ROSA	CA	95403	4226
ALL-RITE MINI STORAGE	2480	BLUEBELL DR		SANTA ROSA	CA	95403	4226
EM AUTODESIGNS	2201	BLUEBELL DR	#J	SANTA ROSA	CA	95403	3999
MICHAEL DEEGAN	2221	BLUEBELL DR	#A	SANTA ROSA	CA	95403	3999
DIGITAL MUSIC CORPORATION	3165	COFFEY LN		SANTA ROSA	CA	95403	3679
VELCON/FLEX WEIGH	3158	CONDO CT		SANTA ROSA	CA	95403	3596
BLUE FUTURE FILTERS INC	3210	COFFEY LN	#B	SANTA ROSA	CA	95403	3399
MACKEN INSTRUMENTS INC	3186	COFFEY LN		SANTA ROSA	CA	95403	3999
ROLLING FRITO LAY SALES LP	3033	COFFEY LN		SANTA ROSA	CA	95403	4212
DENNETT TILE COMPANY	3310	INDUSTRIAL DR		SANTA ROSA	CA	95403	3999
NORTH COAST RUBBER STAMP AND ENGRAVING	3485	AIRWAY DR	#A	SANTA ROSA	CA	95403	3999
SYSTEMATIC MANUFACTURING	3451	AIRWAY DR	#F	SANTA ROSA	CA	95403	3499
SILVERTHREAD TECHNOLOGIES	3262	AIRWAY DR	#D	SANTA ROSA	CA	95403	3825
DOLAN DOLAN CUSTOM GUITARS	3222	AIRWAY DR	#4	SANTA ROSA	CA	95403	3931
TNT CABLE HARNESS	820	PINER RD		SANTA ROSA	CA	95401	3999
ANKROM VISUAL COMMUNICATION	3181	CLEVELAND AVE	#D	SANTA ROSA	CA	95403	3993
PACIFIC SHORING LLC	1809	EMPIRE INDUSTRIAL CT		SANTA ROSA	CA	95403	3999
OBERON DESIGN INC	1817	EMPIRE INDUSTRIAL CT		SANTA ROSA	CA	95403	3199
SIERRA DAWN PRODUCTS	1814	EMPIRE INDUSTRIAL CT	#D	SANTA ROSA	CA	95403	3999
APPLE WOODWORKS INC	1820	EMPIRE INDUSTRIAL CT	#F	SANTA ROSA	CA	95401	2434
AMPAC USA INC	3343	INDUSTRIAL DR	#2	SANTA ROSA	CA	95403	2844
UPTIGHT TRACTOR AND BAIRD RD ORGANICS	1263	BAIRD RD		SANTA ROSA	CA	95409	3524
24-7 COURIER	145	BREY RD		SANTA ROSA	CA	95409	4215
OSO COBRE STUDIO	5640	MELITA RD		SANTA ROSA	CA	95409	3229
L O'NEILL DESIGN	63	MAXWELL CT		SANTA ROSA	CA	95401	3999
STEVE HUG	4603	BRIDLE TRL		SANTA ROSA	CA	95409	3944
CHEM MARK OF SANTA ROSA	5360	NEWANGA AVE		SANTA ROSA	CA	95405	4212
GNATHOLOGY DESIGN	4527	MONTGOMERY DR	#I	SANTA ROSA	CA	95409	3999
COMPUTERS AND MORE INC	4044	SONOMA HWY		SANTA ROSA	CA	95409	3571
DEPOSITION SCIENCES INC (DSI)	3300	COFFEY LN		SANTA ROSA	CA	95403	3999
DUANE NEAL SIGNS	1498	LUPINE DR		SANTA ROSA	CA	95401	3993

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LIST DERIVED FROM BUSINESS LICENSE DATABASE							
May need to file NOI for coverage under State Industrial Storm Water permit Based on reported SIC codes							
BUSINESS NAME		ADDRESS		CITY		ZIP	SIC
MOONLIGHT WAY	2366	MOONLIGHT WAY		SANTA ROSA	CA	95403	3999
DALE ECKEBRECHT	1649	TARKENTON CT		SANTA ROSA	CA	95403	4119
SANTA ROSA TAXI	2171	BOCK ST		SANTA ROSA	CA	95403	4121
JOHN'S FORMICA SHOP	2439	PINER RD		SANTA ROSA	CA	95403	3999
DELIVERY TODAY	2540	RICHIE PL		SANTA ROSA	CA	95403	4215
SHIKAI PRODUCTS	3330	COFFEY LN	#A	SANTA ROSA	CA	95403	3999
SOUTHPOINT SELF STORAGE SANTA ROSA	700	LOMBARDI CT		SANTA ROSA	CA	95407	4226
GEORGE MEDEIROS TRANSPORTATION	4499	OCCIDENTAL RD		SANTA ROSA	CA	95401	1423
ABC SUPPLY CO INC	4141	SEBASTOPOL RD		SANTA ROSA	CA	95407	4212
COMMUNITY BIKES	4019	SEBASTOPOL RD		SANTA ROSA	CA	95407	3089
JOSEPHS UPHOLSTERY	4019	SEBASTOPOL RD		SANTA ROSA	CA	95407	3089
SELVAGE CONCRETE PRODUCTS INC	3309	SEBASTOPOL RD		SANTA ROSA	CA	95407	3272
INTRINSIC TRANSPORTATION INC	2225	CHALLENGER WAY	#100	SANTA ROSA	CA	95407	4212
TRIACCESS TECHNOLOGIES	2255	CHALLENGER WAY	#100	SANTA ROSA	CA	95407	3679
GLOBAL DOCUGRAPHIX	2329	CIRCADIAN WAY		SANTA ROSA	CA	95407	3579
MICROSOURCE INC	1269	CORPORATE CENTER PKY		SANTA ROSA	CA	95407	3679
PARAGON CONTROL INC	2371	CIRCADIAN WAY		SANTA ROSA	CA	95407	3433
INFO STOR	1264	APOLLO WAY		SANTA ROSA	CA	95407	4226
ROXXY'S TRANSPORTATION SERVICE	1129	LOMBARDI LN		SANTA ROSA	CA	95407	4121
SONOMA PHOTONICS INC	1750	NORTHPOINT PKY	#A	SANTA ROSA	CA	95407	3669
MANDUJAUOIS TRUCKING	3860	HOGAN AVE		SANTA ROSA	CA	95407	4212
VENNIE'S DELIVERY SERVICE	2995	ARDEN WAY		SANTA ROSA	CA	95403	4215
ALL SIGNS	2316	KIPLAND DR		SANTA ROSA	CA	95401	3993
DT LIMO	1662	GUERNEVILLE RD		SANTA ROSA	CA	95403	4119
SONOMA COMPUTER PRODUCTS	1260	NORTH DUTTON AVE	#101	SANTA ROSA	CA	95401	3571
ENDRUN TECHNOLOGIES LLC	1360	NORTH DUTTON AVE	#200	SANTA ROSA	CA	95401	3825
BIW CONNECTOR SYSTEMS	500	TESCONI CIR		SANTA ROSA	CA	95401	3999
ALUMA USA INC	480	TESCONI CIR	#B	SANTA ROSA	CA	95401	3911
SONOMA LAVENDER INC	420	TESCONI CIR	#B	SANTA ROSA	CA	95401	3999
JETRONICS	360	TESCONI CIR	#B	SANTA ROSA	CA	95401	3699
SCOTT ARCHITECTURAL GRAPHICS INC	1275	NORTH DUTTON AVE	#4	SANTA ROSA	CA	95401	3993
WALTON ENTERPRISES	2260	STANISLAUS CT		SANTA ROSA	CA	95401	4215
HANCOR	1219	BRIGGS AVE		SANTA ROSA	CA	95401	3999
KRISTAR ENTERPRISES	1219	BRIGGS AVE		SANTA ROSA	CA	95401	3999
BROWN'S NORTH BAY COURIER SERVICE	1049	BOYD ST		SANTA ROSA	CA	95402	4215
U-BRIGHT OPTRONICS (USA) CORP	1726	CORBY AVE		SANTA ROSA	CA	95407	3827
THE CLAY COMPANY	525	FRAZIER AVE		SANTA ROSA	CA	95404	3259
A/C TAXI SERVICE	1243	LOTUS CT		SANTA ROSA	CA	95404	4121
HAMMER MACHINERY COMPANY INC	625	WARE AVE		SANTA ROSA	CA	95404	3569
SPEEDY SIGN A RAMA	1430	GUERNEVILLE RD	#2	SANTA ROSA	CA	95403	3993
SPEEDY SIGN A RAMA	1430	GUERNEVILLE RD	#2	SANTA ROSA	CA	95403	3993
SONOMA KITCHEN AND BATH	1480	GUERNEVILLE RD		SANTA ROSA	CA	95403	2434
CLAYTON NATIONAL COURIER SYSTEMS INC	2050	WEST STEELE LN		SANTA ROSA	CA	95401	4215
DONALD K MORROW	2050	WEST STEELE LN	#C-3	SANTA ROSA	CA	95401	4215
REX HARRISON	1437	GLORIA DR		SANTA ROSA	CA	95407	4121
STOR N LOC LLC	3047	SANTA ROSA AVE		SANTA ROSA	CA	95407	4226
ELEMENTAL PLEASURES INC	357	SUTTON PL		SANTA ROSA	CA	95407	3999
FABWORX INC	3100	DUTTON AVE	#152	SANTA ROSA	CA	95407	3399
MULTI-DISPLAY SYSTEMS	3100	DUTTON AVE	#112	SANTA ROSA	CA	95407	4212
POLYMER OPTICS LLC	3100	DUTTON AVE		SANTA ROSA	CA	95407	3999
WINE COUNTRY WELDING AND FABRICATION	3100	DUTTON AVE	#116	SANTA ROSA	CA	95407	3449
APPLIED FLUIDICS LLC	3200	DUTTON AVE	#218	SANTA ROSA	CA	95407	3826
DKS TECHNOLOGIES INC	3200	DUTTON AVE	#116	SANTA ROSA	CA	95407	3999
FLYING T CABINERY	3200	DUTTON AVE	#412	SANTA ROSA	CA	95407	2434
GLASS CERAMIC TECHNOLOGIES INC	3200	DUTTON AVE	#422	SANTA ROSA	CA	95407	3229
RELUCENT SOLUTIONS	3200	DUTTON AVE	#424	SANTA ROSA	CA	95407	3999
WEST COAST CABINET MAKERS	3200	DUTTON AVE	#322	SANTA ROSA	CA	95407	2434
PACIFIC HARDWOOD CABINERY	2811	DOWD DR		SANTA ROSA	CA	95407	2434
BLENTech CORPORATION	2899	DOWD DR		SANTA ROSA	CA	95407	3556
DATUM TECHNOLOGIES	327	OHAIR CT	#D	SANTA ROSA	CA	95407	3599
FLOWMASTER INC	2975	DUTTON AVE	#3	SANTA ROSA	CA	95407	3714
ACE PRECISION MACHINING	3069	WILJAN CT	#D	SANTA ROSA	CA	95407	3499
NORCAL SAND AND OFF ROAD	3069	WILJAN CT	#E	SANTA ROSA	CA	95407	3999
SONOMA PRECISION MANUFACTURING COMPANY	3055	WILJAN CT		SANTA ROSA	CA	95407	3599
ALEMBIC INC	3005	WILJAN CT	#A	SANTA ROSA	CA	95407	3931
DURACITE	3005	WILJAN CT	#B	SANTA ROSA	CA	95407	3999
INNOVADYNE TECHNOLOGIES INC	2835	DUKE CT		SANTA ROSA	CA	95407	3999
MALM FIREPLACE INC	368	YOLANDA AVE		SANTA ROSA	CA	95404	3499
GALVIN PRECISION MACHINING INC	404	YOLANDA AVE		SANTA ROSA	CA	95404	3999
BERGER'S WORKSHOP	376	YOLANDA AVE		SANTA ROSA	CA	95404	2434

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BUSINESS NAME		ADDRESS		CITY		ZIP	SIC
WALT'S CUSTOM SERVICES	400	YOLANDA AVE	#G	SANTA ROSA	CA	95404	3499
KELLY'S PRECISION GRINDING INC	468	YOLANDA AVE	#11	SANTA ROSA	CA	95404	3999
THE TIN SHOP	2175	BLUEBELL DR	#A	SANTA ROSA	CA	95403	3444
VALANCE BY DESIGN LLC	468	YOLANDA AVE	#803	SANTA ROSA	CA	95404	3999
WHEELER ZAMARONI LANDSCAPE SUPPLIES	3500	PETALUMA HILL RD		SANTA ROSA	CA	95404	4212
PRECISE TURNINGS	2078	TOKAY ST		SANTA ROSA	CA	95404	3499
BEAL'S MOVING	193	HOFF RD		SANTA ROSA	CA	95409	4212
LIC ENGINEERING	3735	COFFEY LN		SANTA ROSA	CA	95403	3621
WINGIF LLC DBA GOLDSTAR LIMOUSINE	489	MAYFIELD DR		SANTA ROSA	CA	95403	4121
S R TAXI CAB	2031	DENNIS LN		SANTA ROSA	CA	95403	4121
SIMPLY STAINLESS	4030	BARNES RD		SANTA ROSA	CA	95404	3999
PETERSON TRACTOR CO	3710	REGIONAL PKY		SANTA ROSA	CA	95403	3531
BURGESS LUMBER INC	3610	COPPERHILL LN		SANTA ROSA	CA	95403	4212
MARIA'S SCREEN	1990	DALLEY DR		SANTA ROSA	CA	95407	4212
IMWALLE GARDENS	685	WEST 3RD ST		SANTA ROSA	CA	95401	4212
ALAN HALLIGAN TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ALBERT TOKI TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ALEM ASSEFA TAXI COMPANY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ANTON HEFELE TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
BARBARA BOCCHINIO	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
BARBARA THOMPSON	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
BEN BROWN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
BRAD FULLER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CAM STINEMATES	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CANDACE MORALES TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CARL B ALSTON	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CHARLES DYER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CHARLIE JORDAN TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CHECKER GEORGES AND YELLOW CAB	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CHRIS SOLOMON	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CHRISTOPHER SOLOMON	588	ROSELAND AVE		SANTA ROSA	CA	95401	4121
CHRISTOPHER WEBER TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
CLIFFORD DEAN WATERS TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DAMIAN NIX TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DANNE PETRAS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DAREN TARLEN CAHN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DAVE PERSONS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DAVID R ABRAHAMS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DAVID WHITE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DENNIS J AHERN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DINESH TAMANG	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DON METZGER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DONALD J BOOSINGER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
DUSK TILL DAWN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
EDWARD ELDREDGE TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
EHLERT PAUL LASSEN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ELAINE AMBROSE TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ELLIOTT NORWOOD III	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ERIC FAISON TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ERIC SHULTZ	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ERICA CARROLL	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
GAR KEILLER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
GEORGE A LINSSENMEYER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
GEORGE TAWAHSA	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
GERALD THOMAS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
GREG YOUNG	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
GREGORY REICHARDT	588	ROSELAND AVE		SANTA ROSA	CA	95401	4121
HAROLD HAGINS TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
IAN STALBERG	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JACSONN LOUIS JEAN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JAIME HOLWEGER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JAMES DAMMATO	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JAMES KELLEY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JASON GREGORY TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JEFF GUDGEL TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JEREMIAH DAWES CAB SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JERMAIN GREGOIRE TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JERRY STEVEN FRANCOM	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JOELI ROKORASEI	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JOHN GAZZANO	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121

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BUSINESS NAME		ADDRESS		CITY		ZIP	SIC
JON D TOBRINER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JONAH KASTRUP	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JOSEPH INGEGNERI TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JOSH TOWNSEND	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JUAN VERA	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JUSTIN HAYMAN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
JUSTIN SEDA TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
KARLA'S TAXI	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
KEITH'S YELLOW TAXI	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
KEN HUBBELL	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
KENNETH ROBERTS O	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
KENNETH TONKIN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
KEVIN COOPER	588	ROSELAND AVE		SANTA ROSA	CA	95405	4121
LARRY A DAVID	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
LAURENCE BERNIE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
LAWRENCE CASSIDY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
LENZ TAXI CAB	588	ROSELAND AVE		SANTA ROSA	CA	95404	4121
LEWIS LUCKY CARRILLO III	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
LISA ROBERGE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
LUTHER ATWATER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MACS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARIE O'BRIEN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARIETTA GRIFFIN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARIO RUSSO	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARK AUSTIN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARK HARDIN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARK KEELER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MARK SPRUCE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MASSEY-DENOLA TAXI SERVICES	588	ROSELAND AVE		SANTA ROSA	CA	94931	4121
MICHAEL KOWAL	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MICHAEL SEAN PHILLIPS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MIKE BEGGS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
MULU HABTE ZEKARIAS TAXI	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
NATALIE MENDEZ	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
NATHAN KERN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
NETWORKING ENTERPRISES	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
NICOLE LONG	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
NOCTURNAL PURSUITS	588	ROSELAND AVE		SANTA ROSA	CA	95404	4121
NORMAN ARTERBURN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
PAUL MORGAN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
PHILIP J FESMIRE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
POUK NAMMACHANTHY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RAJA TAHIR MAHMOOD	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RANDI STEVENSON	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RAQUEL LU TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RENEE BADGER TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RETA NESBITT	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
REY'S CAB SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RICHARD KRAUS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RICHARD L BIGALL	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ROBERT BELL TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ROBERT FRYE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ROBERT MUSGROVE TAXI	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ROBERTO JIMENEZ	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RODNEY GREGORY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
RONALD G TAYLOR	588	ROSELAND AVE		SANTA ROSA	CA	95405	4121
RONALD K RIGGLE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SAM CASSIDY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SAM NIMER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SANDI MCCURDY	588	ROSELAND AVE		SANTA ROSA	CA	95401	4121
SANDY'S TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SARAH NEESE TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SCOTT MCWHORTER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SEAN PARMLEY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SEANN HENRY TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SERENO SPANN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SHANE DYLAN GUILLORY	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SLAPSADDLE SYNDACATE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
STEPHEN CLEMMONS TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
STEPHEN KING VRABEL	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121

APPENDIX III-D

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LIST DERIVED FROM BUSINESS LICENSE DATABASE							
May need to file NOI for coverage under State Industrial Storm Water permit Based on reported SIC codes							
BUSINESS NAME		ADDRESS		CITY		ZIP	SIC
STEVE LARSON	588	ROSELAND AVE		SANTA ROSA	CA	95403	4121
STEVEN CUEVAS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
SYLVAIN DINDY-BOLONCO	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
TAXI 12	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
TAXI SERVICE, AARON SHAPTER	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
TED HALL TAXI SERVICE	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
TED L BROOKS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
THOMAS PACHECO	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
TIM SULLIVAN	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
TOM FITZSIMMONS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
VALQUITT D FOBBS	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
VINCENT FLOYD	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
VINCENT HOOK	588	ROSELAND AVE		SANTA ROSA	CA	95407	4121
ACI DISTRIBUTION	673	SEBASTOPOL RD	#181	SANTA ROSA	CA	95401	4212
THE BARRICADE COMPANY AND TRAFFIC SUPPLY INC	265	ROBERTS AVE		SANTA ROSA	CA	95407	3531
ACME FOREIGN AUTO DISMANTLERS	305	SEBASTOPOL RD		SANTA ROSA	CA	95407	5015
SHAMROCK MATERIALS OF SANTA ROSA	285	ROBERTS AVE		SANTA ROSA	CA	95407	3273
JOSE G CAMPOS TRUCK DRIVING TRAINING	1213	TROMBETTA ST		SANTA ROSA	CA	95407	4213
RACE PACE DELIVERY	2226	WESTLAND DR		SANTA ROSA	CA	95407	4215
NUNEZ SIGNS	1293	WOODHAVEN DR		SANTA ROSA	CA	95407	3999
SANTA ROSA MEAT AND POULTRY COMPANY	940	LUDWIG AVE		SANTA ROSA	CA	95407	4212
SUPERIOR DELIVERY SERVICE	300	WEST ROBLES AVE	#L1	SANTA ROSA	CA	95407	4214
OROWEAT/ENTENMANN'S	257	SUTTON PL		SANTA ROSA	CA	95407	4212
MATSUMOTO INC	3381	MCMAUDE PL	#C	SANTA ROSA	CA	95407	3999
BERGY DOOR COMPANY	3999	SANTA ROSA AVE		SANTA ROSA	CA	95407	4212
FRIEDMAN BROS	4055	SANTA ROSA AVE		SANTA ROSA	CA	95401	4212
3B - LIMOUSINE SERVICE	2724	BARNDANCE LN		SANTA ROSA	CA	95407	4119
COLE SILVER SHOP	514	SURREY DR		SANTA ROSA	CA	95401	3911
DAN TRUDEAU DESIGNS	375	GATE WAY		SANTA ROSA	CA	95401	3911
PUBLIC STORAGE INC	914	HOPPER AVE		SANTA ROSA	CA	95403	4226
QUALITY DISCOUNT CABINETS LLC	3440	AIRWAY DR	#B	SANTA ROSA	CA	95403	2434
MICROCOMP	1324	CASHEW RD		SANTA ROSA	CA	95403	3571
PASDERA DESIGNS	110	CALISTOGA RD		SANTA ROSA	CA	95409	3911
BROOK TROUT DESIGNS	735	HILLMONT ST		SANTA ROSA	CA	95409	3911
MEDTRONIC VASCULAR INC	3576	UNOCAL PL		SANTA ROSA	CA	95403	3841
DESIGN 6 LLC	3203	BROKEN TWIG LN		SANTA ROSA	CA	95404	3911
BLYST PRODUCTIONS	1911	LYON CT		SANTA ROSA	CA	95403	3999
AGILENT TECHNOLOGIES INC.	1400	FOUNTAINGROVE PKY		SANTA ROSA	CA	95403	3825
CAPUCINE CONTEMPORARY ARTS AND CRAFTS	2211	CUMMINGS DR		SANTA ROSA	CA	95404	3999
BILCO	2108	FRANKLIN AVE		SANTA ROSA	CA	95404	4215
B AND W'S COURIER SERVICE	2217	HUMBOLDT ST		SANTA ROSA	CA	95404	4215
SONOMA STERLING LIMOUSINE INC	2348	NORDYKE AVE		SANTA ROSA	CA	95403	4121
THE PAINTING PEASANTS	2145	SLATER ST		SANTA ROSA	CA	95404	3999
ROADRUNNER EXPRESS DELIVERY	1275	4TH ST	#128	SANTA ROSA	CA	95404	4215
SONOMA HERITAGE FARMS	1117	GLENN ST		SANTA ROSA	CA	95401	4221
XEROX CORPORATION	747	MENDOCINO AVE		SANTA ROSA	CA	95404	3579
RELIABLE LIQUID TRANSPORT INC	1041	COLLEGE AVE		SANTA ROSA	CA	95404	4213
SCHULTZ BROS VAN AND STORAGE	701	STEWART ST		SANTA ROSA	CA	95404	4214
THESE TEES	1638	PAMELA DR		SANTA ROSA	CA	95404	4121
EXECUTIVE PASSENGER TAXI SERVICE	2226	RIVERA DR		SANTA ROSA	CA	95409	4121
NITROX TECHNOLOGIES INC	551	MIDDLE RINCON RD		SANTA ROSA	CA	95409	3999
METRO COURIERS	201	D ST		SANTA ROSA	CA	95404	4215
MRO INDUSTRIAL SUPPLY	1088	BADGER CT		SANTA ROSA	CA	95409	4212
ADOLFO SALDANA	940	BAIRD RD		SANTA ROSA	CA	95409	4121
JAY K MILBURN	5133	PARKHURST DR	#B	SANTA ROSA	CA	95409	4215
JAMES B WORK	4937	SEA WOLF DR		SANTA ROSA	CA	95409	4215
ADAM BELTZ	4945	CHARMIAN DR		SANTA ROSA	CA	95409	4121

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LIST DERIVED FROM UTILITIES DEPT- ENVIRONMENTAL COMPLIANCE DATABASE

May need to file NOI for coverage under State Industrial Storm Water permit

Based on reported SIC codes

NAME		ADDRESS	CITY		ZIP	SIC
3T EQUIPMENT CO, INC	1,596	HAMPTON WY	SANTA ROSA,	CA	95407	3589
3T EQUIPMENT COMPANY, INC.	3,227	B ST	SANTA ROSA,	CA	95407	3589
A & C REBUILT	3,200	DUTTON AVE	SANTA ROSA,	CA	95407	3694
A & M MINI MART	440	HEARN AVE	SANTA ROSA,	CA	95407	1381
A-1 COMPRESSOR CO.	321	SUTTON PL	SANTA ROSA,	CA	95407	3563
ABLE BAKING COMPANY	3,275	DUTTON AVE	SANTA ROSA,	CA	95407	2051
ACE PRECISION MACHINE	3,069	WILJAN CT	SANTA ROSA,	CA	95407	3599
ACME FOREIGN	305	SEBASTOPOL RD	SANTA ROSA,	CA	95407	5093
ACME SALVAGE, INC.	1,885	SEBASTOPOL RD	SANTA ROSA,	CA	95407	5093
AGILENT TECHNOLOGIES, INC.	1,400	FOUNTAINGROVE PKY	SANTA ROSA,	CA	95403	3825
AGILENT TECHNOLOGIES, INC.	1,201	PINER RD	SANTA ROSA,	CA	95404	3825
AIR MONITOR CORPORATION	1,050	HOPPER AVE	SANTA ROSA,	CA	95403	3822
AJ PRINTING & GRAPHICS	1,350	CENTRAL AVE	SANTA ROSA,	CA	95401	2752
ALLEGRA PRINT AND IMAGING	417	TESCONI CIR	SANTA ROSA,	CA	95401	2752
ALUMA TECH	1,017	SEBASTOPOL RD	SANTA ROSA,	CA	95407	3599
AMERICAN MEDICAL RESPONSE	1,415	NORTH DUTTON AVE	SANTA ROSA,	CA	95401	4119
AMY'S KITCHEN	2,330	NORTHPOINT PKY	SANTA ROSA,	CA	95407	2038
ANDANTE DAIRY	1,550	RIDLEY AVE	SANTA ROSA,	CA	95401	2022
AUTOCON MIXING SYSTEMS INC.	917	PINER RD	SANTA ROSA,	CA	95401	3599
BENNETT VALLEY BREAD & PASTRY	2,755	YULUPA AVE	SANTA ROSA,	CA	95405	2051
BEPEX CORP. (HOSOKAWA)	150	TODD RD	SANTA ROSA,	CA	95407	3559
BERINGER WINE ESTATES	3,215	COFFEY LN	SANTA ROSA,	CA	95403	2084
BIGHAM NATURAL STONE	3,200	DUTTON AVE	SANTA ROSA,	CA	95407	3281
BIW CONNECTOR SYSTEMS	500	TESCONI CIR	SANTA ROSA,	CA	95401	3643
BOB WESCOTTS AUTO & TRUCK PART	1,569	SEBASTOPOL RD	SANTA ROSA,	CA	95407	5015
BOERICKE & TAFEL	2,381	CIRCADIAN WAY	SANTA ROSA,	CA	95407	2834
BOYETT PETROLEUM	171	SANTA ROSA AVE	SANTA ROSA,	CA	95401	1381
BRUNSING ASSOCIATES INC	6,598	MONTECITO BLVD	SANTA ROSA,	CA	95409	1381
BRUNSING ASSOCIATES INC	995	SEBASTOPOL RD	SANTA ROSA,	CA	95407	1381
BRUNSING ASSOCIATES, INC.	1,980	SEBASTOPOL RD	SANTA ROSA,	CA	95407	1381
BRYCE ROCKET CYCLES	3,145	COFFEY LN	SANTA ROSA,	CA	95403	3751
CAFE DES CROISSANTS	3,194	COFFEY LN	SANTA ROSA,	CA	95403	2051
CAFE DES CROISSANTS	2,444	LOMITAS AVE	SANTA ROSA,	CA	95404	2051
CARRERA'S PLATING SHOP	3,381	MCMAUDE PL	SANTA ROSA,	CA	95407	3471
CHROMAGRAPHS	440	TESCONI CIR	SANTA ROSA,	CA	95401	2752
CITY OF SANTA ROSA PRINT SHOP	100	SANTA ROSA AVE	SANTA ROSA,	CA	95404	2731
CITY OF SANTA ROSA-CORP YARD	55	STONY POINT RD	SANTA ROSA,	CA	95401	4111
CLASSIC MILL & CABINET	3,033	COFFEY LN	SANTA ROSA,	CA	95403	2434
CLEEK PRINT, LLC	1,755	PINER RD	SANTA ROSA,	CA	95403	2752
CO OF SONOMA TRANSIT	335	WEST ROBLES AVE	SANTA ROSA,	CA	95407	4131
CONCEPT DEVELOPMENT ASSOC	1,375	CENTRAL AVE	SANTA ROSA,	CA	95401	3993
COPAIN WINE CELLARS	1,160	HOPPER AVE	SANTA ROSA,	CA	95403	2084
COSTILL GRAPHICS	55	RIDGEWAY AVE	SANTA ROSA,	CA	95401	2752
COUNTY OF SONOMA REPORGRAPHICS	455	FISCAL DR	SANTA ROSA,	CA	95403	2752
CUSTOM DESIGN COUNTERTOPS, INC	3,043	WILJAN CT	SANTA ROSA,	CA	95407	3089
D.I PRINTING	1,809	EMPIRE INDUSTRIAL CT	SANTA ROSA,	CA	95403	2751
DAISY CHAIN ENT., LTD.	300	WEST ROBLES #L	SANTA ROSA,	CA	95407	4212
DAUENHAUER MFG. CO.	111	5TH ST	SANTA ROSA,	CA	95401	3523
DENNETT TILE	3,310	INDUSTRIAL DR	SANTA ROSA,	CA	95403	3281
DEPOSITION SCIENCES, INC.(DSI)	3,300	COFFEY LN	SANTA ROSA,	CA	95403	3823
DIENAMICS	3,200	DUTTON AVE	SANTA ROSA,	CA	95407	2759
DIENAMICS	351	WEST ROBLES RD	SANTA ROSA,	CA	95407	2752
DIGI-TYPE, INC.	2,635	CLEVELAND AVE	SANTA ROSA,	CA	95403	2791
DRIVE LINE SERVICE OF S.R.	3,132	COFFEY LN	SANTA ROSA,	CA	95403	3499

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LIST DERIVED FROM UTILITIES DEPT- ENVIRONMENTAL COMPLIANCE DATABASE

May need to file NOI for coverage under State Industrial Storm Water permit

Based on reported SIC codes

NAME		ADDRESS	CITY		ZIP	SIC
EMG INC.	3,165	COFFEY LN	SANTA ROSA,	CA	95403	3931
ENVIRONMENTAL FILTER CORP	265	ROBERTS AVE	SANTA ROSA,	CA	95407	3564
EQUILON DBA SHELL OIL PRODUCTS	2,799	4TH ST	SANTA ROSA,	CA	95405	1381
EQUILON DBA SHELL OIL PRODUCTS	2,575	CORBY AVE	SANTA ROSA,	CA	95407	1381
EQUILON DBA SHELL OIL PRODUCTS	2,005	GUERNEVILLE RD	SANTA ROSA,	CA	95401	1381
EQUILON DBA SHELL OIL PRODUCTS	3,785	SANTA ROSA AVE	SANTA ROSA,	CA	95407	1381
EXXONMOBIL OIL CORP	1,101	YULUPA AVE	SANTA ROSA,	CA	95405	1381
EXXONMOBIL REFINING & SUPPLY	4,501	SONOMA HWY	SANTA ROSA,	CA	95409	1381
FARMERS BROS. CO.	470	EAST TODD RD	SANTA ROSA,	CA	95407	3556
FIFTH STREET PRINTING CENTER	529	5TH ST	SANTA ROSA,	CA	95401	2752
FINISHING TOUCH	966	PINER RD	SANTA ROSA,	CA	95403	2431
FLEX PRODUCTS, INC.	2,331	CIRCADIAN WAY	SANTA ROSA,	CA	95407	3999
FLEX PRODUCTS, INC.	1,402	MARINER WAY	SANTA ROSA,	CA	95407	3827
FLEX WEIGH CORPORATION	3,158	CONDO CT	SANTA ROSA,	CA	95403	3596
FLOWMASTER, INC.	2,975	DUTTON AVE	SANTA ROSA,	CA	95407	3714
FORMPRINT DESIGN	1,626	PINER RD	SANTA ROSA,	CA	95403	2752
FOUNTAINGROVE PLAZA ASSOCIATES	3,975	OLD REDWOOD HWY	SANTA ROSA,	CA	95404	1381
FRANCO AMERICAN BAKERY	202	WEST 7TH ST	SANTA ROSA,	CA	95401	2051
FREETIME	3,350	COFFEY LN	SANTA ROSA,	CA	95403	2759
G & G SPECIALTY FOODS	322	BELLEVUE AVE	SANTA ROSA,	CA	95407	2022
GALVIN PRECISION MACHINING	404	YOLANDA AVE	SANTA ROSA,	CA	95404	3599
GEORGES & YELLOW CAB	588	ROSELAND AVE	SANTA ROSA,	CA	95407	4121
GLOBAL MATERIAL RECOVERY SERVI	3,899	SANTA ROSA AVE	SANTA ROSA,	CA	95407	5093
GOLDEN GATE BUS TRANSIT	3,225	INDUSTRIAL DR	SANTA ROSA,	CA	95403	4111
GRANITE BY RAFAEL	3,200	DUTTON AVE	SANTA ROSA,	CA	95407	3281
GRAPHIX LAB, INC	3,345	INDUSTRIAL DR	SANTA ROSA,	CA	95403	2752
HEALTH FREEDOM NUTRITION, LLC	343	WEST ROBLES AVE	SANTA ROSA,	CA	95407	2099
HR & DV GANTNER TRUST OF 1982	1,680	MENDOCINO AVE	SANTA ROSA,	CA	95401	1381
HUMPHREYS INJECTION MOLDS	329	SUTTON PL	SANTA ROSA,	CA	95407	3089
HYBRINETICS, INC.	225	SUTTON PL	SANTA ROSA,	CA	95407	3639
IBS OF THE NORTH BAY	2,400	BLUEBELL DR	SANTA ROSA,	CA	95403	3692
ICON DESIGN & DISPLAY INC	1,733	SEBASTOPOL RD	SANTA ROSA,	CA	95407	2541
INDUSTRIAL MACHINE & ENGINE	928	NORTH DUTTON AVE	SANTA ROSA,	CA	95401	3599
INTERSTATE BATTERIES,INC	2,400	BLUEBELL DR	SANTA ROSA,	CA	95403	3692
ITT INDUSTRIES, INC.	500	TESCONI CIR	SANTA ROSA,	CA	95401	3678
JDS UNIPHASE	2,789	NORTHPOINT PKY	SANTA ROSA,	CA	95407	3827
JNW ENGINE & MACHINE	1,000	PINER RD	SANTA ROSA,	CA	95403	3599
KEEHN SCENES	3,350	COFFEY LN	SANTA ROSA,	CA	95403	2759
KOMAG MATERIAL TECHNOLOGY	93	STONY CIR	SANTA ROSA,	CA	95401	3695
KUSTOM GRAPHIC APPAREL	3,222	AIRWAY DR	SANTA ROSA,	CA	95403	2759
KUSTOM GRAPHIC APPAREL	3,181	CLEVELAND AVE	SANTA ROSA,	CA	95403	2759
KVO INDUSTRIES	1,825	EMPIRE INDUSTRIAL CT	SANTA ROSA,	CA	95403	3479
LA GUADALUPANA BAKERY	1,031	SEBASTOPOL RD	SANTA ROSA,	CA	95407	2051
LA TORTILLA FACTORY	3,300	COFFEY LN	SANTA ROSA,	CA	95403	2051
LA TORTILLA FACTORY	3,645	STANDISH AVE	SANTA ROSA,	CA	95407	2051
LIDLAW TRANSIT	959	SEBASTOPOL RD	SANTA ROSA,	CA	95407	4151
LASER EXCEL	3,310	COFFEY LN	SANTA ROSA,	CA	95403	2771
LEBARON MANUFACTURING CORP.	343	WEST ROBLES AVE	SANTA ROSA,	CA	95407	3172
LEETE GENERATORS	3,360	MCMAUDE PL	SANTA ROSA,	CA	95407	3621
LETTER SHOP PRINTING	4,283	MONTGOMERY DR	SANTA ROSA,	CA	95405	2752
LFI SPORTSWEAR	1,733	SEBASTOPOL RD	SANTA ROSA,	CA	95407	2262
LOTUS BAKERY	3,336	INDUSTRIAL DR	SANTA ROSA,	CA	95403	2051
MALM FIREPLACES, INC.	368	YOLANDA AVE	SANTA ROSA,	CA	95404	3433
MCCANN MACHINE AND MANUFACTURI	1,075	SEBASTOPOL RD	SANTA ROSA,	CA	95407	3599

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Based on reported SIC codes

NAME		ADDRESS	CITY		ZIP	SIC
MEDTRONIC / A.V.E.	2,330	CIRCADIAN WAY	SANTA ROSA,	CA	95407	3841
MEDTRONIC A.V.E.	3,576	UNOCAL PL	SANTA ROSA,	CA	95403	3841
MICHAEL DOLAN CUSTOM GUITARS	3,222	AIRWAY DR	SANTA ROSA,	CA	95403	3931
MICROSOURCE, INC	1,269	CORPORATE CENTER PKY	SANTA ROSA,	CA	95407	3679
MILNER'S ANODIZING	3,330	MCMAUDE PL	SANTA ROSA,	CA	95404	3471
MINUTEMAN PRESS	3,401	CLEVELAND AVE	SANTA ROSA,	CA	95403	2752
NEIGHBORHOOD BAKERY	170	FARMERS LN	SANTA ROSA,	CA	95405	2051
NETRA CORPORATION	1,455	CORPORATE CENTER PKY	SANTA ROSA,	CA	95407	3089
NORTH COAST RUBBER STAMP & EN	3,485	AIRWAY DR	SANTA ROSA,	CA	95403	3953
NORTH COAST TILE & STONE, INC.	350	EAST TODD RD. #1	SANTA ROSA,	CA	95407	3281
NORTHWESTERN GRAPHICS	1,314	PETALUMA HILL RD	SANTA ROSA,	CA	95404	2752
OBERON DESIGN	1,817	EMPIRE INDUSTRIAL CT	SANTA ROSA,	CA	95403	3172
OPTICAL ENGINEERING, INC.	3,186	COFFEY LN	SANTA ROSA,	CA	95403	3699
PACIFIC GAS AND ELECTRIC	3,965	OCCIDENTAL RD	SANTA ROSA,	CA	95401	1381
PACIFIC HARDWOOD CABINETRY	2,811	DOWD DR	SANTA ROSA,	CA	95407	2434
PARAGON CONTROLS INC.	2,371	CIRCADIAN WAY	SANTA ROSA,	CA	95407	3823
PAUL'S EMPIRE HEAD SHOP	112	ROBERTS AVE	SANTA ROSA,	CA	95401	3599
PAX WINE CELLARS, LLC	3,352	COFFEY LN	SANTA ROSA,	CA	95403	2084
PAYNE'S DIECUTTING & EMBOSsing	3,349	INDUSTRIAL DR	SANTA ROSA,	CA	95403	2759
PERSONAL STAMP EXCHANGE	360	SUTTON PLACE	SANTA ROSA,	CA	95407	3953
PHILLIPS DESIGN	3,100	DUTTON AVE	SANTA ROSA,	CA	95407	3545
PINER PRINTING	997	PINER RD	SANTA ROSA,	CA	95403	2752
PIP PRINTING	997	PINER RD	SANTA ROSA,	CA	95401	2752
PLANNED PRINTER, INC.	986	AIRWAY CT	SANTA ROSA,	CA	95403	2752
POLYMER OPTICS, LLC	3,100	DUTTON AVE	SANTA ROSA,	CA	95407	3999
PREFERRED CHARTERS	520	EAST TODD RD	SANTA ROSA,	CA	95407	4171
PRESS DEMOCRAT PUBLISHING CO	427	MENDOCINO AVE	SANTA ROSA,	CA	95401	2711
PRINTING EXPRESS	119	COLLEGE AVE	SANTA ROSA,	CA	95401	2752
PRINTING PLUS	55	RIDGEWAY AVE	SANTA ROSA,	CA	95401	2752
PRINTS AND THE PAPER	525	ROSS ST	SANTA ROSA,	CA	95401	2752
RACKERBY SALES CO	1,733	SEBASTOPOL RD	SANTA ROSA,	CA	95407	3443
RANDAL NUTRITIONAL PRODUCTS, I	1,595	HAMPTON WAY	SANTA ROSA,	CA	95407	2099
RANDY'S DESIGN & MACHINE INC.	242	ROBERTS AVE	SANTA ROSA,	CA	95401	3599
RECORD MANAGEMENT SERVICES	3,069	WILJAN CT	SANTA ROSA,	CA	95407	3861
REDWOOD OIL COMPANY	1,100	BENNETT VALLEY RD	SANTA ROSA,	CA	95402	1381
REDWOOD OIL COMPANY	1,855	GUERNEVILLE RD	SANTA ROSA,	CA	95401	1381
REDWOOD OIL COMPANY	760	SEBASTOPOL RD	SANTA ROSA,	CA	95407	1381
REDWOOD OIL COMPANY	455	YOLANDA AVE	SANTA ROSA,	CA	95407	5171
ROWENS MACHINE SHOP	1,285	PETALUMA HILL RD	SANTA ROSA,	CA	95404	3599
RPM OPTOELECTRONICS	1,724	CORBY AVE	SANTA ROSA,	CA	95407	3577
SALINIA WINE COMPANY LLC	3,350	COFFEY LN #D	SANTA ROSA,	CA	95403	2084
SAM'S DONUTS	1,080	SEBASTOPOL RD	SANTA ROSA,	CA	95407	2051
SANTA ROSA BREAD CO.	1,021	HAHMAN DR	SANTA ROSA,	CA	95405	2051
SANTA ROSA LABEL	986	AIRWAY CT	SANTA ROSA,	CA	95403	2752
SANTA ROSA PRECISION MACHINING	3,200	DUTTON AVE	SANTA ROSA,	CA	95407	3599
SANTA ROSA PRINTING	575	ROSS ST	SANTA ROSA,	CA	95401	2752
SCOTT ARCHITECTURAL GRAPHICS	1,275	NORTH DUTTON AVE	SANTA ROSA,	CA	95401	3993
SELBY & SONS MACHINE INC	804	PINER RD	SANTA ROSA,	CA	95403	3599
SHELL OIL PRODUCTS US	255	DUTTON AVE	SANTA ROSA,	CA	95404	1381
SIDURI WINES	980	AIRWAY CT	SANTA ROSA,	CA	95403	2084
SILVER CREEK TILE & STONE	954	PINER RD	SANTA ROSA,	CA	95403	3281
SIR SPEEDY PRINTING #202	3,451	AIRWAY DR	SANTA ROSA,	CA	95403	2754
SOLO PRESS	3,185	CLEVELAND AVE	SANTA ROSA,	CA	95403	2752
SOLOMON'S WATER TRUCKS	107	WEST BARHAM	SANTA ROSA,	CA	95407	4212

Appendix III-C

Term 2, Annual Report 4

July, 2007

LIST DERIVED FROM UTILITIES DEPT- ENVIRONMENTAL COMPLIANCE DATABASE

May need to file NOI for coverage under State Industrial Storm Water permit

Based on reported SIC codes

NAME		ADDRESS	CITY		ZIP	SIC
SONOMA COUNTY PW & DEPT TRANS	1,775	SEBASTOPOL RD	SANTA ROSA,	CA	95407	1381
SONOMA DESIGN APPAREL	3,360	COFFEY LN	SANTA ROSA,	CA	95403	2759
SONOMA PHOTONICS	1,750	NORTHPOINT PKY	SANTA ROSA,	CA	95403	3827
SONOMA PRECISION MFG. CO.	3,055	WILJAN CT	SANTA ROSA,	CA	95407	3599
SONOMA VALLEY BAGEL COMPANY	2,310	MENDOCINO AVE	SANTA ROSA,	CA	95401	2051
SONOMA VALLEY FOODS, INC	3,645	STANDISH AVE	SANTA ROSA,	CA	95407	2099
SPECTRASWITCH, INC.	445	TESCONI CIR	SANTA ROSA,	CA	95401	3827
STEVEN L. CLARK CO.	3,345	INDUSTRIAL DR	SANTA ROSA,	CA	95403	3599
SUMMERFIELD GRAPHICS, INC.	860	PINER RD	SANTA ROSA,	CA	95403	2796
SWEETHEART CABINETMAKERS	360	SUTTON PL	SANTA ROSA,	CA	95407	2434
SYCIP DESIGNS INC.	111	5TH ST	SANTA ROSA,	CA	95401	3751
T & B SPORTS, INC	1,250	MENDOCINO AVE	SANTA ROSA,	CA	95401	2759
TADDEI'S MACHINE SHOP	451	WEST 9TH ST	SANTA ROSA,	CA	95401	3599
TAN'S DONUTS	1,074	4TH ST	SANTA ROSA,	CA	95404	2051
TAN'S DONUTS	2,550	GUERNEVILLE RD	SANTA ROSA,	CA	95401	2051
TAN'S DONUTS	754	MONTECITO CTR	SANTA ROSA,	CA	95409	2051
TEXACO	1,410	SANTA ROSA AVE	SANTA ROSA,	CA	95404	1381
TORTILLERIA EL MOLINO	421	STONY POINT RD	SANTA ROSA,	CA	95401	2099
TRANS INDIA PRODUCTS	3,354	COFFEY LN	SANTA ROSA,	CA	95403	2844
TRANS INDIA PRODUCTS	3,330	COFFEY LN	SANTA ROSA,	CA	95403	2844
U-BRIGHT OPTRONICS (USA) CORP	1,726	CORBY AVE	SANTA ROSA,	CA	95407	3081
U-HAUL INTL/SOTA ENVIRONMENTAL	3,601	SANTA ROSA AVE	SANTA ROSA,	CA	95407	1381
UNITED PARCEL SERVICE	3,331	INDUSTRIAL DR	SANTA ROSA,	CA	95403	4231
VERTICOM	2,330	CIRCADIAN WAY	SANTA ROSA,	CA	95407	3679
VILLAGE BAKERY	1,445	TOWN & COUNTRY DR	SANTA ROSA,	CA	95404	2051
VOLUME PRECISION GLASS	150	TODD RD	SANTA ROSA,	CA	95407	3827
WASTE MANAGEMENT, INC.	3,400	STANDISH AVE	SANTA ROSA,	CA	95407	4212
WEST COUNTY TRANSPORTATION	367	WEST ROBLES AVE	SANTA ROSA,	CA	95407	4151
WEST SONOMA COUNTY DISPOSAL	3,417	STANDISH AVE	SANTA ROSA,	CA	95407	4212
WESTSIDE ENGINE AND MACHINE	12	WEST 3RD ST	SANTA ROSA,	CA	95401	3599

APPENDIX III-D
Term 2, Annual Report 4
July, 2007

LIST OF BUSINESSES WITH NOI ON FILE AT REGIONAL BOARD				
List from SWRCB web site (July 2007)				
WDID	STATUS	FACILITY NAME	FACILITY ADDRESS	CITY
1 49I000306	Active	Bob Wescott s Auto & Truck	1569 Sebastopol Rd	Santa Rosa, CA 95407
1 49I000826	Active	Preferred Charters	520 E Todd Rd	Santa Rosa, CA 95407
1 49I000836	Active	Sonoma Cnty Airport	2200 Airport Blvd	Santa Rosa, CA 95403
1 49I002101	Active	UPS Santa Rosa CASAR	3331 Industrial Dr	Santa Rosa, CA 95403
1 49I002137	Active	Superior Supplies Inc	40 Ridgeway Ave	Santa Rosa, CA 95401
1 49I003252	Active	Shamrock Materials Inc	285 Roberts Ave	Santa Rosa, CA 95407
1 49I003958	Active	Acme Auto Wreckers Inc	1885 Sebastopol Rd	Santa Rosa, CA 95407
1 49I004738	Active	Sonoma Cnty Transit	355 W Robles Ave	Santa Rosa, CA 95407
1 49I004950	Active	Acme Foreign	305 Sebastopol Rd	Santa Rosa, CA 95407
1 49I005113	Active	Syar Industries Inc Todd Rd A.C.	260 Ghilotti Rd	Santa Rosa, CA 95407
1 49I005994	Active	Fed Ex	3541 Regional Pkwy	Santa Rosa, CA 95403
1 49I006032	Active	Air Monitor	1050 Hopper Ave	Santa Rosa, CA 95403
1 49I006367	Active	Laidlaw Transit Santa Rosa	959 Sebastopol Rd	Santa Rosa, CA 95407
1 49I006435	Active	Con Way Freight USR	4095 S Moorland Ave	Santa Rosa, CA 95407
1 49I009685	Active	Calico Hardwoods Inc	3580 Westwind Blvd	Santa Rosa, CA 95403
1 49I009740	Active	Selvage Concrete Prod Inc	3309 Sebastopol Rd	Santa Rosa, CA 95407
1 49I009813	Active	Mark West Quarry	1060 N Dutton Ave	Santa Rosa, CA 95404
1 49I010344	Active	Santa Rosa Stainless Steel	1400 Airport Blvd	Santa Rosa, CA 95403
1 49I010400	Active	West Cnty Trans	367 W Robles Ave	Santa Rosa, CA 95407
1 49I011103	Active	Norcal Bldg Materials Inc	1534 Copperhill Pkwy	Santa Rosa, CA 95403
1 49I011118	Active	Fedco Const Inc	3510 Brooks Ave	Santa Rosa, CA 95407
1 49I011176	Active	Empire Waste Mgt	3400 Standish Ave	Santa Rosa, CA 95407
1 49I011692	Active	Municipal Services Ctr North	55 Stony Point Rd	Santa Rosa, CA 95401
1 49I012211	Active	Grab N Grow Soil Prod	2759 Llano Rd	Santa Rosa, CA 95407
1 49I012566	Active	Davis, Daniel O	1051 Todd Rd	Santa Rosa, CA 95407
1 49I012696	Active	West Sonoma Cnty Disposal	3417 Standish Ave	Santa Rosa, CA 95407
1 49I012744	Active	Zamaroni Quarry Inc	3500 Petaluma Hill Rd	Santa Rosa, CA 95404
1 49I012764	Active	Rich Ted Trucking	3289 Regional Pkwy	Santa Rosa, CA 95403
1 49I013463	Active	Industrial Carting	5050 Taylor Ave	Santa Rosa, CA 95407
1 49I014143	Active	Hanna Winery Inc	5345 Occidental Rd	Santa Rosa, CA 95401
1 49I014154	Active	Walter Hansel Winery	5570 Hall Rd	Santa Rosa, CA 95401
1 49I014352	Active	Deloach Vineyards	3339 Hartman Ln	Santa Rosa, CA 95401
1 49I014353	Active	Deloach Vineyards	1791 Olivet Rd	Santa Rosa, CA 95401
1 49I014534	Active	Western Fiberglass Inc	1555 Copperhill Pkwy	Santa Rosa, CA 95403
1 49I014616	Active	Kendall Jackson Skylane	5660 Skylane Blvd	Santa Rosa, CA 95403
1 49I014731	Active	Dura Glass Prod	1500 1500A Copperhill Pkwy	Santa Rosa, CA 95403
1 49I016094	Active	Fountain Grove	1400 FOUNTAIN GROVE MS M2SA	Santa Rosa, CA 95403
2 49I016261	Active	St Francis Vineyards & Wine	500 N Pythian Rd	Santa Rosa, CA 95409
1 49I016283	Active	Rich Doss Inc	3809 Stony Point Rd	Santa Rosa, CA 95407
1 49I017446	Active	Bodean Co Inc Santa Rosa Hot Plant	1060 Maxwell Dr	Santa Rosa, CA 95401
1 49I017554	Active	Icore Int Inc	3780 Flight Line Dr	Santa Rosa, CA 95403
1 49I017792	Active	Global Materials Recovery Sys	3911 Santa Rosa Ave # 3899	Santa Rosa, CA 95407
1 49I018140	Active	Portosan Co LLC	1521 Copperhill Pkwy	Santa Rosa, CA 95403
1 49I018216	Active	Matanzas Creek Winery	6097 Bennett Valley	Santa Rosa, CA 95404
1 49I018705	Active	Ghilotti Const Co	246 Ghilotti Ave	Santa Rosa, CA 95404
1 49I018738	Active	De Loach Vineyards	1791 Olivet Rd	Santa Rosa, CA 95401
1 49I018862	Active	Envrio Metal	175 Scenic Ave	Santa Rosa, CA 95407
1 49I019005	Active	Santa Rosa	3033 Coffey Ln Ste G	Santa Rosa, CA 95403
1 49I019430	Active	Santa Rosa Boat Ctr	4185 Santa Rosa Ave	Santa Rosa, CA 95407
1 49I019589	Active	Dynamic Precast Co Inc	5300 Sebastopol Rd	Santa Rosa, CA 95407
1 49I019777	Active	Bonevia Winery	3339 Hartman Ln	Santa Rosa, CA 95401
1 49I020005	Active	Redwood Coast Petroleum	455 Yolanda Ave	Santa Rosa, CA 95404
1 49I020041	Active	FedEx Ground home Delivery	975 Corporate Ctr Parkway Ste 165	Santa Rosa, CA 95407
1 49I020133	Active	Sonoma Wine Co	2120 Olivet Rd	Santa Rosa, CA 95401
1 49I020252	Active	Curtis Auto Recycling and Scrap	4298 Santa Rosa Ave	Santa Rosa, CA 95407
1 49I020672	Active	Santa Rosa Subregional Water	4300 Llano Rd	Santa Rosa, CA 95407

**RGO INSPECTIONS DURING YEAR 4 2006-2007 AND
INSPECTION FORM**

Appendix III.D

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RGO INSPECTION

RGO BUSINESS NAME RGO BUSINESS ADDRESS
FAIRGROUNDS CHEVRON 1100 BENNETT VALLEY RD SANTA ROSA CA 95404
KEITH & DONS 76 1311 4TH ST SANTA ROSA CA 95404

WISEMANS VALERO 2500 HOEN AVE SANTA ROSA CA 95405

CODDINGTOWN VALERO 100 CODDINGTOWN CTR SANTA ROSA CA 95401

SONOMA HWY CHEVRON 4925 SONOMA HWY SANTA ROSA CA 95409

CHEVRON USA INC (PA) #91168 1715 SANTA ROSA AVE SANTA ROSA CA 95404
REDWOOD OIL COMPANY 1855 GUERNEVILLE RD SANTA ROSA CA 95403

MAYETTE VALERO 1101 YULUPA AVE SANTA ROSA CA 95405

A&M MINI MARKET 440 HEARN AVE SANTA ROSA CA 95407

DUTTON SHELL 255 DUTTON AVE SANTA ROSA CA 95407

COLLEGE SHELL 266 COLLEGE AVE SANTA ROSA CA 95401

SANTA ROSA 76 3551 CLEVELAND AVE SANTA ROSA CA 95403

GUERNEVILLE SHELL 2005 GUERNEVILLE ROAD SANTA ROSA CA 95403

CHEVRON FUEL 2201 CLEVELAND AVE SANTA ROSA CA 95403

FAST LANE GAS & FOOD MART 50 WEST COLLEGE AVE SANTA ROSA CA 95401

MISSION VALERO 4501 SONOMA HWY SANTA ROSA CA 95409

STEELE LANE SHELL 777 STEELE LN SANTA ROSA CA 95403

ROTTEN ROBBIE #40 2515 GUERNEVILLE RD SANTA ROSA CA 95401

SHELL-BRANDED STORE #136093 3453 CLEVELAND AVE SANTA ROSA CA 95403

MENDOCINO/COLLEGE CHEVRON 701 MENDOCINO AVE SANTA ROSA CA 95401

BEACON 1333 4TH ST SANTA ROSA CA 95404

FAST GAS & MARKET 1410 SANTA ROSA AVE SANTA ROSA CA 95404

BENNETT VALLEY 76 2799 YULUPA AVE SANTA ROSA CA 95405

CHEVRON 136 COLLEGE AVE SANTA ROSA CA 95401

CHEVRON USA INC #208221 879 HOPPER AVE SANTA ROSA CA 95403

ARCO AM/PM #5936 1010 4TH ST SANTA ROSA CA 95404
FLAMINGO SHELL 2799 4TH ST SANTA ROSA CA 95405

CIRCLE K 76 2200 MENDOCINO AVE SANTA ROSA CA 95404

EASY SERVE GAS 4180 MONTGOMERY DR SANTA ROSA CA 95405

VALERO 300 COLLEGE AVE SANTA ROSA CA 95401

VALERO 3230 COFFEY LN SANTA ROSA CA 95403

CHEVRON 2145 MENDOCINO AVE SANTA ROSA CA 95401

CIRCLE K/76 #2705658 1950 GUERNEVILLE RD SANTA ROSA CA 95403
7/11 CITCO GAS 2648 SANTA ROSA AVE SANTA ROSA CA 95407
COSTCO GAS 1990 SANTA ROSA AVE SANTA ROSA CA 95407

FULTON ARCO AM-PM 2500 GUERNEVILLE RD SANTA ROSA CA 95401

OAKMONT SERVICE STATION 6501 Oakmont Drive SANTA ROSA CA 95409

FARMER'S LANE 76 1300 Farmer Lane SANTA ROSA CA 95405

REDWOOD COAST PETROLIUM 459 YOLANDA SANTA ROSA CA 95404

CHEVRON STONY POINT ROAD SANTA ROSA CA 95401

RGO INSPECTION REPORT

Facility Name: Date:

Address: Zip Code:

Manager:

INSPECTION REPORT YES NO

Staff Aware washdown prohibited

Trained in Spill Cleanup

Enough staff present

Catch Basins Clean

Decal

Number onsite # =

General Spill Kit Accessible

Trash Cans Adequate

Cleanliness Fuel Island Area swept

Stains

Air / Water Area swept

Stains

Parking Area swept

Stains

Trash Area swept

Stains

S/M/U Satisfactory, Minor issues, Unsatisfactory

SPILL & SITE CLEAN PROCEDURES (brief descriptions):

NOTES:

RGO Manager

Inspector:

SEQAC MEETING AGENDAS & ATTENDEES

Appendix III.E

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Sonoma Environmental Quality Assurance Committee

WHEN July 26, 2006
 9:30 am to 11:30 am

WHERE: City of Santa Rosa
 Laguna Wastewater Reclamation Plant
 4300 Llano Road
 Santa Rosa, CA

MEETING AGENDA/TOPICS

9:30 – 10:00	Introductions
10:00- 11:00	Round Table Discussion
11:00- 11:30	Announcements and future training topics
11:30	Adjourn

NEXT MEETING: *September 27, 2006*

Questions Contact:

Chris Murray
City of Santa Rosa
(707) 543-3393
cmurray@ci.santa-rosa.ca.us

Donna Seaman
City of Santa Rosa
(707) 543-3392
dseaman@ci.santa-rosa.ca.us

Sonoma Environmental Quality Assurance Committee

WHEN September 27, 2006
 9:30 am to 11:30 am

WHERE: City of Santa Rosa
 Laguna Wastewater Reclamation Plant
 4300 Llano Road
 Santa Rosa, CA

MEETING AGENDA/TOPICS

9:30 – 10:00	Introductions
10:00- 11:00	“Jail Trash” Donna Seaman, City of Santa Rosa
11:00- 11:30	Announcements and future training topics
11:30	Adjourn

NEXT MEETING: *Nov 15, 2005*

Questions Contact:

Chris Murray
City of Santa Rosa
(707) 543-3393
cmurray@ci.santa-rosa.ca.us

Donna Seaman
City of Santa Rosa
(707) 543-3392
dseaman@ci.santa-rosa.ca.us

Sonoma Environmental Quality Assurance Committee

WHEN November 15, 2006
 8:30 am to 11:30 am

WHERE: City of Santa Rosa
 Geysers Operations Center
 35 Stony Point Road
 Santa Rosa, CA

MEETING AGENDA/TOPICS

8:30 – 11:30 Tour of the City of Santa Rosa Geysers pipeline
 And wastewater disposal system

NEXT MEETING: *Jan 24, 2007*

Questions Contact:

Chris Murray
City of Santa Rosa
(707) 543-3393
cmurray@srcity.org

Donna Seaman
City of Santa Rosa
(707) 543-3392
dseaman@srcity.org

DTSC, Office of Pollution Prevention and Technology Development, Presents:



Best Environmental Practices for Fleet Maintenance

The Office of Pollution Prevention and Technology Development is presenting a free workshop to local businesses on **P2 alternatives, compliance,** and **economic incentives** for the fleet maintenance industry.

Who should attend: Any inspectors which conduct inspections at Automotive Facilities. Those dealing with environmental compliance issues. Let us show you how our training program can enhance your inspection goals and environmental performance.

Workshop topics:

-  Aqueous parts washing for degreasing and brake cleaning.
-  Antifreeze recycling technologies.
-  Use of reusable spray containers to minimize aerosol container wastes.
-  Used oil management: reusable filters, oil analysis, rerefined oil programs.
-  Oil water separator maintenance and stormwater compliance.
-  Dry shop spill cleanup methods
-  Economic and compliance incentives for businesses.



Fleet Maintenance

Workshop Location and Dates: January 24, 2007 9:00am.

Location: City of Santa Rosa
4300 Llano Road
Santa Rosa, CA 95407

Please respond prior to January 16th by completing this form and faxing to (707) 543-3398 Attn: Donna or Chris or send an e-mail to cmurray@srcity.org

Register Early For This Free Workshop (limited space available)

Name: _____ Organization: _____

Phone Number:(_____) _____ - _____

Names of Additional Attendees: _____

Sonoma Environmental Quality Assurance Committee

WHEN **March 28, 2007**
 9:30 am to 11:30 am

WHERE: **City of Santa Rosa**
 Laguna Wastewater Reclamation Plant
 4300 Llano Road
 Santa Rosa, CA

MEETING AGENDA/TOPICS

9:30 – 10:00	Introductions
10:00- 11:00	Green Business Update Andy Parsons, Sonoma County Fire Services
11:00- 11:30	Announcements and future training topics
11:30	Adjourn

NEXT MEETING: *May 23, 2007*

Questions Contact:

Chris Murray
City of Santa Rosa
(707) 543-3393
cmurray@ci.santa-rosa.ca.us

Donna Seaman
City of Santa Rosa
(707) 543-3392
dseaman@ci.santa-rosa.ca.us

Sonoma Environmental Quality Assurance Committee

WHEN May 23, 2007
 9:30 am to 11:30 am

WHERE: City of Santa Rosa
 Laguna Wastewater Reclamation Plant
 4300 Llano Road
 Santa Rosa, CA

MEETING AGENDA/TOPICS

9:30 – 9:45	Introductions
9:45 – 11:15	Inspector Round table discussion
11:15- 11:30	Announcements and future training topics
11:30	Adjourn

NEXT MEETING: *July 25, 2007*

Questions Contact:

Chris Murray
City of Santa Rosa
(707) 543-3393
cmurray@ci.santa-rosa.ca.us

Donna Seaman
City of Santa Rosa
(707) 543-3392
dseaman@ci.santa-rosa.ca.us

Geysers Tour 11-15-06

Name

Agency

Laura Peruechi

Novato Sanitation District

Jeremy Kimball

~~BAAQMD~~

Susan Keach

S.C.W.A

Marty Swift

S.C.W.A

Jim Stettler

DTSC

DTSC Workshop.

1/24/07

name	Agency	Address
Cathy Pease	CMSA	1301 ANDERSEN DR SAN RAFAEL 94901
Devina Douglas	↓	↓
Doug Dahye	SRFD	955 SONOMA AVE SANTA ROSA
GREG MARTIN	So. Co. Haz-MAT GMARTIN2@SonomaCounty.ca	2300 COUNTY CENTER DR #221A SANTA ROSA 95403
Marita Petersen	SRFD	955 Sonoma Ave Santa Rosa
Forest L. Frasier	SR Public Works	69 Strong Circle SR
John Roberts	City of Livermore	101 Jack London Dr. Livermore
Gina PETERSON	So. Co. Hazmat	2300 County Center Dr #221A Santa Rosa 95403
Alan Wilcox	City of Livermore	101. W. Jack London Blvd. Livermore, CA 94551
Marty Swift	Sonoma Co H ₂ O	marty@scwa-ca.gov 2150 W-College S. Rosa
Bene Gundy	City of Santa Rosa	4300 Llano Rd Santa Rosa 95404 rgundy@srcity.org
Susan Keach	Sonoma County Water Agency	2150 W. College - SR skeach@scwa.ca.gov
Concyncent	SRFD	Cuncent@sr-city.org

SPILL RESPONSE PROCEDURES

Appendix III.F

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Public Works Storm Water Spill Response/Enforcement Procedures

A. Notification Procedures

Get Information	Appropriate Response																
<p>1. Where did incident occur? (street address and cross street)</p> <p>a. City? b. County? c. Water Agency?</p>	<p>a. Emergency response warranted or ANY discharge to a creek or waterway.</p>	<ul style="list-style-type: none"> • FIRST: Call COMM CENTER (543-3666 or 911), REDCOM (568-5933), or direct caller to call • SECOND: Page PW Spill Notification Group • NOTE: SW Responder is responsible for notifying RWQCB (576-2220) and CDFG (944-5512 weekdays or (916) 445-0045 24 hr. dispatch) if discharge has reached a creek. SW Responder must also report all significant releases of hazardous materials to the Office of Emergency Services (1-800-852-7550). 															
<p>2. When did incident occur? Or is it presently occurring?</p> <p>3. Background:</p> <p>a. What happened or is happening?</p> <p>b. What materials are involved?</p> <p>c. What amount of material?</p> <p>d. Particularly, does the situation affect or threaten to affect a creek?</p>	<p>b. Non-emergency response, cleanup or investigation is required.</p>	<ul style="list-style-type: none"> • FIRST: Page PW SPILL NOTIFICATION GROUP (includes Field Services) or SW SPILL RESPONSE GROUP <p>And contact as appropriate: COMM CENTER: 543-3666 STORM WATER RESPONSE TEAM* PW FIELD SERVICES: 543-3881 UTILITIES: 543-4200 INDUSTRIAL WASTE 543-3369 (All permitted sites) CD: (Non-compliance with City Code) 543-3235 COUNTY PW ROAD DEPT: 565-7280 (spill on road during business hours) SHERIFF: 565-2121 (spill on road outside business hours) COUNTY HAZMAT: 576-1371 COUNTY HEALTH: 565-6560 WATER AGENCY: 526-5370 or 523-1070 (24 hr) CALTRANS: (510) 286-5726 CHP: 588-1400 Santa Rosa or 648-5550 Vallejo</p>															
<p>4. Does the caller know who or what caused situation?</p>	<p>c. No immediate response required, education or follow-up needed, or you need to speak with someone on the SW RESPONSE TEAM.</p>	<ul style="list-style-type: none"> • PAGE PW SW SPILL RESPONSE GROUP 															
<p>5. Ask if person calling wants to leave name, phone number, and whether the caller wishes to be contacted later. (The City must provide the name if it is requested by another party.)</p>	<p>IN ALL CASES:</p> <ul style="list-style-type: none"> • Prepare Call Link entry form to create a work order for the incident. 																
<p>6. Determine appropriate response</p>	<p>*STORM WATER RESPONSE TEAM (7:30 am - 4:00 pm):</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;">SW ENGR RESPONSE PAGER 581-5906</td> <td style="width: 33%;">Storm Water Eng.</td> <td style="width: 33%;">543-3467</td> </tr> <tr> <td>Steve Brady 543-3919 (477-3884 cell)</td> <td>Sheri Emerson</td> <td>543-4225 (738-0264 cell)</td> </tr> <tr> <td>Forest Frasier 543-4224 (953-6458 cell)</td> <td>Dale Tressler</td> <td>543-3873 (481-6352 cell)</td> </tr> <tr> <td>Ken Hutchins 543-3923 (583-5174 cell)</td> <td>Rita Miller</td> <td>543-3879 (540-2591 cell)</td> </tr> <tr> <td>Colleen Ferguson 543-3852</td> <td></td> <td></td> </tr> </table>		SW ENGR RESPONSE PAGER 581-5906	Storm Water Eng.	543-3467	Steve Brady 543-3919 (477-3884 cell)	Sheri Emerson	543-4225 (738-0264 cell)	Forest Frasier 543-4224 (953-6458 cell)	Dale Tressler	543-3873 (481-6352 cell)	Ken Hutchins 543-3923 (583-5174 cell)	Rita Miller	543-3879 (540-2591 cell)	Colleen Ferguson 543-3852		
SW ENGR RESPONSE PAGER 581-5906	Storm Water Eng.	543-3467															
Steve Brady 543-3919 (477-3884 cell)	Sheri Emerson	543-4225 (738-0264 cell)															
Forest Frasier 543-4224 (953-6458 cell)	Dale Tressler	543-3873 (481-6352 cell)															
Ken Hutchins 543-3923 (583-5174 cell)	Rita Miller	543-3879 (540-2591 cell)															
Colleen Ferguson 543-3852																	

B. Incident Response and Enforcement

<p>1. REPORT OF INCIDENT</p>	<ol style="list-style-type: none"> 1. Upon receiving spill report, inform PW front counter of the Storm Water Response Team's estimated time of arrival on site. If Storm Water Response Team is unable to respond they communicate with other City staff to ensure effective response. 2. Request PW front counter to send 2nd alpha page to PW Spill Notification Group with status and name of Storm Water Response Team responder. 3. Storm Water Response Team responder communicates en route or at site with Ron Simi (481-1412) and Jeremy Gundy (529-6143). Jeremy will begin to mobilize for response when initial alpha page is received. Contact Jeremy if he is not needed.
<p>2. ASSESS SITUATION</p>	<p>Safety first! Upwind, Uphill, Upstream. Determine what material has been discharged, its source, and outfall. Stop or reduce discharge. Contain spill. Determine responsible party.</p>
<p>3. CONTACT (in the following order)</p>	<ol style="list-style-type: none"> 1. In case of emergency, call COMM CENTER 543-3666 or 9-1-1. 2. Non-emergencies: Notify appropriate departments or agencies. 3. Notify Colleen Ferguson (543-3852) if appropriate. 4. If discharge has reached a creek, notify RWQCB (576-2220) and CDFG (944-5512 weekdays or (916) 445-0045 24 hr. dispatch). 5. All significant releases of hazardous materials must be immediately reported to the Office of Emergency Services (1-800-852-7550). 6. A press release may also be needed to alert the public of significant incidents with affects on human health and/or the environment.
<p>4. CLEAN UP must occur in a timely manner. Ascertain how clean up will be performed.</p>	<ol style="list-style-type: none"> 1. When responsibility <i>cannot</i> be determined, perform clean up or request that PW Field Services, Utilities, or SRFD Hazmat crews handle clean up. Assist with clean up if appropriate. 2. If responsibility for the discharge <i>can</i> be clearly determined inform discharger that they are responsible for clean up. Direct the discharger to perform the cleanup themselves if this can be done safely and effectively. 3. If discharger is unable to perform clean up provide discharger with ASpill Clean Up Resources@ list of companies that clean up the particular type of spill. Request a schedule for clean up procedures, notification when clean up begins, and a copy of billings for clean up services performed. 4. If discharger cannot safely perform the cleanup in a timely manner or the situation requires an immediate cleanup, the City may perform the cleanup and bill discharger for clean up costs. The City may charge for cleanup costs if: <ol style="list-style-type: none"> a) discharger has been responsible for a previous discharge, b) discharger operates a business that has been targeted for storm water public education, or c) the City has determined that the community's awareness of storm water issues has been raised to the level that the unacceptability of the actions leading to the discharge is generally known. 5. In emergency or time sensitive situations (where the detrimental impacts of spill, may increase or cause disruption of business or traffic) PW Field Services may clean up spill. Discharger may be billed a Cost Recovery for some or all of the costs incurred by the City. 6. If the discharger has been required to perform the clean up or has been assessed some of the costs, inform Rick Moshier and Colleen Ferguson of your observations and actions.
<p>5. EDUCATION & FOLLOW UP</p>	<p>If necessary, reinspect the site in a timely manner to ensure thorough clean up and reduce the potential for future discharges. Stress the seriousness of storm drain system pollution, clarify the concepts of pollution prevention and BMPs, and provide educational material.</p>

<p>6. PREVENTION OF FUTURE INCIDENTS</p>	<ol style="list-style-type: none"> 1. Determine if there is a reasonable likelihood of recurrence. 2. If responsibility for incident <i>cannot</i> be determined and the likelihood of recurrence exists, the City shall evaluate the practicability of implementing BMPs to reduce this likelihood and take appropriate action. 3. In cases of <i>actual</i> discharges to the storm drain system where the responsibility for the discharge <i>can</i> be determined and there is the likelihood of recurrence, the discharger may be asked to implement appropriate BMPs or ordered to develop and submit a plan, acceptable to the Director of Public Works, to eliminate or reduce the likelihood of recurrence using the Best Conventional Technology. The requirement to develop and implement such a plan and a time frame to submit the plan for approval shall be encompassed in a Notice of Violation or Cease and Desist Order. 4. In cases of <i>potential</i> discharges to the storm drain system where the responsibility for discharge <i>can</i> be determined and a likelihood of recurrence exists, the discharger may be issued a Warning or Notice of Violation and asked to implement appropriate BMPs. 5. Provide educational material.
<p>7. ENFORCEMENT</p>	<ol style="list-style-type: none"> 1. Take appropriate enforcement action according to Enforcement Options guidelines. 2. Inform supervisor, SW Response Team and other departments/agencies of actions taken. 3. Be sure to CC the RWQCB and property owners on all enforcement letters.

ENFORCEMENT OPTIONS	Informal			Formal
	Written or Verbal Warning	Notice of Violation	Cease & Desist Order	Admin Order, Criminal, or Civil Actions
1. Evidence of discharge present (stains, sludge, eroded concrete).	X			
2. Failure to effectively minimize exposure of potential pollutants to storm water.	X	X		
3. Release of small quantities of pollutants where there is the <i>potential</i> to reach the storm drain system.	X	X		
4. Actual discharge of small quantities of pollutants to the storm drain system.	X	X	X	
First Failure to correct violations 1-4.		X	X	X
5. Discharge of pollutants from sources where the community's awareness of storm water issues has been raised to the level that the unacceptability of the discharge is generally known.		X	X	X
6. Illegal connections to storm drain system, such as a floor drain.		X	X	X
Second failure to correct violations 1-4 or first failure to correct violations 5-6.			X	X
7. Discharge of significant quantities of pollutants to the storm drain system.			X	X
8. Discharge of industrial wastewater or sanitary sewage to the storm drain system.			X	X
Failure to correct violations 7-8.				X

	<p>The following cost recovery procedure shall be followed when a responsible party is identified for a potential or actual discharge in violation of the City's Storm Water Ordinance or NPDES permit in which Public Work crews perform a clean up.</p>
<p>8. Cost Recovery</p>	<p>1. Public Works Field Services personnel involved in the cleanup document the activity on their worksheets.</p>
	<p>2. Field Services Crew Supervisor submits expenses associated with the cleanup (labor, materials, equipment, etc.) to the Storm Water Response Team.</p>
	<p>3. Public Works Engineering expenses associated with the response are submitted to the Storm Water Response Team.</p>
	<p>4. The Storm Water Response Team checks to see if any other City departments are going to bill and informs Administrative Services - Accounts Receivable of the findings when the Request for Billing is submitted to for all Public Works clean up expenses. Attach the SW Incident Report, Cost Recovery Spreadsheet, and letter sent to the responsible party. Payment received is credited to the Storm Water Utility Fund (Acc. #0671-3860) for Storm Water expenses and the Hazardous Materials Clean up Fund (Acc. #0100-3860) for PW Field Services expenses</p>
	<p>5. When the Request for Billing is submitted, the Storm Water Response Team notifies the discharger in writing that the process for collection of clean up expenses is underway. (In most cases the discharger will have already have been verbally informed that a cost recovery will be undertaken for the clean up.) The letter may also serve as a Written Warning or Notice of Violation. Notification of discharger shall include a statement that the charges reflect only Public Works Department's costs and that other City departments may be undertaking cost recovery for their expenses related to the incident. Copy Ron Simi, Public Works Field Services Crew Supervisor, on all cost recovery letters involving Field Services clean ups.</p>
	<p>6. Administrative Services bills the discharger and handles collection of funds.</p>
	<p>7. If payment is not received, a letter of delinquency is sent to the discharger by Administrative Services.</p>
	<p>8. A collection agency is contacted if the letter of delinquency produces no response. (Note: steps 7 and 8 are City procedures followed for all unpaid bills and are not specific to storm drain system related clean ups).</p>
<p>9. Reporting</p>	<p>1. Upon arrival to the office fill out as much of the Cartegraph storm water incident form as possible even if the investigation is continuing. 2. Attach photographs by saving them in Project_Home on 'pw-fieldservice'/photos and attaching them to the incident. 3. Attach attachments (letters, drawings, etc.) by saving them in Project_Home on 'pw-fieldservice'/attachments and attaching them to the incident.</p>

STORM WATER INCIDENT REPORT

Appendix III.G

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City of Santa Rosa Storm Water Engineering Detail Report

General Information

Work Order Number 05471 Department Storm Water Maintenance
Address 2111 KAWANA SPRINGS RD Status In Progress
Priority High Activity Investigate Spill
Start Date Actual 9/7/2005 Total Cost Actual 339.86
Stop Date Actual Assigned To Ron Simi
Issue Spill Investigation
Details PAINT SPILL - COLGAN CREEK @ PETALUMA HILL RD
Notes Latex paint vacumed from creek east of Petaluma Hill rd at Colgan creek.
Paint from Apartments.

Spill Response

Business Name Holland Residential
Spill Category Contractors, Landscaping, Painters, etc. Material Paint/Stain- Base Unknown
Type of Discharge Discharge to Creek Weather Clear
Clean Up By Public Works

Summary:

11:00 - Steve, Sheri and Forest saw paint polluted water coming out of an 15" (?) outfall from the Oaks at Kawana Springs into Colgan Creek. 11:15 Ron Simi and vactor crew arrived and began vactoring end of outfall pipe and small pond in the creek. Creek dry upstream of outfall. Pond fed from over irrigation, not flowing. Paint in neatest upstream drop inlet only. I talked with Brandon Broll (Holland Residential) over the phone, his company hired All State Painting. He sent manager Nathan Thorp to see me. I told Nathan the City is cleaning the outfall and pond but he is responsible for cleaning onsite. I told him he will be billed for City time. I gave him a list of resources to call. Vactor crew, Ron and I left at 12:15.

Sent e-mail to Paul Keiran - RWQCB, notified him of discharge to Colgan Creek

9/19/2005 Talked to Nathan Thorp. JCC cleaned out onsite SD on 9/12

ARP Information

Name Nathan Thorp
Address 1227 Kawanas Terrace # 7112 SR 95404
Phone
Last Modified 9/8/2005 1:02:09 PM

Administration Response

Administrative Action	No	Educational Materials Provided	No
Cease and Desist	No	Notice of Violation	No
Civil Action	No	Verbal Warning	No
Cost Recovery	Yes	Written Warning	Yes

Caller Information

Name Sheri Emerson Request Callback No
Address PETALUMA HILL RD Entry Date 09/07/2005
Phone 7075434225

City of Santa Rosa Storm Water Engineering Detail Report

(Work Order Number is equal to "05471")

Storm Water Detail Report by Work Order Number

Tuesday, July 18, 2006

**RRWA LETTER TO *PRESS DEMOCRAT* REGARDING PET
WASTE**

Appendix III.H

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EDITORIALS

eyesore

Santa Rosa finally takes
AT&T building

Anyone who played a part — big or small — in encouraging AT&T to part with the most interesting thing downtown Santa Rosa has to be a battleship.

In the past decade, the 100,000-square-foot building on Third Street has been in dire need of repair — or, better yet, torn down. It has been hard to get the phone company to accept the city's phone calls. As a Santa Rosa resident, I have stood for "Absent, Through

and has managed to do something in a reasonable way. It is going to buy the building from the city's Redevelopment Agency. The 100-foot-high, windowless struc-

ture is under the control of this building. The city is moving forward in improving the downtown. Everyone involved should be applauded.

City officials should not rush the decision to do with this site.

The plan is to be building for selling the building to the developer who would replace it with a new building project. This may end up being a good thing.

The city already has three downtown, high-rise buildings. They have been in the planning stages. Construction has yet to start on the fourth.

The city should encourage broad public participation in the decision-making process.

The city should fully explore how this key building can help achieve broader city goals, such as the construction of a performing arts center.

Third Street is not the best location for a performing arts center. But could it be used as a leveraged property somewhere else?

It is worth exploring how this site can contribute to downtown revitalization and the renovation of Courthouse Square.

It has taken many years to acquire this site. It would be a shame if the city acquires a building only to replace it with another

LET THE PUBLIC SPEAK

Highway 116 delays

EDITOR: As the price of gasoline begins to soar once again, I sit idling in one of the many one-way stoplights on Highway 116 that those of us lucky, or unlucky, enough to live in the western portion of this road have had to endure for the past 10 months.

Granite Construction was eager enough to take CalTrans money and put up five one-way stoplights between Jenner and Rio Nido, but unwilling to get the work done and move on.

The two lights that I travel through daily have had little or no workers at the site for the past four months. One in particular looks as though it is finished, but since Granite Construction stores its equipment there, it is in no hurry to remove the stop light.

Don't get me wrong, I am happy to have CalTrans repairing the infrastructure; it is Granite Construction that I feel is cheating the taxpayers and residents of western Sonoma County. After all, it is our tax dollars paying its contract, and I have personally idled away many dollars waiting and waiting for the light to turn green at a site that is finished, yet still blocked. The one-way lights pollute the air and waste fossil fuels as well as our gas dollars and tax dollars.

Get on with the work, Granite. It only just now began to rain. Where were the workers during all those dry months?

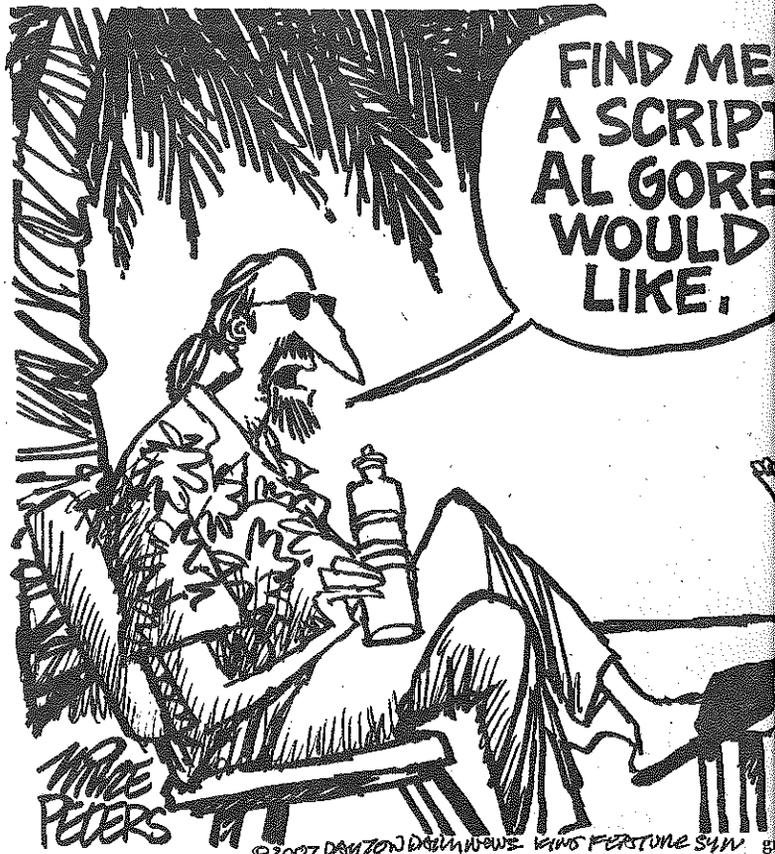
LYNDA WILLIAMS
Cazadero

Lights out

EDITOR: On Monday, in the six miles between Calistoga Road and Lawndale Road on Highway 12, we counted 19 cars without headlights on and three with only parking lights on. It was raining heavily at the time, and all cars had their windshield wipers going. How much would public treasuries realize if these law-breakers were cited?

More importantly, how many accidents would be prevented? Note: We didn't see a single law enforcement vehicle along the way, and traffic was heavy.

GLORIA KRAFT
Kenwood



plete with trash, food remains, vomit and students passed out in drunken disorder across the furniture? No?

What if they are really, really quiet? Still no?

But they are citizens, too! Aren't they also entitled to use the library just like any other citizen? Of course not — because they wouldn't be using the library for its intended purpose. They aren't there to find jobs or educate themselves or read some good self-help books. They are using the library as a camping ground.

Stiffening the rules of conduct isn't going to cut it. Clearly the intruders couldn't care less about how the library is and isn't supposed to be used. So get them out.

MARINA MICHAELS
Santa Rosa

Pet wastes

EDITOR: Pet waste in public areas is unsightly, unsanitary and unsafe. Even pet waste left out in private yards poses hazards to people, animals and the environment. You can prevent pet poop problems if you:

- Pick up pet waste from your yard. It is not a fertilizer.

- Place pet waste in carefully tied plastic bags and dispose of in the trash (but not in curbside yard waste recycling bins). Alter-

natively, you can bury pet waste in your yard, but do a little research on the Internet or at your local garden store before undertaking this option.

- Don't flush cat feces down the toilet; place it in the trash instead. A parasite (toxoplasmosis) that is sometimes present in cat feces may kill sea otters along California's coasts.

- Keep your pets on your property so that you can responsibly clean up their waste.

- Carry disposable bags while walking your dog to pick up and dispose of waste properly.

Pick up after your pet. It's the neighborly thing to do, and the right thing to do — for your pets, for other people and for the environment.

CHRISTY KENNEDY
Russian River Watershed
Association
Ukiah

Slang and hate

EDITOR: In regard to the Feb. 22 article, "Hate or slang?", slang is hate. This incident is an opportunity for our county to become aware of the subtle yet far reaching power of speech.

The Sonoma County Commission on Human Rights (CHR) is a group of volunteer citizens dedicated to advocating, educating

***PRESS DEMOCRAT* NEWSPAPER ARTICLES**

Appendix III.I

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Photos by JOHN BURGESS / The Press Democrat

Dale Tressler, a Santa Rosa public works quality control associate, collects water samples Thursday in Colgan Creek near Hearn Avenue that will be tested for bacteria.

SR's RUNOFF COPS

Season's first rains clean the streets, but where does it go?

By MARY CALLAHAN
THE PRESS DEMOCRAT

Think of the Russian River watershed as a huge kitchen sink littered with food scraps, bacon grease, a pile of coffee grounds and the remains of some moldy sour cream, except instead of foodstuffs you've got leaked oil, pet waste, pesticides and other potential pollutants ready to be washed down the drain.

That's the kind of image that sent representatives from a variety of local agencies scrambling Thursday to check potential hot spots in their effort to protect local waterways from hazardous runoff typical of initial autumn rains.

"It's panic time," said John Short, a senior engineer with the North Coast Regional Water Quality Control Board as moderate rains pelted the North



RUNOFF: Inspectors look for signs of trouble

CONTINUED FROM PAGE B1

"first flush" of the season, Thursday's showers raised similar concerns about accumulations of contaminants washing down storm drains and into creeks and rivers.

After the October rain, lab tests turned up high levels of fecal bacteria from an undetermined source in south Santa Rosa's Colgan Creek, prompting inspectors to take more samples at various locations in case there's another spike.

Top polluter: Sediment

Officials also targeted construction sites and other work areas to ensure proper erosion-control measures were in place, preventing soils from being washed into creekbeds.

That's because sediments are the largest pollution threat, officials said.

On Thursday, testing of runoff from residential development on San Miguel Road in northwest Santa Rosa turned up samples so thick with sediment the turbidity was twice that of the Russian River during a flood, said Don McEnhill, who directs the nonprofit Russian Riverkeeper monitoring project.

McEnhill said the muddy stream was pouring uncontrolled into a storm drain that leads to Piner Creek.

"I've got a sample sitting here on my desk," said Short, of the North Coast Water Quality Control Board. "It's pretty bad."

The fine sediments that run off areas where the soil has been graded or disturbed increase flood risks. They also endanger fish by burying food sources and, sometimes, fish eggs, preventing them from

hatching, said Janice Gilligan, a Sonoma County storm water inspector.

"That's the primary pollution of concern in Sonoma County," said Greg Desmond, the county's storm drain coordinator.

Short said his staffers also worried about a private bridge project in the Mark West Creek watershed in which workers were pouring concrete pylons in the bottom of a creekbed in the rain, at the risk of heavy metals and other contaminants reaching the water.

Potential contaminants

Among the sources of potential contamination are motor oil and other automotive fluids that leak or drip onto roadways, then wash into storm drains; soaps and detergents — even biodegradable ones — that homeowners use to wash their cars (commercial car washes contain their runoff); pet and livestock waste left or sometimes dumped near waterways and storm drains; fertilizers applied shortly before rainfall; and pesticides, especially ant killers, said Colleen Ferguson, an engineer for the city of Santa Rosa.

City and regional officials say they try to educate the public about the threats posed by dumping materials into storm drains, but the message doesn't always get through, creating problems that may surprise some residents.

Though leaves and other yard waste are biodegradable, for instance, they are not suitable for disposal in gutters and storm drains because they consume so much dissolved oxygen in decomposi-

tion, threatening fish and other species, authorities said.

Yet many homeowners and landscaping personnel routinely blow or wash their leaves into storm drains.

Mystery toxins

Creek monitoring programs also turn up evidence of contamination that officials can't manage to trace.

During "first-flush" testing conducted last month on seven Santa Rosa creeks, something in Matanzas Creek killed 60 percent of the rainbow trout that were introduced in a water sample for a 96-hour survival test, city officials said. City personnel were unable to determine what it was or where it came from.

Intermittent problems with contamination in Colgan Creek from the Santa Rosa Marketplace downstream toward Hearn Avenue have been so persistent for the past six years that a separate management plan is in place, accounting in part for the city's sampling of water there Thursday.

Extensive pollution was evident in the creek even without special testing, however, as rising flows washed bottles, cups, plastic sheeting and a variety of other foreign objects downstream.

"I think most people know about storm drains and not dumping garbage into them," said Steve Brady, an environmental specialist taking part in the sampling for the city, "but they haven't really seen it come full circle, in the creek."

You can reach Staff Writer Mary Callahan at 521-5249 or mcallahan@pressdemocrat.com.

VACCINE: Waiver allows shots

CONTINUED FROM PAGE B1

tion of thimerosal-free products" to meet California's "critical need."

The American Academy of Pediatrics, California Medical Association, California Academy of Family Physicians and Kaiser Permanente recommended the exemption, state officials said, arguing that children forgoing immunizations in October and November may not come back for shots later in the season.

Each year, approximately 36,000 people in the

Sacramento founder of champion cines. He b old son's a

But he st istration's ble childre the flu.

"It's righ Rollens sai nose an unl

SEABISCUIT IN BRONZE

Tribute to Depression-era racehorse as life-size statue unveiled at Willits ranch he called home / **B3**



A RALLY FOR THE TROOPS

Family and sacrifice are the central themes in a show of support at Old Courthouse Square / **B3**

Sonoma Sunday

NEWS • IDEAS • VOICES • ISSUES



Carol Vellutini leads a Sierra Club hike along the Santa Rosa Creek Trail, east of the Farmers Lane and Fourth Street intersection in Santa Rosa.

By MARTIN ESPINOZA
THE PRESS DEMOCRAT

Santa Rosa's Unseen Creek

Many-faceted stream winds its way
past city streets for 22 miles

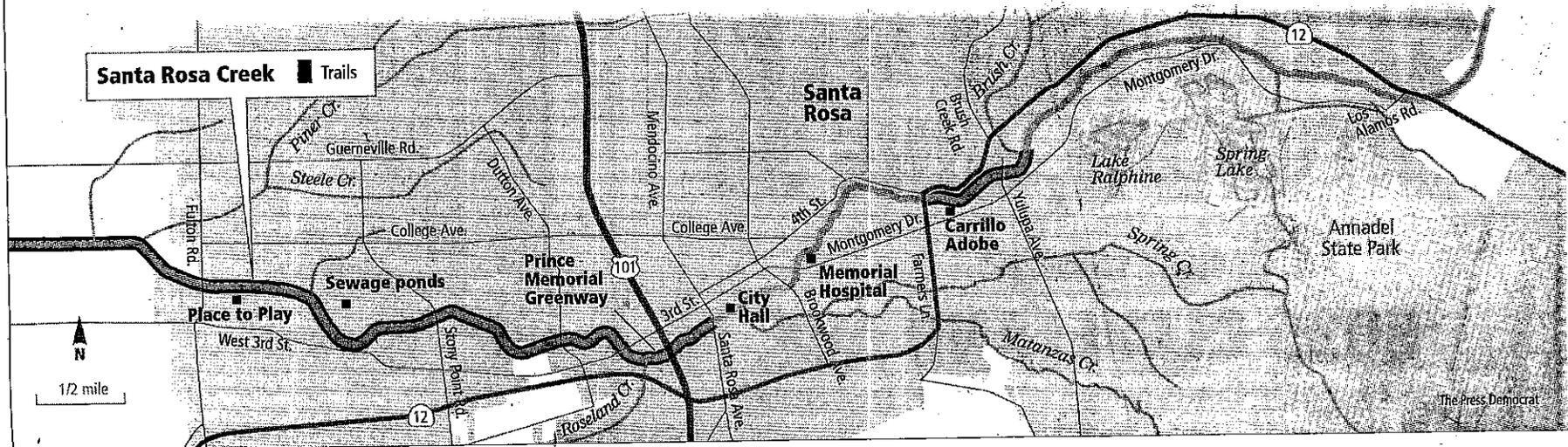
As cars and trucks noisily travel Sonoma Highway, just east of Farmers Lane, frogs, ducks and dragonflies secretly search for food in nearby Santa Rosa Creek.

All you can see from a car are the tops of willow trees, white alders and big-leaf maples beside Highway 12. But just below the thick green canopy is a cycle of life and nature local creek enthusiasts have worked hard to recapture.

Old trees lean far out over the creek as a duck paddles upstream. Steelhead trout, which will have spent two years in these fresh waters before they head out to sea, swim in the shallow waters.

The trail, which was started about eight years ago, offers an escape from the angst-filled roadways high above the creek. Were it not for the inescapable sound of traffic along Highway 12, the trail could easily be mistaken for some stream pathway in a remote corner of the country.

TURN TO CREEK, PAGE B5



CREEK: Public access to stream limited on east side of town

CONTINUED FROM PAGE B1

This section of Santa Rosa Creek, from its juncture with Brush Creek to the Farmers Lane intersection, provides the only public access to the creek on the east side of the city.

Then, right at Santa Rosa Avenue, the creek re-emerges from a concrete channel beneath City Hall and new pathways beckon.

Santa Rosa Creek is a stream with many personalities, schizophrenic at times, reflecting more than half a century of changing priorities and attitudes about the 22 miles of waterway that meander through the city.

Where it begins

The headwaters of the creek can be found on the northern slopes of Hood Mountain, east of Santa Rosa. From there the creek makes its way past canyons, cliffs and redwoods, naturally sheltered by native Big Leaf Maple, California Buckeye and white alders.

The creek rushes over rocks in shallow flows or tiny falls, churning the water in a froth of oxygen that is crucial to insects the fish that eat them. The water is cool, clear and clean, the perfect environment for spawned fish eggs left just below the gravel bed.

The creek reaches the valley floor near the intersection of Highway 12 and Los Alamos Road then runs along Montgomery Road until it is joined by Brush Creek at an area called "Flat Rock," where the waters of Brush Creek come through a shelf of large flat

slabs of rock.

This is where the creekside becomes walkable on a pathway that reaches Farmers Lane.

Although the creek upstream of City Hall can be seen from bridges and various vistas, such as one at Santa Rosa Memorial Hospital, public access to the creek is extremely limited from Farmers Lane to Brookwood Avenue. Residents on either side of the creek along this stretch of the waterway own the creek up to its centerline, though some are unaware of this.

From a shaded vista just west of Santa Rosa Avenue, you can see heavy construction equipment on the other side of Santa Rosa Creek. Bulldozers and backhoes scrape and tear at a trapezoidal-shaped piece of earth where the gateway to Prince Memorial Greenway is being built. It will be a park-like entrance to a Santa Rosa Creek restoration project that's already cost \$25 million in just six years.

"There's nothing like it"

"The creek is an amenity," said Steve Rabinowitsh, a former Santa Rosa City Council member who started his civic career as a member of the Committee for Restoring Santa Rosa Creek.

"There's nothing like it," he said while standing across the creek from the construction. "It's a unique natural part of our city."

Artwork commissioned by Artstart, a nonprofit founded by Rabinowitsh and two Santa

Rosa High parents, can be found all along the greenway, from massive spinning globes behind the Hyatt Vineyard Creek hotel to mosaic walls to colorful murals beneath highway and road overpasses.

The flow of the creek is being temporarily diverted beneath the Highway 101 overpass as construction workers tear down wall-like supports to create better views across the creek for trail users.

Freshly landscaped

Just west of Santa Rosa Avenue, the creek still has a freshly landscaped appearance. But between the 101 overpass and Railroad Street, it assumes a more natural aspect, with a thick canopy of trees and bushes shading the stream. Reeds and overgrown tree branches lazily dip back into the creek and fish scatter as you approach the carefully designed sandy banks.

In just a few years, this stretch of the creek — phase one of the greenway project — has matured and grown beyond its Disneyesque origins.

Between Railroad Street and Pierson, the creek becomes barren, with few trees or brush. The water flows over rocks embedded in concrete. Rabinowitsh said it would take another \$10 million to restore this section of the creek.

Just below the Pierson Street bridge near Railroad Square, three egrets stand in the creek, their long curvy necks extending into the cool waters in search of fish or frogs. One spreads its wide wings in a flash of white re-

flected in the morning sun.

Here is where the urban part of Santa Rosa creek, channelized for flood control decades ago, again takes on a more natural and wild aspect. From here westward, gravel rather than concrete was used to control flood waters. As a result, trees and brush have grown more freely.

A thick canopy over the creek shades pools of small fish. Small birds rustle in the dry ground-cover on the banks or fly from branch to branch, chirping, whistling and cawing.

Twin trails

Beyond the Greenway, west of Pierson Street, two trails run alongside the creek, a gravel trail on the south side and a paved one on the north side, ideal for joggers and bicyclists.

Past Fulton Road, a set of rust-colored pedestrian bridges near the confluence of Piner Creek and Santa Rosa Creek are among the newest additions to the trail. Here, the creek extends beyond Santa Rosa's city limits. The sound of traffic is greatly reduced and the waterway is lined by vineyards.

Terry Smith, a resident from nearby Sequoia Mobile Home Park, was walking her French bulldog, Mr. Peabody, on the gravel trail on the north side of the creek on Friday.

"It's such a beautiful area out here," she said.

You can reach Staff Writer Martin Espinoza at 521-5213 or martin.espinoza@pressdemocrat.com.

GOPHERS: Trapper encourages avoidance of toxic chemicals

CONTINUED FROM PAGE D1

found a way to get inside their tiny brains.

Instead of the endless digging involved with setting common gopher traps — which seem to work only if you are lucky enough to find the varmint's main tunnel — he uses a simple \$15 cinch trap that is angled in just below the soil surface.

The trick to its placement is to scout the garden in the early morning to find a fresh little mound of moist soil. This indicates the gopher has recently been maintaining its burrow in some way — say, closing things back up after a nighttime grazing session in the garden. Most mounds will have finely sifted soil arrayed in a sort of fan shape and the “plug” will be distinct, Wittman says.

Once he's zeroed in on a likely mound, Wittman deftly uses the Hori Hori knife to probe around, excavate and determine which direction the burrow is headed. He uses a light stabbing motion.

“See how the knife just falls right into the tunnel?” Wittman says as he gives a demonstration. And darned if it doesn't. “That's how we know we're in a good spot.”

After identifying a burrow close to the surface, Wittman sets the trap right into it, pretty much vertically, then slants it back slightly. A small flag is placed nearby as a reminder that the trap is there. The key is leaving the hole open.

“This lures the gopher to the surface. He sees daylight in his

tunnel, and he wants to plug it up, just like you want to close your front door,” he says.

The hair trigger on the cinch trap is activated when the gopher tries to shut the door, and the powerful steel spring closes the jaws around the animal's midsection. Death is swift.

Wittman says it's important that the traps be easy to use and quick to deploy in the garden. “With some of the other traps, it's traditionally been a laborious process, and if it's hard to use or takes a lot of time, people tend to want to try other things,” Wittman says.

Things such as toxic chemicals. He opposes their use in principle as an organic farmer and because they can pose a hazard to children, pets and wildlife. “My mission is to help people manage their pest problem without the use of chemical poisons,” says Wittman, who studied ecology at UC Santa Cruz.

Wittman says he's never seen a pet injured by a cinch trap, although it's possible for a pet to have a paw snapped by the trap's spring. “The jaws are set too deep to be a problem, and they are not sharp,” he says. “Sometimes, if people are worried, I put a milk crate over the trap. This can also protect small children.”

Gophers Limited, the Ben Lomond-based business he started in 1999, originally focused on gopher and mole control but recently has expanded into “resolving any human and animal conflict that results in

THINKING GOPHER

Some facts from Wittman about gophers:

■ Gophers are opportunistic, often adopting tunnels created by other animals — moles or other gophers — to call their own.

■ Gophers are solitary and territorial. What might look like a huge infestation in your garden is probably the work of just one or a few industrious gophers.

■ Gophers can build a tunnel the length of a football field in a single day. Tunnels can be 800 feet long.

■ Female gophers can have as many as four litters of eight to 10 pups each year. The mother nurses the brood for about two weeks and then opens the tunnels to the surface and sends them on their way to find their own territories. Thomas Wittman says, “If you catch a pregnant gopher, it's like catching 10 at once.”

■ Gophers don't drink water. They get all their moisture from the fleshy roots of plants, which explains why tomato vines and

succulent plants are among their favorites. Grapevine roots, Wittman says, also are a gopher delicacy.

■ Gophers dig with their front feet and use those protruding incisors like a pickax to get through tough spots. A gopher's teeth continue to grow its entire life; if it didn't use them to dig, they'd be 6 inches long.

The cinch traps Wittman uses can be purchased online or through his business, Gophers Limited; \$15 each. He recommends that local gardeners use the cinch trap devised to catch the smaller mole, because California pocket gophers are smaller than gophers in other parts of the country. Online, search for “cinch mole trap.” Wittman also sells galvanized gopher wire, gopher baskets and the Hori Hori knife (\$28).

Set traps first thing in the morning and check them late in the afternoon or the next morning (Wittman's “manana rule”).

damage in ways that do not degrade the environment and water resources,” according to Wittman's Web site.

Wittman offers presentations on nontoxic pest control and field training. He urges gardeners to try other things, including “discouraging” and “disgusting.”

“Discouraging” can be done by burying wire mesh up to two feet underground, or by using the same kind of deep root barriers that keep some varieties of bamboo from spreading.

“Disgusting” is just what it sounds like — putting some-

thing in the gophers' tunnels they don't like, such as fish heads. “Gophers are strict vegetarians, and they won't tolerate meat and fish products in their burrows,” Wittman says.

Gophers Limited is Wittman's business. Visit www.gopherslimited.com or call (831) 336-2852.



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GARDENING



RICK E. MARTIN / San Jose Mercury News
Thomas Wittman is an expert in identifying active gopher tunnels and then trapping the rodents with a cinch trap.

Trapping expert proves a pest to pesky gophers

By HOLLY HAYES

SAN JOSE MERCURY NEWS

If Hollywood were ever to cast a movie called “The Gopher Whisperer,” Thomas Wittman would be its superhero leading man. Tall, tanned and with a very sharp, very gleaming Hori Hori knife strapped to the belt of his shorts, Wittman goes about his business swiftly and with good humor.

No, Wittman doesn't actually talk to gophers, nor does he have X-ray vision for finding their tunnels — although it seems as if he must. But in 25 years of trapping the gardener's most pesky pest, he certainly has

TURN TO GOPHERS, PAGE D3

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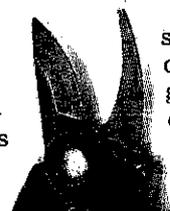


Instead of sending those leaves and clippings to the dump, go green and put them to work in your garden

RECYCLING AUTUMN

By MEG McCONAHEY
Photo illustration by DENNIS BOLT
THE PRESS DEMOCRAT

The typical autumn scene finds homeowners wielding rake and clippers as they madly tidy up the mess that Mother Nature left behind after all that summer fun



In fact, advocates for doing things nature's way say, "Stop sweeping." In most cases, the stuff we call yard waste is not waste at all, but valuable organic material that, if left in place or redistributed, will protect and nourish the soil.

"Any matter that falls into my garden is composted right where it is," says Bob Cannard, who organically farms 100 acres of crops in Sonoma

RECYCLING AUTUMN

By MEG McCONAHEY
Photo illustration by DENNIS BOLT
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The typical autumn scene finds homeowners wielding rake and clippers as they madly tidy up the mess that Mother Nature left behind after all that summer fun.

While spring may be time for housecleaning, fall is time for heavy lifting outdoors as you undertake a janitorial sweep of the yard. The blissful, leafy shade of summer turns into a squall of dry leaves, spent plants and garden clippings.

Conventional garden wisdom says fallen leaves are not only messy but menacing, providing a breeding ground for pests and disease. But the steady mainstreaming of organic gardening is introducing a new, more casual standard for landscape neatness.



Fall
to-do
tips for
garden
health.
Page D5

In fact, advocates for doing things nature's way say, "Stop sweeping." In most cases, the stuff we call yard waste is not waste at all, but valuable organic material that, if left in place or redistributed, will protect and nourish the soil.

"Any matter that falls into my garden is composted right where it is," says Bob Cannard, who organically farms 100 acres of crops in Sonoma County that make their way into some of the finest restaurants in the Bay Area, from Chez Panisse in Berkeley to Quince in San Francisco's Pacific Heights.

They say one man's trash is another man's treasure. Such is the case with garden educator and designer Maile Arnold, who is such a militant advocate of reusing what others might see as garbage that she declares, "If anyone has leaves they don't want, I'll take them."

TURN TO **RECYCLING**, PAGE D5

Fall clean-up has satisfying rewards

Once again, after a bountiful year in the garden, we're approaching yet another round of fall clean-up. If you're a person who looks at the glass as half full rather than half empty, this is a productive time, as much winding up for next year as winding down in this, a time for gathering together valuable raw materials — ordinary garden debris — to turn into compost that you can use in next year's garden.

If composting itself seems like just another onerous chore, try reducing its steps into the simplest ones you can handle. Send bulky trimmings to the landfill to let the professionals put them in with massive amounts of other people's yard debris,

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but keep smaller stems, vegetable garden residue and leaves in your own backyard where you can add kitchen scraps to them to keep the pile moist and workable.

When you lift out finished compost next spring, you'll look back on the cleanup as a fruitful time.

Although the ideal compost pile is about 3 cubic feet, not everyone is able to handle that size. Even a small pile only 20 inches high is worth building. It will heat up enough to decompose in a few months if

you start with roughly the same amount of brown and green materials and keep it supplied with

TURN TO **FALL**, PAGE D2

THANKSGIVING LUTHERAN CHURCH - ELCA, R.I.C. 1225 Fulton St. College 544-0241, Sunday worship with Communion, 9:30 a.m. Coffee House for High School youth, last

Luthevan (cont.)

FRIDAY, OCTOBER 21, 2006

RECYCLE: Not all debris must be tossed away

CONTINUED FROM PAGE D1

Failing to reuse what comes from your land is like "strip-mining" your garden, she maintains.

"I learned this from my grandmother. She was taking all of her leaves and all of her trimmings and putting them in beds around the plants. She didn't have a landfill or any place to take it. She just put it back, and her garden was amazing."

If you have a lawn, you'll need to do some raking. Leaves left on lawn will deprive it of light and interfere with photosynthesis. You also will want to sweep the leaves from paths, porches and decks to prevent slips. But resist the impulse to push them all into black plastic bags and then dump them in the yard-waste container. If they're going into your recycling container, they will be composted at the county landfill. But there's really no need to send them off when

FALL TO-DO TIPS

Tool care: Clean and oil your tools before storing them for the winter in a dry place.

Save seeds: Tomato and bean seeds are not just an annoyance to be spit out. Neither plant cross-pollinates. Garden educator Lena Hahn-Schuman recommends saving them for next season. This is also true of tithonia, sunflowers, hyacinth and other flowering annuals.

Cut perennials: Once the weather starts cooling more in November, clip down your perennials. Organic vegetable grower Bob Cannard says that cutting them way down will give them a longer life. Proper and repetitive pruning back will keep them from fully maturing and thus, prematurely aging, he adds. He also recommends digging out competing weeds growing among your perennials. If it makes you feel nervous, cut back only to a point where you see a few leafy buds sprouting out. Garden educator Maile Arnold advises to cut back any fading blooms from perennials and annuals and then simply "tuck them under the plant's skirts or cover with mulch. The nutrients in the plant will go back where they came from."

Remove fallen fruit: While many garden clippings and leaves can be safely reintroduced into the garden, rotting fruit should always be removed. Arnold warns that fruit can be a "repository for next year's codling moth."

Old crops: Arnold recommends pulling up summer vegetables and covering the bare soil with fresh compost.

Harvest: Take your winter squash and put it in a cool, dry place until you're ready to cook it. Most winter squash improves in flavor after a month or so in storage, Arnold says. With your tomatoes, either dry them or boil off excess moisture and store them in the freezer. If you have potatoes, let them dry on top of the soil for a day and store them in a dark and cool — but not freezing — place. Remove any lingering apples, pears and kiwis when they come off the branch with a gentle tug and keep them in a cool place. Then bring them into the warm house to finish off the ripening process. Go ahead and leave beets, turnips and parsnips in the ground and harvest as needed, Arnold says.

Cover crop: Doug Gosling of the Occidental Arts and Ecology Center believes putting in a cover crop is part and parcel of grooming your garden every fall. Fava and bell beans, Australian field peas, purple vetch or grasses like oats and rye, will revive your soil with organic matter and nitrogen.

Feeding: Make sure your garden is fed the minerals it needs. Cannard recommends crushed oyster shells to supply calcium. Not only will it enrich your soil, but it will ward off snails, which like calcium-deficient plants, says Cannard, who recommends sprinkling it virtually everywhere. He also suggests similarly spreading crushed volcanic rock, which contains all the other minerals and elements your soil needs, such as phosphorus, iron, potassium and zinc. In both cases, 50-pound bags should be sufficient for a quarter-acre lot.

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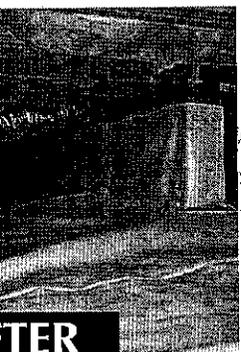
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to warm the room, and fire screens were often more decorative than useful. They were used in front of smaller fires or empty fireplaces.

Some of the late 1800s screens were made of leaded and stained glass. Brass or iron was used to hold the glass. The screens must have been impressive when the fire was lit and the flames shined through the stained glass. By the 1900s, fire screens were made primarily to keep hot ashes from singeing the carpet.

What can you tell me about my Trudy baby doll? She is 14 inches long and has three faces: Crying, smiling and sleeping. Two are hidden in her bonnet when the third is facing front. The doll's swivel head is composition, and her body is cloth.

Multiface dolls were first commercially made in Europe in the mid-19th century. Early ones had two or three faces, some with swivel heads like yours. Others had detachable

er, caned privacy panel, brass ferrules on feet, file drawer, 1960s, \$450.

■ Pepsi-Cola thermometer, tin lithograph, image of bottle, 1930s, 15½ x 6½ inches, \$700.

■ Hot Wheels Mustang Boss Hoss car, open hood displays engine, white interior, No. 4 sticker on side, metallic green, on display card, Mattel, 1969, \$705.

Write to *Kovels at King Features Syndicate, 300 W. 57th St., New York, NY 10019.*

FALL: Reduce number of steps in composting

CONTINUED FROM PAGE D1

enough moisture — not soaking wet, just damp to the touch.

Composting, though, is only one of the ways to approach autumn chores. There's much more to do. Master gardener Pauline Haro will talk about "Fall in the Garden" this morning at 10:30 at the Petaluma library and again next Saturday, Oct. 28th at 10 a.m. at the Harvest for the Hungry garden in Santa Rosa at 1717 Yulupa behind United Methodist Church. She'll address such issues as evaluating the garden for changes and repairs; trimming perennials; cleaning up under fruit trees; planning for frost protection; spraying fruit trees; planting for winter color and veggies; and other late-season concerns.

Coming up roses

The change of seasons brings more to the garden than flagging foliage, of course, as some of the loveliest sights appear this time of year. One of them is rose hips, those highly colored, round or bottle-shaped pods filled with seeds that your rose has been concentrating on all summer while we've been focusing on flowers. When there is a profusion of shiny

hips in the garden, the roses once again are an eye-catching focus as soon as dead and distracting foliage is cleared away from garden beds.

Hips on many rose species and cultivars last long into the winter months and contribute lively color to the garden along with tinted foliage. The Russian River Rose Company is presenting a program Sunday, Oct. 29 on how to use rose hips to advantage in your own garden, in seasonal crafts, and in teas and jams — hips are a source of vitamin C.

Their nursery at 1685 Magnolia Drive in Healdsburg's Dry Creek Valley has a display garden with over 600 varieties of roses, many still flowering, others with dazzling displays of glowing hips and foliage. They'll have their estate-produced rosewater and perfume for sale as well as hundreds of potted roses. Presentations are free, rain or shine, at 11 a.m. and 2 p.m.

Not so rosy

It's a member of the rose family, but the Himalayan blackberry growing in creeks and along roadsides is a nasty weed. Its delicious fruit carries seeds spread so easily that it pops up too often as an unwelcome bramble patch. Birds and other wildlife eat the berries and deposit seeds with their droppings, encouraging it to sprout wherever the seeds land.

As you work through your garden trimming out spent foliage this fall, keep an eye out for young wild blackberry canes. The late rains we had

last May and June were ideal for all sorts of weeds as well as for our desirable natives. Year-old canes can usually be pulled out, but anything older and broken off roots on young shoots must be dug out to be eradicated.

If turkeys visit your garden, be doubly aware. Twice in the past month, I've seen turkeys perched atop blackberry thickets feasting away. Those seeds are going to end up somewhere where they aren't wanted.

Unfortunate legacy

Everyone makes mistakes, and Luther Burbank made a big one when he listed the "Himalaya Giant" blackberry in his seed catalog in the late 1800s. Sweet and prolific berries made it seem like a good idea at the time.

As it turns out, our wild blackberry is not from the Himalaya at all, as was thought when Burbank came across it, but is native to Armenia; hence, the botanical name change from *Rubus discolor* to *Rubus armeniacus*.

The vicious prickles are bad enough, but fast growth—up to 10 feet a year — deep roots, and wanton propagation put it in the menace category when it grows in the wrong place, notwithstanding those delicious pies.

Rosemary McCreary, a Sonoma County gardener, gardening teacher and author, writes the weekly Homegrown column for The Press Democrat. Write to her at P.O. Box 910, Santa Rosa, 95402; or send fax to 521-5343.

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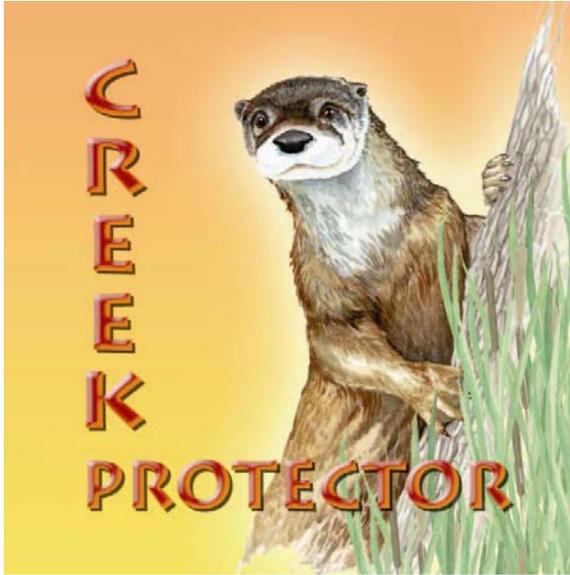
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NEW CREEK PROTECTOR STICKERS

Appendix III.J

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Appendix III.K

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APPENDIX



PRICKETTS NURSERY SET UP ADDITIONAL DISPLAYS BEYOND IDENTIFYING LESS TOXIC PRODUCTS WITH A TAG. THESE DISPLAYS IDENTIFIED PRODUCTS THAT ARE FRIENDLY TO USE AROUND PETS AND ONE ON PLANTS THAT ATTRACTED BENEFICIAL INSECTS.

Prickett's Pet Friendly Products 2007

Product Name

Active Ingredients

Ant Control

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Concern Citrus Home Pest
Grant's Ant Stakes
Monterey Garden Insect Spray
Tanglefoot Pest Barrier
Terro Liquid Ant Bait Station Liquid
Terro III Liquid Ant Killer
Terro Outdoor Liquid Baits

Diatomaceous earth
De-limonene
Arsenic
Spinosad (mixture of spinosynA&D)
Castor oil, veg wax, gum resin
Boric acid
Boric Acid
Boric acid

Aphid Control

Bonide All Season's Spray Oil
EB Stone Insecticidal Soap
Garden Sulphur 1#
Greenlight Rose Defense
Greenlight Tomato and Vegetable Insect Spray
Lilly Miller Superior type Spray Oil
Slow Release and Organic Fertilizers: See
Fertilizers

Petroleum super paraffinic oil
Potassium salts of fatty acids
Sulphur
Neem oil
Neem Oil
Petroleum oil

Cockroach Control

Concern Diatomaceous Earth

Diatomaceous earth

Fertilizers Organic, Slow Release

E.B.Stone Organics
Growmore Seaweed Extract
Osmocote ACR Plant Food
Osmocote Outdoor Indoor
Osmocote Veg and Bedding

Organic fertilizer line
Liquid kelp
Slow release
Slow release
Slow release

Flea Control

Concern Diatomaceous Earth

Diatomaceous earth

Fungicides

Bonide Sulphur Dust
Greenlight Rose Defense
Monterey Liquicop
Polysul Summer and Dormant Spray
Safer Garden Fungicide

Sulphur
Neem oil
Copper ammonium complex
Calcium Polysulfide
Sulphur

Lawns

Bagged Compost for Top Dressing
Bayer Season Long Grub Control

Various types
Imidacloprid

Rose Diseases and Pests

Bonide All Season's Spray Oil
Bonide Sulphur Dust
EB Stone Insect Soap
Greenlight Rose Defense
Lilly Miller Dormant Spray for Insects
Master Nursery Nature's Pestfighter
Master Nursery Pestfighter Year Round Oil
Safer Garden Fungicide
Slow Release and Organic Fertilizers: See Fertilizers

Petroleum super paraffinic oil
Sulphur
Potassium salts of fatty acids
Neem oil
Petroleum oil
Pyrethrins
Petroleum oil
Sulphur

Slug and Snail Control

Safer Slug and Snail Barrier Tape
Sluggo Slug and Snail Killer

Copper barrier tape
Iron phosphate

Weed Control

EB Stone Weed and Grass Killer
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Various types
Potassium salts of fatty acids

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Weed Fabric

Landscape fabric

Algae and Moss Control

Safer Moss and Algae

Yellow Jacket Control

Rescue Yellow Jacket Traps

Rescue Yellow Jacket Attractant

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Coddling Moth Traps

Macabee Gopher Trap

Moisture Meter

Monterey Garden Insect Spray

Mosquito Dunks

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Shake Away Deer

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Pheromones

Reflective tape

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Instrument

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Protein bait

Bacillus thuringiensis kurstaki

Garlic oil

Natural polymer

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Common Name

Abelia
Aster
Bidens
Calendula
California lilac
California poppy
Cape Mallow
Cape Weed
Catmint
Chrysanthemum
Cistus
Citrus , orange, lemon
Coneflower
Coriander
Cosmos
Cotoneaster
Crab Apple
Dill
Dusty Miller
Echium, Pride of Madera
Escallonia
Evening primrose
Firethorn
Fleabane
Gaillardia
Gaura
Geranium
Geranium

Botanical Name

Abelia grandiflora
Aster
Bidens ferulifolia
Calendula
Ceanothus
Escholzia californica
Anisodonteia 'Tara's Pink'
Arctotheca calendula
Nepeta spp.
Chrysanthemum
Rockrose
Citrus species
Echinacea
Coriander sativum
Cosmos
Cotoneaster
Malus floribunda
Anthemum graveolens
Centaurea cineraria
Echium candicans
Escallonia
Onothera sp.
Pyracantha sp.
Erigeron
Gaillardia
Gaura
Geranium incanum
Geranium species

Germander
Japanese Mock Orange
Korean Hummingbird Mint
Lavendar
Licorice Plant
Lilly of the Nile
Manzanita
Marguirite Daisy
Marigold
Monkey flower
Myrtle
New Zealand Tee Tree
Oregano
Oriental poppy
Penstemon
Pincushion flower
Rosemary
Rudbeckia
Russian Sage
Sage
Scented geranuim
Shasta Daisy
Shrub Mallow
Sunflower
Sweet alyssum
Tickseed
Veronica
Yarrow
Zinnia

Teucrium
Pittosporum tobira
Agastache rugosa
Lavendula spp.
Helichrysum petiolare
Agapanthus
Arctostaphylos sp.
Chrysanthemum frutescens
Tagetes
Mimulus
Myrtus communis
Leptosprum scoparium
Origanum spp.
Papaver orientale
Penstemon
Scabiosa
Rosmarinus officinalis
Rudbeckia
Perovskia atriplicifolia
Salvia species
Pelargonium
Chrysanthemum maximum
Lavatera maritima'Bicolor'
Helianthus
Lobularia maritima
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Hebe
Achillea tomentosa
Zinnia

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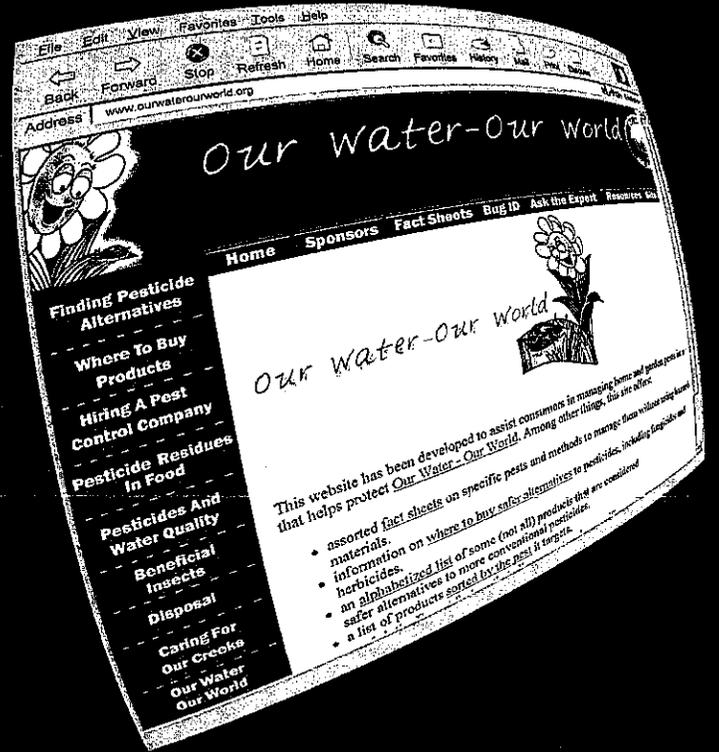
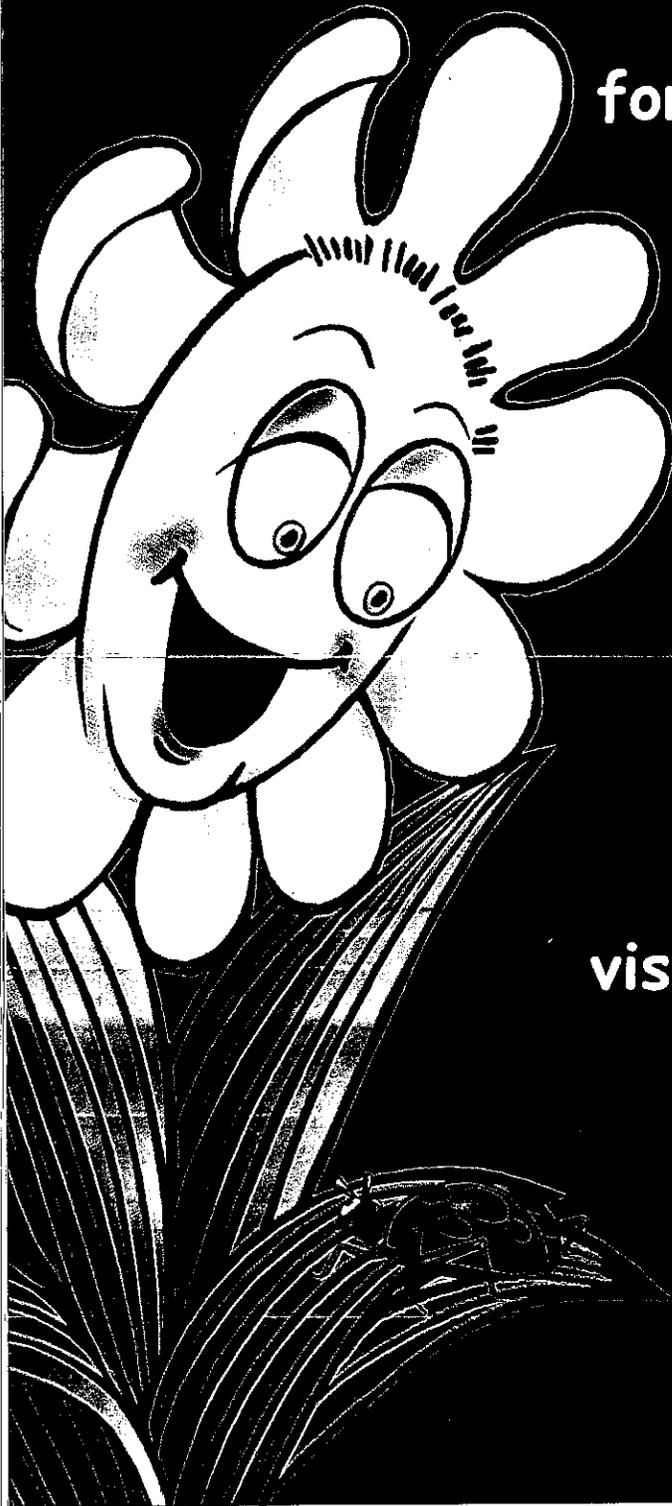
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**HIGH SCHOOL PROGRAM – AQUATIC MACROINVERTEBRATE
BIOASSESSMENT REPORT**

Appendix III.L

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City of Santa Rosa, Public Works Department
Santa Rosa High Schools' Aquatic Macroinvertebrate
Bioassessment Program
2006 - 2007 Final Report



Prepared by:
Stephanie Lennox, Enviroichment





City of Santa Rosa, Public Works Department
Santa Rosa High Schools' Aquatic Macoinvertebrate
Bioassessment Program
2006 - 2007 Final Report

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Appendices

- A. California Bioassessment Worksheet *Updated version*
- B. Lab Benchsheet *Updated version*
- C. Water Quality Field Worksheet *Updated version*
- D. Field Groups and Task Assignments *Updated version*
- E. Salmonid Restoration Federation 25th Annual Conference-
Bioassessment Program Abstract
- F. Pre/Post Survey
- G. Certificate of Completion
- H. Letters of Recommendation
- I. Student Authored Article
- J. Taxa and Habitat Assessment Results

Project Background

The City of Santa Rosa's Aquatic Macroinvertebrate Bioassessment Program originated in 1998 as an outreach effort for compliance with requirements of the National Pollution Discharge Elimination System Permit (NPDES) for storm water discharges. Since the program's creation, a total of 1,768 students from Elsie Allen, Maria Carrillo, Montgomery, Piner, Ridgeway, and Santa Rosa High Schools have participated. This experiential education program is provided to high school science classes with academic levels ranging from elective zoology courses to Advanced Placement classes.

Each high school monitors a Santa Rosa area creek near their campus, with a total of six creeks being assessed. Participants use a modified version of the Citizen Monitoring Level California Stream Bioassessment Protocol (CSBP) to guide their sampling. Students learn key ecological concepts, macroinvertebrate identification techniques and receive training in the sampling protocols and related equipment. Students then conduct a field assessment where participants collect and identify an aquatic macroinvertebrate sample, test water quality and conduct a habitat assessment. After the field assessment is done, students identify their collection of macroinvertebrates in the field or during a lab session. Participants then compile their data and compare their creek's health with past results.

Two versions of this program are now offered, a short course and a long course. The participating teachers choose which version of the program they would like their students to participate in. Due to varying academic levels, daily schedules and the participating teachers' time availability it has been essential to the program and the participants' success to offer these two versions. The short course requires less time to complete (8 hours in total), the participants conduct their macroinvertebrate identification to the order level while in the field, and do not conduct the CSBP Physical/Habitat Quality assessment. The long course requires a minimum of 12 hours to complete, includes a lab identification of the macroinvertebrates to the family level and completion of a CSBP Physical/Habitat Quality assessment.

During the program's eight years, the City's project team has observed that successful stream bioassessments do not automatically result in participants understanding their life-long role in preventing storm water pollution. This evolving program is trying to engage students in a local creek assessment while also informing and inspiring them to act in support of healthy Santa Rosa streams. Program and curriculum adjustments aim to increase student motivation and efforts for positively impacting local waterways.

The 2006 – 2007 year included several changes to the program format and the curriculum and activities being delivered. In addition, this program year had no participating teacher/class from Ridgeway High School. As a result, the program was able to facilitate more classes at the remaining 5 participating high schools. See the report's Program and Curriculum Changes section for additional details.

Stephanie Lennox, proprietor of Envirichment, was the program coordinator and facilitator for this year's program. Along with the City of Santa Rosa Storm Water team's assistance, Envirichment provided classroom education sessions, field and lab instruction, results analysis and assistance with culminating activities.

Program Curriculum and Course Outline

2007 Long Course

Session #1

Introduction Part 1- Pre-test, general program and Santa Rosa creek information, storm water pollution awareness, water quality, watersheds.

Session #2

Introduction Part 2- Stream ecology, biological diversity, habitat features, fisheries life cycle.

Session #3

Introduction Part 3- Aquatic macro-invertebrates morphology, life cycles, feeding guilds, taxonomy, identification and key.

Session #4

Practice Lab- review protocol and procedure, conduct identification and recording of 3 macroinvertebrates.

Session #5

Field Day Preparation- review and assign field assessment group tasks, practice with procedure, protocol and equipment, practice habitat assessment.

Session #6

Field Assessment Session- complete California Bioassessment Worksheet and Physical Habitat Quality assessment, conduct water quality testing and aquatic macroinvertebrate collection.

Session #7

Laboratory identification and recording results.

Session #8

Program Wrap up- compile/review results, answer questions, post-test and certificate presentation. Discuss possibilities and begin planning culminating activity.

2007 Short Course

Session #1

Introduction Part 1 and 2- Pre-survey, general program and Santa Rosa creek information, storm water pollution awareness, water quality, watersheds, stream ecology, biological diversity, habitat features, fisheries life cycle.

Session #2

Introduction Part 3- Aquatic macro-invertebrates morphology, life cycles, feeding guilds, taxonomy, practice with equipment, key and identification.

Session #3

Field Day Preparation- review and assign field assessment group tasks, practice with procedure, protocol and equipment.

Session #4

Field Assessment Session- complete California Bioassessment Worksheet, conduct water quality testing and aquatic macroinvertebrate collections, identification and recording.

Session #5

Program wrap up- compile/review results, conduct post-survey and discuss culminating activity.

Program and Curriculum Changes

The 2006 - 2007 curriculum implemented a variety of changes with the aim of improving the program's overall quality and effectiveness. The program's ongoing directive to increase the participants' knowledge and sense of responsibility of their individual role in storm water pollution prevention has encouraged these changes. In addition, the previous chaotic atmosphere during the training and field assessments necessitated changes to increase the students' effectiveness and success in accomplishing the assessment tasks.

The following is a list of the changes implemented during the 2006 – 2007 program year:

- Conducted either the short or the long course with each participating class and “required” all students to attend the field assessment day.
- Presented participants of the long course with a certificate of completion at the culmination of the program (See Appendix G).
- Organized field day assessment by assigning students to one of six specific groups. Each group accomplished specific roles during the training and the field assessment days. When all of the six groups' work is compiled, the class has completed the entire field assessment. (See Appendix D).
- Created a new California Bioassessment Worksheet to correlate directly to the modified field sampling procedure being used (See Appendix A).
- Increased the number of water quality testing parameters included in the assessment and used color-metric water quality testing kits, designed specifically for educational purposes to accomplish the testing.
- Created a new water quality field sheet to record the results of the tests being conducted (See Appendix C).
- Provided classroom-based practice identification sessions and/or lab prior to the field sampling and/or official lab.
- Created a new lab bench-sheet for participants to use that reduces confusion and correlates directly to the key and level of identification needed for non-insect and insects being identified (See Appendix B).
- Included more hands-on activities and less lecture time during instruction of key ecological concepts and during training for field assessment tasks.
- Included activities, information and exploration into the connections between healthy, local water resources to healthy individuals and human communities.
- Presented all participants with information about the resources available for citizens to help care for their local creeks everyday by providing the Creek Stewardship Program brochure.
- Created a simple, one page, 7 question combination multiple choice and fill in the blank participant survey (See Appendix F).
- Surveyed pre and post knowledge base of 86% of the participating students- a significant increase from the 15% of participants being pre and post surveyed during the 2005 – 2006 program year.
- Created and presented the Aquatic Macoinvertebrate Bioassessment Program at the Salmonid Restoration Federation's 25th Annual Restoration Conference during the Salmonid and Watershed Education Session (See Appendix E).

Participating School Program Details

Montgomery High School, Fall 2006

Teacher: Patty Dunlap

Course: Advance Placement Honors, International Baccalaureate, Senior Biology Class

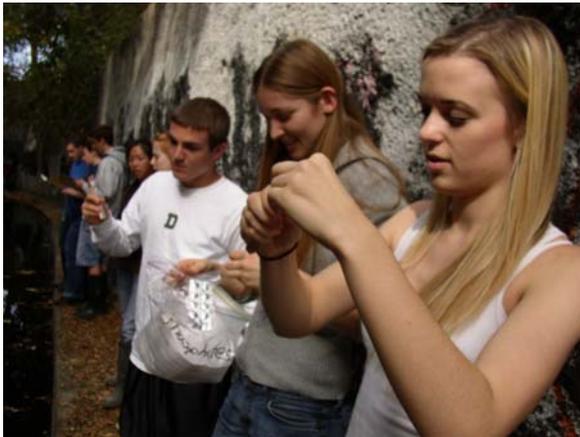
Number of classes served: 1

Number of students served: 18

Long or Short Program: Long

Assessment Results: This class conducted a physical habitat assessment, a field collection and laboratory identification of macroinvertebrates from Matanzas Creek, downstream of the Hoen Road overpass. See Appendix J for assessment and identification results.

Culminating Activity: This group decided to start a school ecology club with the specific aim of gathering together interested students to learn about and clean up Matanzas creek located next to the high school campus. The participants were able to file all the necessary paperwork to establish the club and the participating teacher is the advisor on record. In addition, the participating teacher is trying to develop a more in-depth science and service project program for her students which would include an increase in the time and activities spent monitoring and studying their local creek.



Fall 2006 MHS students performing water quality testing



Fall 2006 MHS student and Storm Water Team member Steve Brady processing the aquatic macroinvertebrates collected from Matanzas Creek

Montgomery High School, Spring 2007

Teacher: David Miller

Course: Environment and Health

Number of classes served: 1

Number of students served: 12

Long or Short Program: Long

Assessment Results: This class conducted a physical habitat assessment, a field collection and laboratory identification of macroinvertebrates from Matanzas Creek, downstream of the Hoen Road overpass. See Appendix J for assessment and identification results.

Culminating Activity: The participating class organized a creek clean-up event at a local park, upstream from their campus on Matanzas Creek. The participating teacher recruited a group of 18 students to conduct a creek clean-up and do maintenance of a revegetation project at the park. David Miller is also working with Patty Dunlap to create and coordinate the more in-depth science and service project at the creek for next year's students.



Spring 2007 MHS student performing habitat assessment



Spring 2007 MHS students conducting water quality testing

Maria Carrillo High School, Spring 2007

Teacher: Gale Ligotti

Course: Zoology

Number of classes served: 1

Number of students served: 16

Long or Short Program: Long

Assessment Results: This class conducted a physical habitat assessment, a field collection and laboratory identification of macroinvertebrates from Brush Creek, downstream of Farmers Lane/Highway 12. See Appendix J for assessment and identification results.

Culminating Activity: On the field assessment day, participants conducted a thorough clean-up of Brush Creek. After completion of the Bioassessment Program, this class raised a population of steelhead trout in their classroom. Envirichment arranged for the students to release their hatchlings at a local ranch property on the headwaters of Mark West Creek.



Spring 2007 MCHS students processing the aquatic macroinvertebrates collected from Brush Creek



Spring 2007 MCHS students conducting water quality testing



Spring 2007 MCHS students conducting their creek clean-up



Spring 2007 MCHS students releasing steelhead trout hatchlings in Mark West Creek

Piner High School, Spring 2007

Teacher: Mark Mantoani

Course: Environment and Health

Number of classes served: 2

Number of students served: 52

Long or Short Program: Long

Assessment Results: This class conducted a physical habitat assessment, a field collection and laboratory identification of macroinvertebrates from Peterson Creek, downstream of Youth Park, at the beginning of the Sonoma County Water Agency service road. See Appendix J for assessment and identification results.

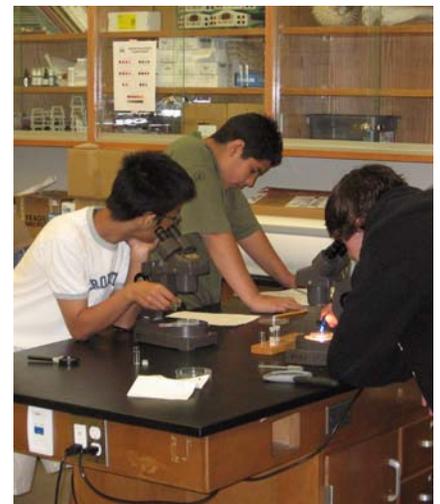
Culminating Activity: On the field assessment day, participants conducted a thorough clean-up of Peterson Creek. This class continued on with the themes of the program by conducting another series of water quality testing at Peterson Creek using professional level monitoring equipment.



Spring 2007 PHS students recording canopy cover on Peterson Creek



Spring 2007 PHS student conducting a clean-up of Peterson Creek



Spring 2007 PHS students conducting the lab identification and recording of the aquatic macroinvertebrates collected

Santa Rosa High School, Spring 2007

Teacher: Elaine Bechler

Course: Biology

Number of classes served: 2

Number of students served: 54

Long or Short Program: Short

Assessment Results: This class assessed Piner Creek, downstream of Marlow Road. The calculated biological index of water quality was 24 which is a rating of GOOD on a scale of Poor, Fair, Good or Excellent. Also see Appendix J.

Culminating Activity: This class finished on the last regular week of the school year and did not conduct a culminating activity. The participating teacher has requested conducting the program in the Fall so that there will be time to complete a culminating activity and so that her students can benefit from the experience and relate the lessons learned from the program throughout the school year.



Spring 2007 SRHS students conducting habitat assessment on Piner Creek



Spring 2007 SRHS students conducting identification of the aquatic macroinvertebrates collected

Elsie Allen High School, Spring 2007

Teacher: Annette Bustamonte

Course: Biology

Number of classes served: 3

Number of students served: 68

Long or Short Program: Short

Assessment Results: This class assessed Colgan Creek, downstream of Burgess Road. The calculated biological index of water quality was 20 which is a rating of FAIR on a scale of Poor, Fair, Good or Excellent. Also see Appendix J.

Culminating Activity: This class finished near the last regular week of the school year and did not conduct a culminating activity. The participating teacher has requested conducting the program in the Fall so that there will be time to complete a culminating activity and so that her students can benefit from the experience and relate the lessons learned from the program throughout the school year.



Spring 2007 EAHS students collecting the aquatic macroinvertebrates on Colgan Creek



Spring 2007 EAHS teacher, Annette Bustamonte, holds a garter snake found during the field collection



Spring 2007 EAHS students conducting identification of the aquatic macroinvertebrates collected

Pre and Post Survey Results and Discussion

The program coordinators and facilitators agreed that a comprehensive and consistent sampling of the students' knowledge base prior to and after the program would provide valuable information about the program's effectiveness and would serve as a key component in making future program changes and adjustments. 86% (189 out of 220 total) of the program participants were surveyed for their stormwater awareness and related knowledge base before the program started and again after the program was finished. The remaining 14% (31 students) not included in the results was one class from Piner High School. This class was Pre-surveyed, but were unable to complete and did not return the Post-survey.

Overall, the results indicated an average 45% percent increase in participants' knowledge and awareness of the information surveyed. At the end of the program, 6 of the questions were answered correctly by 90% or more of the participants. The remaining question was answered correctly 81% of the time. From these results it is clear that a substantial amount of information gain and/or reinforcement was achieved through participating in this program.

This results section is designed to provide insight into the information gained through the implementation of the surveys with each of the 7 survey questions being discussed individually. For the purposes of this discussion and results section, each of the 4 multiple-choice questions had only one correct answer. The remaining 3 fill in the blank questions could have a variety of correct responses, however, the results will only indicate the question being answered correctly or incorrectly. See Appendix F for the complete survey that was given.

QUESTION (1)

Do you think that soapy water running off a car and then into the gutter and down a storm drain poses a hazard to the environment or not?

- (a) Yes it poses a hazard
- (b) No it does not pose a hazard
- (c) I am unsure

Before the beginning of the program, 81.5% of the students were able to answer this question correctly. This was the highest rate of stormwater pollution prevention behavior awareness apparent before the program began. After the completion of the program an additional 18% of the students were able to recognize the negative hazard soapy water poses to our environment, leaving only 0.5% still unaware or not caring of this environmental hazard.

QUESTION (2)

Do you think that you personally have any effect on protecting the water quality of the Russian River?

- (a) Yes I have an effect
- (b) No I do not have an effect
- (c) I am unsure

63% of the participants surveyed felt they did have a personal effect on the water quality of the Russian River. It is unknown how many students realized their direct connection to the Russian River through their local watershed, however, a vast majority of students were not initially able to identify a watershed and their place within the Russian River watershed (Questions 4, 5). This question was designed to give an estimate to how many of the participants felt they had an impact on and the ability to help local water quality. Upon completion of the program, 96% of the students agreed they had the ability to effect water quality, which represents a 33% increase in this knowledge and awareness.

QUESTION (3)

As far as you know, which best describes what happens to the water that goes into our gutters and down storm drains:

- (a) It flows to a sewage treatment plant, like the water that goes through your household drains
- (b) It flows directly into a local creek or river
- (c) It flows someplace else
- (d) I am not sure

62% of the participants surveyed indicated they knew storm drains lead directly into a local creeks, however, question 6 indicates that only 45% of participants knew the name of the nearest creek. 38% of respondents thought that storm drains lead somewhere else, were part of the sewage treatment system or were not sure. Upon completion of the program, 94% of the participants were clear that local storm drains lead to a nearby creek which represents a 32% increase in this knowledge and awareness.

QUESTION (4)

As far as you know, do you live in a watershed?

- (a) Yes, I live in a watershed
- (b) No, I do not live in a watershed
- (c) I am unsure

Generally, the concept of a watershed is not widely known and is a difficult concept to understand. The intent of the program is to educate the participants that stormwater runoff carries pollutants and flows downhill. Also that in Santa Rosa runoff always flows to bodies of water like creeks or lakes that in turn flow downhill until reaching the Pacific Ocean. Only 22% of the students surveyed knew they lived in a watershed with 78% saying they did not or were not sure. At the completion of the program, 91.5% of the students knew they lived in a watershed which represents a 69.5% increase in this knowledge and awareness.

QUESTION (5)

If you do live in a watershed, what is the name of the watershed you live in?

From question 4 we know that 22% knew they lived in a watershed, but when asked to name it, only 10% of the students could do so accurately. After completion of this program 81% of the participants were able to name the watershed they lived in! This represents a 71% increase in this knowledge and awareness, the most notable increase indicated by this survey.

QUESTION (6)

If you know the name of a creek right next to your school, please write it down:

45% of the students surveyed knew the name of the creek near their school prior to the program. Knowing the name of their creek is a definite and critical first step required for acknowledging and caring about their local fresh water, natural resources. After the program was completed a total of 95% of students could name the local creek next to their campus. This represents a 50% increase of this knowledge and awareness.

QUESTION (7)

What is a common pollutant in Santa Rosa's Creeks (do not list litter/trash):

Student participants were asked to name a common pollutant in Santa Rosa's creeks. They were asked not to list trash so a determination of pollution knowledge beyond human debris could be assessed. 50% of participants were able to list one or more common pollutant in Santa Rosa's creeks, most noted was oil. After the program was complete a total of 90.5% of participants were able to list a common pollutant in the creeks. In addition, a more detailed list of pollutants, in addition to oil, were listed more frequently. An increase of 40.5% of participants were able to correctly identify a common creek pollutant after the program was completed.

Recommendations

Based on this year's program results, the following is a brief listing of suggestions to maintain and improve the effectiveness of the program:

- Continue to encourage and support the creation of a student-designed culminating activity upon completion of the program.

- Continue to divide students into individual groups with specific tasks for training and field days and work on the design of these events to maximize efficiency and the feeling of teamwork.
- Continue to offer the two program duration levels, short and long courses.
- Continue to conduct pre and post learning surveys and strive to achieve a level of 100% student participation. To obtain 100% participation it is recommended not to leave the survey with the teacher to complete and return but have the program facilitator give the surveys.
- Schedule more schools/classes in the Fall program semester to create more space in the Spring semester for rescheduling if there is rain on field days and/or to accommodate more schools or classes in general.
- Continue to use the color-metric water quality testing kits.

Appendix A

California Bioassessment Worksheet (CBW)

Non-Point Source Sampling Design

Stream/ Watershed: _____ Date and Time: _____

Group Name: _____ Sample ID: _____

Site Description: _____

Site Location

GPS Coordinates

GPS Unit Name: _____

LAT: _____

LONG: _____

Elevation: _____

Error: _____

Physical Habitat Characteristics

Riffle Length: _____

Transect Location: _____

Riffle Width- *Average of measurements a – h*

(a): _____ (b): _____ (c): _____ (d): _____

(e): _____ (f): _____ (g): _____ (h): _____

Average Riffle Width: _____

Riffle Depth - *Average of measurements a – h*

(a): _____ (b): _____ (c): _____ (d): _____

(e): _____ (f): _____ (g): _____ (h): _____

Average Riffle Depth: _____

Riffle Water Velocity- *Average time measurements a – d. Divide riffle distance by average time to get velocity.*

(a): _____ (b): _____ (c): _____ (d): _____

Riffle Velocity: _____

Reach/Riffle Characteristics

Reach Length #:

Reach Length Description: _____

Physical Habitat Quality Score: _____

% Gradient: _____

% Canopy Cover- *Average of measurements a - d*

(a): _____ (b): _____ (c): _____ (d): _____

Average Canopy Cover: _____

Substrate Characteristics

Substrate Complexity: _____

Embeddedness: _____

% Substrate (adds up to 100%)

Fines (<0.1"): _____

Gravel (1 - 2"): _____

Cobble (2 - 10"): _____

Boulder (>10"): _____

Bedrock (solid): _____

Substrate Consolidation (circle one):

Low Medium High

Chemical Characteristics

Conduct water quality testing and record results from Water Quality Worksheet on reverse side

Turbidity: _____

pH: _____

Phosphates: _____

Nitrates: _____

Dissolved Oxygen ppm: _____

Dissolved Oxygen % saturation: _____

Chlorine: _____

Conductivity: _____

Temperature *Average of measurements a – d*

(a): _____ (b): _____ (c): _____ (d): _____

Average Temperature: _____

Appendix B

Level 2 Taxonomic Effort Sorting Benchsheet

- One BMI at a time- have one person look through the microscope as the other person reads the written key (pages 1 and 2)
- Write the number/letter combination for each step you take through the key
- When you reach the “end” of the key- check whether it is an Insect or a Non-insect and write its name
- Remember- The Insects you find need further identification, write down the chapter listed to use
- Use the back side of this sheet to record your total numbers

1. _____

Name: _____ Insect, see chapter _____ or Non-insect

2. _____

Name: _____ Insect, see chapter _____ or Non-insect

3. _____

Name: _____ Insect, see chapter _____ or Non-insect

4. _____

Name: _____ Insect, see chapter _____ or Non-insect

5. _____

Name: _____ Insect, see chapter _____ or Non-insect

6. _____

Name: _____ Insect, see chapter _____ or Non-insect

7. _____

Name: _____ Insect, see chapter _____ or Non-insect

8. _____

Name: _____ Insect, see chapter _____ or Non-insect

9. _____

Name: _____ Insect, see chapter _____ or Non-insect

10. _____

Name: _____ Insect, see chapter _____ or Non-insect

Parameter	What is it?	Measurement Units	Results
Temperature	Amount of _____ energy in the water.	Degrees Fahrenheit °F or Degrees Celsius °C	Below 55 FPreferred by a variety of creek life 55 – 67 FCan support a variety of creek life 68 – 76 FCreek life begins to die
Turbidity	Measuring the _____ of the water.	Jackson Turbidity Units JTU	0 JTUExcellent 1 – 40 JTUGood 40 – 100 JTU Fair Over 100 JTUPoor Results:
Phosphates	A _____. Needed for _____ to grow. Excess phosphate can be _____.	Parts Per Million ppm	1 ppm Excellent 2 ppm Good 4 ppm Fair Results:
Nitrates	A _____. Needed for _____ to grow. Excess nitrates can be _____.	Parts Per Million ppm	5 ppm Fair 20, 40 ppmPoor Results:
Dissolved Oxygen	Measuring the _____ in the water.	Parts Per Million ppm	0 ppm Poor 4 ppm Good 8 ppm Excellent Results:
pH	Measurement of the _____ or _____ in the water.	Ranges 0 to 14 7 is neutral Below 7 is Acidic Above 7 is Basic	7 Excellent 6,8 Good 4,5,9,10,11Poor Results:
Available Chlorine	Measuring _____ in the water.	Parts Per Million ppm Results:	0, 0.2, ppm 0.4, 0.6, ppm O K A Y 0.8, 1.0, 1.5 ppm 2.0, 3.0 ppm TOO HIGH

Appendix D

Group #	Water Quality Test	Physical/Habitat Quality	Other
1	Turbidity	#6, #8	<ul style="list-style-type: none"> ➤ Major recorders ➤ Creek sampling assistance ➤ Conductivity
2	pH	#1, #2	<ul style="list-style-type: none"> ➤ GPS Unit ➤ Substrate % ➤ Consolidation ➤ Embeddedness
3	Phosphates	#7	Riffle Measurement <ul style="list-style-type: none"> ➤ Length ➤ Depth ➤ Width
4	Dissolved Oxygen	#9, #10	<ul style="list-style-type: none"> ➤ % Canopy Cover
5	Chlorine	#3, #4	<ul style="list-style-type: none"> ➤ % Gradient ➤ Riffle water velocity
6	Nitrates	#5	<ul style="list-style-type: none"> ➤ Creek samplers ➤ Temperature

Appendix E

25th Annual Salmonid Restoration Conference 2007

Pacific Salmon and Watershed Education Session, March 9

Title:

Evolving Towards Effectiveness: 8 Years of Bioassessment, Bugs and Human Behavior in Santa Rosa, California

Presenters:

Stephanie Lennox, Envirichment
Steve Brady, The City of Santa Rosa

Authors:

Stephanie Lennox, Envirichment
Steve Brady, The City of Santa Rosa

The City of Santa Rosa's Aquatic Macroinvertebrate Bioassessment Program originated in 1998 as an outreach effort for compliance with requirements of the National Pollution Discharge Elimination System Permit (NPDES) for storm water discharges. Since the program's creation, a total of 1,548 students from Elsie Allen, Maria Carrillo, Montgomery, Piner, Ridgeway, and Santa Rosa High Schools have participated. This experiential education program is provided to high school science classes with ranging academic levels from elective zoology courses to Advanced Placement classes.

Each high school monitors a Santa Rosa Creek tributary closest to their campus, with a total of six creeks being assessed. Participants use the Citizen Monitoring Level of the California Stream Bioassessment Protocol (CSBP) to guide their sampling. Students first learn key ecological concepts and receive training in the protocols then collect and identify an aquatic macroinvertebrate sample, test water quality, and conduct a habitat assessment. After the monitoring is complete, students compile their data and analyze their creek's health over time.

During the program's eight years, the project team has observed that successful stream bioassessments do not automatically result in participants understanding their life-long role in preventing storm water pollution. This evolving program is trying to engage students in a local creek assessment while also informing and inspiring them to act in support of healthy Santa Rosa streams. Program adjustments aim to increase student motivation and efforts for positively impacting local waterways. A recent change has been to add a "Culminating Activity" which is a student-created and implemented creek education project. This presentation will detail the program and the changes made in effort to encourage human behaviors that positively influence water quality and creek health.

Appendix F



Aquatic Macro-Invertebrate Bioassessment Program Pre and Post-Program Survey

Name: _____

Date: _____

1) Do you think that soapy water running off a car and then into the gutter and down a storm drain poses a hazard to the environment or not?

- (a) Yes it poses a hazard
- (b) No it does not pose a hazard
- (c) I am unsure

2) Do you think that you personally have any effect on protecting the water quality of the Russian River?

- (a) Yes I have an effect
- (b) No I do not have an effect
- (c) I am unsure

3) As far as you know, which best describes what happens to the water that goes into our gutters and down storm drains:

- (a) It flows to a sewage treatment plant, like the water that goes through your household drains
- (b) It flows directly into a local creek or river
- (c) It flows someplace else
- (d) I am not sure

4) As far as you know, do you live in a watershed?

- (a) Yes, I live in a watershed
- (b) No, I do not live in a watershed
- (c) I am unsure

5) If you do live in a watershed, what is the name of the watershed you live in?

6) If you know the name of a creek right next to your school, please write it down: _____

7) What is a common pollutant in Santa Rosa's Creeks (do not list litter/trash):

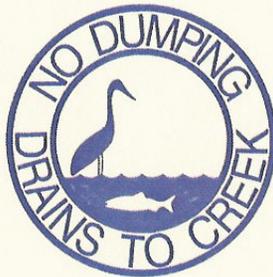
Appendix G

Certificate of Completion
California Stream Bioassessment Procedure

Awarded To

ETUATE VAREA

For Participation in the
Aquatic Macroinvertebrate Bioassessment Program



High School Instructor

Presented by the City of Santa Rosa
Storm Water Management Team



Environmental Specialist

October 2006

Steve Bundy

Appendix H

From: Elaine Bechler [mailto:bbfarm@sonic.net]

Sent: Friday, June 01, 2007 1:10 PM

To: Brady, Steve

Subject: Stephanie Lennox

June 1, 2007

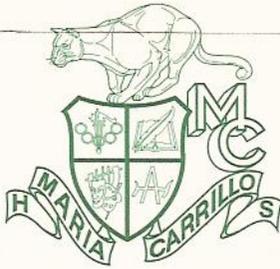
Dear Steve,

I want to let you know how much I appreciated working with Stephanie Lennox this year. She is a dynamic leader and excellent at organizing lessons. She actively engaged my students. Also she was able to talk at the appropriate level with them so they could learn best. She was also willing and helpful with working out behavioral problems that came up. She was pivotal in providing a meaningful and positive experience for my very difficult students this year. I hope your supervisors are aware of what a gem she is. Remember, I have worked with 4 others before. Stephanie is veru effective in teaching environmental concepts to the students. I hope she continues to work with the City of Santa Rosa for many years to come.

Sincerely,

Elaine Bechler

SRHS biology instructor



Maria Carrillo High School

Mark W. Klick
Principal

James E. Goddard
Vice Principal

Rand K Van Dyke
Assistant Principal

Roosevelt Ellerbe
Assistant Principal

May 25, 2007

To whom it may concern:

For the last eight years or so my zoology class at Maria Carrillo High School has been involved with the bio-assessment of local creeks through a program sponsored by the City of Santa Rosa. I have had the pleasure of working closely with several excellent coordinators over the years. This year was the first time Stephanie Lennox worked with my class. She immediately engaged my students to the point that they could not wait for her to return to the classroom. This is not an easy feat to accomplish with high school students. Stephanie maintained a high level of enthusiasm and coupled that with an extensive knowledge of environmental issues. She made all her time in my class educational and informative because she was well prepared with activities and lectures. Stephanie is a true professional and a natural with young adults.

Stephanie also organized and supervised our field trip to the creek. She created working groups of students that were responsible for several tasks. For the first time since we began working with this program, my students commented on what a great experience this field trip was for them. I truly believe that my students learned more this year than any of the previous years.

We are also involved in Steelhead in the Classroom. Although, this is not a program associated with the City of Santa Rosa, Stephanie volunteered to make my contacts and run the field trip to release the fish. She showed up on time and had the whole field trip outlined for me including a guest speaker.

It is my hope that Stephanie will continue to work with me in the future. Good help is hard to find and she was such an amazing asset this year. My students adored her and so did I and for what it is worth this high school teacher gives Stephanie Lennox an "A+".

Sincerely,

Gale Svane Ligotti
Science Teacher

Maria Carrillo High School

Steelhead in the classroom

MC **Chloe Ulutau**
staff writer

For the past few months Mrs. Gail Ligotti's sixth period Zoology class has been involved in a series of procedures hoping to maintain and preserve California's fisheries and aquatic habitats.

For eight years Maria Carrillo's Zoology class has been signed up with the California Stream Bioassessment Procedure program (CSBP), learning key ecological concepts, receiving training in CSBP protocols, collecting and identifying aquatic microinvertebrate samples, testing water quality and conducting habitat assessments. The key focus of the program is to assess the biological and physical habitat conditions of wadeable streams in California in order to determine the stream's biological and physical integrity. In other words, to make sure the streams are healthy.

Stephanie Lennox, a program facilitator from Enrichment, and Steve Brady, an Environmental Specialist, came to MCHS to assist the students with the fulfillment of the program. Splitting the class into groups of four Lennox and Brady prepared the class for their first mission,

conducting a bioassessment of Brush Creek. Junior Kathie Salado and her group were assigned to test the pH level of the creek and test the embeddedness (the degree to which dirt is mixed in with spawning gravel). After the groups completed their assigned jobs they roamed the creek picking up refuse in order to keep it clean. But what teenager likes picking up garbage? "Cleaning



Photo courtesy of Stephanie Lennox
From the left Scott Swan, Chrystine Hulac and Chloe Ulutau collect bugs found in Brush Creek.

up the creek was my favorite part." Says Salado "It really made me happy when we looked back at the creek after we went through it, and saw how much we had cleaned." The same comments came from the rest of the class, many of them saying they would do it again.

As an extension to the CSBP program zoology received 30 steelhead eggs from Warm

Springs Fish Hatchery on Wednesday 4 April. Kept in a special fridge with a constant temperature of 52 degrees fahrenheit, the students were able to determine when the eggs would hatch, approximately 15-20 April. With this date in mind on Friday May 11 zoology set out to release the Steelhead at Head Waters of Mark West Creek. After having lunch overlooking a small lake with a domesticated duck, the students were given one polystyrene cup containing one steelhead alevin to release in the creek. One by one the students named their alevin and set them free, keeping in mind that a majority of the steelhead are not likely to reach maturity.

At the end of the program each student was awarded with a Certificate of Completion, for participation in the 'Aquatic Microinvertebrate Bioassessment Program', presented by the City of Santa Rosa Storm

Water Management team.

The program helped students to understand the importance that Californian creeks have for the environment. "It's a wonderful opportunity for students to become aware of preserving natural resources" says Ligotti.

All rivers lead to the ocean and all drains lead into our creeks, so keep it clean and hygienic.

The Puma Prensa, May 23 2007

Article published in the May 23, 2007 Maria Carrillo High School's Puma Prensa student newspaper about the students participating in the Aquatic Macroinvertebrate Bioassessment Program.

Appendix J

Aquatic Macroinvertebrate Taxa Results

		Creek					
Metric	Year	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Taxa Richness	1998*	7	5	5	5	3	5
	1999*	2	11	4	6	5	9
	2000	14	11	8	8	10	**
	2001	2	5	7	**	6	**
	2002	7	6	5	3	9	**
	2003	**	**	5	6	6	**
	2004	13	2	5	**	10	**
	2005	7	3	**	**	8	**
	2006		13				
	2007	15	10	**	**	13	**
Mean		6.3	6.1	5.6	5.6	7.1	**
Metric	Year	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
EPT Taxa	1998*	2	4	1	1	0	1
	1999*	0	8	1	1	1	1
	2000	7	3	2	5	0	**
	2001	0	3	1	**	2	**
	2002	1	2	1	0	1	**
	2003	**	**	1	1	0	**
	2004	2	1	1	**	1	**
	2005	1	1	**	**	2	**
	2006		7				
	2007	6	5	**	**	2	**
Mean		1.0	3.1	1.1	1.6	0.9	**
Metric	Year	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
EPT Index	1998*	22	81	9	4	0	38
	1999*	0.4	66	1	4	2	8
	2000	5	21	16	25	0	**
	2001	0	23	3	**	4	**
	2002	9	67	2	0	4	**
	2003	**	**	18	2	0	**
	2004	16	1	1	**	1	**
	2005	63.2	4.4	**	**	14.7	**
	2006		36.2				
	2007	32.14	12.7	4	34	2	**
Mean		18.4	40.4	7.1	7.0	3.2	**
Metric	Year	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Percent Dominance	1998*	45	51	50	79	67	48
	1999*	90	29	52	50	69	38
	2000	26	50	39	53	54	**
	2001	100	48	61	**	58	**
	2002	72	66	80	95	57	**
	2003	**	**	53	92	61	**
	2004	62	99	78	**	51	**
	2005	63.2	94.4	**	**	70.6	**
	2006		45.7				
2007	20	79.7	40	24	78	**	

	Mean	72.0	62.5	59.0	73.8	61.0	**
Metric	Year	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Tolerant Taxa Index	1998*	5.8	3.4	6.5	6.1	7.3	5.5
	1999*	9.0	4.2	7.5	7.1	8.1	5.7
	2000	5.1	5.5	5.5	4.6	6.3	**
	2001	8.0	5.5	6.4	**	6.5	**
	2002	5.9	4.6	6.0	6	6.0	**
	2003	**	**	5.6	6	5.6	**
	2004	5.9	6.0	6.2	**	6.1	**
	2005	4.3	5.9	**	**	5.6	**
	2006		5				
	2007	6.3	5.8	**	**	6	**
	Mean	6.5	5.0	6.2	6.0	6.4	**

* Data based on mean of replicate samples.

** Data not available.

Appendix J

Habitat Assessment Scores

2007 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	6	8	NR	NR	13	NR
Embeddedness	8	9	NR	NR	8	NR
Velocity/Depth	18	14	NR	NR	9	NR
Sediment Deposition	16	12	NR	NR	17	NR
Channel Flow	11	4	NR	NR	10	NR
Channel Alteration	14	12	NR	NR	6	NR
Frequency of Riffles	0	12	NR	NR	7	NR
Bank Stability L.	7	7	NR	NR	9	NR
Bank Stability R.	6	10	NR	NR	5	NR
Vegetative Protection L.	8	2	NR	NR	5	NR
Vegetative Protection R.	8	0	NR	NR	4	NR
Riparian Width L.	5	3	NR	NR	3	NR
Riparian Width R.	4	0	NR	NR	1	NR
Total Habitat Score	111	93	NR	NR	97	NR
2005 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	8	13	10	NR	8	NR
Embeddedness	15	11	**	NR	16	NR
Velocity/Depth	13	14	9	NR	9	NR
Sediment Deposition	9	14	5	NR	9	NR
Channel Flow	8	15	11	NR	13	NR
Channel Alteration	12	7	9	NR	18	NR
Frequency of Riffles	8	10	10	NR	10	NR
Bank Stability L.	4	8	7	NR	9	NR
Bank Stability R.	4	9	7	NR	8	NR
Vegetative Protection L.	8	6	5	NR	7	NR
Vegetative Protection R.	8	1	5	NR	6	NR
Riparian Width L.	7	5	4	NR	9	NR
Riparian Width R.	7	1	3	NR	10	NR
Total Habitat Score	111	114	(93)	NR	132	NR
2004 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	18	9	4	NR	6	NR
Embeddedness	10	11	12	NR	13	NR
Velocity/Depth	15	14	9	NR	9	NR
Sediment Deposition	8	13	8	NR	8	NR
Channel Flow	8	10	10	NR	9	NR
Channel Alteration	9	5	6	NR	17	NR
Frequency of Riffles	6	8	3	NR	8	NR
Bank Stability L.	9	7	8	NR	4	NR
Bank Stability R.	9	10	9	NR	8	NR
Vegetative Protection L.	1	4	2	NR	6	NR
Vegetative Protection R.	4	0	1	NR	8	NR
Riparian Width L.	4	7	2	NR	9	NR
Riparian Width R.	4	0	2	NR	10	NR
Total Habitat Score	105	98	76	NR	115	NR
2003 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	NR	NR	3	12	9	NR
Embeddedness	NR	NR	13	13	13	NR
Velocity/Depth	NR	NR	8	15	15	NR
Sediment Deposition	NR	NR	12	15	12	NR
Channel Flow	NR	NR	13	8	14	NR
Channel Alteration	NR	NR	6	8	15	NR

Frequency of Riffles	NR	NR	7	13	9	NR
Bank Stability L.	NR	NR	3	8	4	NR
Bank Stability R.	NR	NR	3	7	6	NR
Vegetative Protection L.	NR	NR	4	6	7	NR
Vegetative Protection R.	NR	NR	4	6	7	NR
Riparian Width L.	NR	NR	3	4	5	NR
Riparian Width R.	NR	NR	3	4	10	NR
Total Habitat Score	NR	NR	82	119	126	NR
2002 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	7	8	5	8	11	13
Embeddedness	8	12	13	11	12	14
Velocity/Depth	13	14	12	8	13	15
Sediment Deposition	7	13	5	14	5	14
Channel Flow	8	9	15	18	16	15
Channel Alteration	9	8	8	6	12	9
Frequency of Riffles	5	7	8	13	8	14
Bank Stability L.	9	8	8	7	7	2
Bank Stability R.	9	10	7	7	4	2
Vegetative Protection L.	2	7	2	3	3	1
Vegetative Protection R.	3	0	2	3	5	2
Riparian Width L.	4	5	4	2	7	2
Riparian Width R.	4	0	4	2	10	2
Total Habitat Score	88	101	93	102	113	105

2001						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	4	7	2	4	12	3
Embeddedness	7	12	12	8	13	12
Velocity/Depth	9	13	12	10	13	13
Sediment Deposition	3	5	15	10	5	8
Channel Flow	5	8	6	9	9	7
Channel Alteration	6	4	11	6	7	8
Frequency of Riffles	1	4	3	7	6	7
Bank Stability L.	6	9	6	7	9	7
Bank Stability R.	6	10	8	7	9	8
Vegetative Protection L.	3	4	4	7	5	4
Vegetative Protection R.	3	0	3	7	5	2
Riparian Width L.	3	6	4	3	4	1
Riparian Width R.	3	1	4	3	10	1
Total Habitat Score	59	83	90	88	107	81
2000 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	7	6	10	7	10	10
Embeddedness	18	14	17	9	4	4
Velocity/Depth	9	14	6	8	13	13
Sediment Deposition	13	19	7	13	16	16
Channel Flow	9	11	6	15	16	16
Channel Alteration	14	11	13	7	19	19
Frequency of Riffles	7	13	2	8	3	3
Bank Stability L.	8	7	8	7	7	7
Bank Stability R.	9	10	9	7	9	9
Vegetative Protection L.	8	9	6	8	8	8
Vegetative Protection R.	6	1	6	8	9	9
Riparian Width L.	10	5	2	3	5	5
Riparian Width R.	3	4	2	3	10	10
Total Habitat Score	121	124	94	103	129	129

1999 Habitat Assessment Scores						
	Brush	Matanzas	Colgan	Piner	Peterson	Paulin
Epifaunal Cover	13	5	3	6	16	4
Embeddedness	15	14	2	16	7	13
Velocity/Depth	13	14	8	9	19	10
Sediment Deposition	12	15	13	18	14	15
Channel Flow	8	8	8	17	15	13
Channel Alteration	18	5	4	7	18	0
Frequency of Riffles	13	12	15	15	7	14
Bank Stability L.	7	5	6	6	7	9
Bank Stability R.	9	10	2	4	3	3
Vegetative Protection L.	8	6	6	6	7	2
Vegetative Protection R.	9	0	2	2	3	0
Riparian Width L.	10	4	3	2	4	0
Riparian Width R.	6	0	1	1	8	0
Total Habitat Score	141	98	73	109	128	83

NR No Recorded data.

** Data not available.

EDC/"DOWN THE DRAIN" - POSTER

Appendix III.M

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ENVIRONMENTAL DISCOVERY CENTER of Sonoma County

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CITY OF SANTA ROSA
PUBLIC WORKS DEPT

2006-2007 School Field Trip program

The life science programs offered at Spring Lake Park at the EDC continue to be popular. The results of the Center's fifth full year of operation are as follows:

- Habitat & Home (September - December)
2,400 students and chaperones attended
- Down the Drain (January - May)
2,880 students and chaperones attended
- Tolay Fall Program (October)
1,900 students and chaperones attended

Science in the Parks Program

The Discovering Science in the Parks continues to be a strong program in it's third year. The two programs offered, Rockin' & Recycling and Weather or Not, focused on 4th grade earth science standards for geology and 5th grade earth science standards for weather. Programs were offered at Helen Putnam Regional Park in Petaluma and Foothill Regional Park in Windsor.

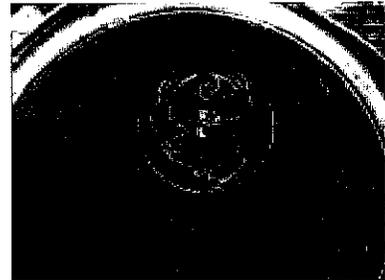
- 2,330 students and chaperones attended
(2005-2006 2,520 students/chaperones attended)

Scholarship Program

Over 1,160 children attended the programs on full scholarships provided by the Medtronic Foundation.

Total Attendance Figures Annually

- 2001-2002 attendance: 1,500
- 2002-2003 attendance: 3,000
- 2003-2004 attendance: 4,800
- 2004-2005 attendance: 6,200
- 2005-2006 attendance 8,200
- 2006-2007 attendance 9,500



A partnership established by the Sonoma County Regional Parks Foundation
Sonoma County Water Agency, Sonoma County Department of Transportation and Public Works, Integrated Waste Management,
Sonoma County Department of Health Services Environmental Health, City of Santa Rosa - Public Works Department,
Sonoma County District Attorney, Sonoma County Regional Parks Department, North Bay Corporation, Agilent Technologies
Sonoma County Agricultural Preservation & Open Space District

Information 707-539-2865 www.sonoma-county.org/parks

**ENVIRONMENTAL
DISCOVERY
CENTER**
of Sonoma County



a raindrop's journey from cloud to creek

- follow a raindrop's journey
- touch live tidepool sea creatures
 - play the Drain Game
 - create works of art
- watch interesting videos
- learn about our watershed and much more!

January 24 - June 10, 2007

Noon - 5pm Wednesday - Sunday

FREE admission with paid parking
at Spring Lake Regional Park, uphill from the swimming lagoon

Info (707)539-2865

A partnership established by the Sonoma County Regional Parks Foundation
Sonoma County Water Agency, Sonoma County Department of Transportation and
Public Works, Integrated Waste Management, Sonoma County Department of
Health Services Environmental Health, Sonoma County District Attorney,
City of Santa Rosa - Public Works Department,
Sonoma County Regional Parks Department
Agricultural Preservation & Open Space District

Appendix IV Sonoma County Water Agency

- IV.A SCWA and ZunZun Evaluation Forms
- IV.B 2007 Russian River Watershed Association High School Video Contest
Winners

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SCWA and ZunZun Evaluation Forms

Appendix IV.A

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ZunZun Evaluation Summary (1-7 with 7 the highest value) 66 evaluations returned

Rate the following, with 7 being the highest or best rating and 1 being the lowest rating	1	2	3	4	5	6	7
1. Rate the Educational Value of this program			3%	4%	18%	31%	44%
2. Rate the program's ability to stimulate student discussion		1%	1%	12%	18%	28%	40%
3. Rate the likelihood that students will retain the material covered.			1%	7%	26%	29%	37%
4. Rate how well the program emphasized the difference between storm drains and sanitary sewers.	1%	7%	7%	15%	30%	19%	21%
5. Rate how well the program covered the importance of protecting our waterways and storm water pollution prevention.				1%	6%	21%	72%
6. Rate the effectiveness of the audience participation activities in keeping the students' attention and reinforcing the educational message.					6%	20%	74%
7. Rate the ability of live presentations such as this one to increase the students capacity for retaining the educational message.					4%	20%	76%
8. Was the program delivered in a friendly, professional and age appropriate manner?				1%	6%	7%	86%
9. Would you like to see SCWA continue with this or a similar program in the future?	Yes 100%						
10. What grade do you teach? K 1 2 3 4 5 6 7 8 10% 9% 10% 5% 11% 10% 13% 18% 14%							

Comments: (items with * mentioned more than once)

- Better for younger students – but rather than resent this – the students enjoyed it immensely *
- Students loved the assembly
- Excellent follow up to outdoor education program
- I don't usually fill out evaluations – so the quality of the performance impressed me
- Students had a wonderful time and were singing the songs all day

ZunZun Evaluation Summary (1-7 with 7 the highest value) 66 evaluations returned

Comments (con't)

- Thank-you – it was great *
- Awesome
- I would like a list of list of points to discuss and follow-up activities to do with my students
- WOW! That was great – wonderful job with the kids – they loved it and learned a lot
- The program was great, loved the music and how they incorporated the lessons
- Delightful, fun, meaningful *
- Very captivating performance *
- Fabulous learning experience for all
- Appreciated the presenter had staff and students involved in presentation
- Fun, engaging, good message *
- Excellent show, good music, fun way to teach science – kids loved it , well done
- Water is an extremely important topic for students to learn about & visit every year.

**2007 Russian River Watershed Association
High School Video Contest Winners**

Appendix IV.B

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Appendix V Monitoring Results

- V.A Chemical Monitoring Sampling Data
- V.B 2006/2007 Bioassay Survey Laboratory Results
- V.C 2006/2007 Outfall Lab Results
- V.D Colgan Creek Special Study Bioassay Survey Results

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CHEMICAL MONITORING SAMPLING DATA

Appendix V.A

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STORMWATER RESULTS FOR: Station C1

SAMPLE DATE	Event	Temp.	pH	Residual Cl2	BOD	TSS	TDS	COD	O & G	Hardness	Antimony		Arsenic		Beryllium		Cadmium		Chromium		Copper	
		°C	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Method →		Field	Field	SM4500	405.1	160.2	160.1	410.4	413.1	SM2340B	200.9		200.9		200.7		200.7		200.7		200.7	
											Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
10/11/1997	1st Flush	17.4	7.99	< 0.10	< 5	< 4	370	22	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10/8/1997	Storm I	17.6	7.81	< 0.10	7	370	150	990	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
12/14/1997	Storm II	12.7	7.00	< 0.10	< 5	180	110	57	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0110	ND
4/3/1998	Storm III	9.1	7.70	< 0.10	< 5	150	160	45	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	0.004	ND	0.0450	0.0075
10/24/1998	Storm I	7.87	8.18	< 0.10	9	97	220	7.7	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0063	0.0082
1/20/1999	Storm NQ	12.8	6.73	< 0.10	< 5	169	72	64	< 5	---	ND	ND	0.0023	ND	ND	ND	ND	ND	0.02	ND	0.0170	0.0045
1/30/1999	Storm II	10.7	7.04	< 0.10	< 5	90	86	20	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	0.013	ND	ND	ND
4/3/1999	Storm III	11.9	7.04	0.00	< 5	71	73	27	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	0.01	0.0026	0.0054	0.0048
10/27/1999	Storm I	10.2	6.3	0.00	9	174	182	75	< 5	---	ND	ND	0.0025	< 0.002	ND	ND	ND	ND	0.013	ND	0.0180	0.0020
1/30/2000	Storm II	12.4	5.51	0.00	5	85	115	46	9.8	---	ND	ND	ND	ND	ND	ND	ND	ND	0.017	ND	0.0096	0.0025
4/13/2000	Storm III	14.7	6.36	0.00	8	68	110	74	14	---	ND	ND	ND	ND	ND	ND	ND	ND	0.008	ND	0.0110	0.0037
9/2/2000	1st Flush	15.0	6.54	---	10	24	311	56	5.4	---	ND	ND	0.0020	ND	ND	ND	ND	ND	ND	ND	ND	ND
1/23/2001	Storm I	12.6	7.88	---	5	77	69	36	6.3	---	ND	ND	ND	ND	ND	ND	ND	ND	0.0076	ND	0.0084	0.0025
2/17/2001	Storm II	12.7	8.02	---	7.3	17	150	17	< 5	---	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	0.0034	0.0028
10/30/2001	1st Flush	16.4	8.03	0.10	5.2	50	300	43	< 5	186	ND	ND	0.0024	ND	ND	ND	ND	ND	0.0068	ND	0.0095	0.0082
12/14/2001	Storm I	11.0	7.03	0.16	< 5	24	96	40	< 5	---	ND	ND	0.0021	ND	ND	ND	ND	ND	0.016	ND	0.0110	ND
11/7/2002	1st Flush	14.1	7.2	< 0.10	15	150	280	63	< 5	192	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.013	< 0.002	0.0140	0.0044
2/12/2003	Storm II	10.5	7.2	< 0.10	8.5	24	150	38	< 5	87	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0034	0.012	0.0038	< 0.0020
4/4/2003	Storm III	12.7	7.58	< 0.10	6.2	41	170	34	< 5	132	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0054	< 0.002	0.0080	< 0.0020
11/8/2003	Storm I	15.4	7.09	---	---	54	170	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/19/2003	Storm II	10.5	8.05	---	---	11	180	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/25/2004	Storm III	15.0	7.58	---	---	94	200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/19/2004	Storm I	15.2	7.19	---	---	140	340	---	---	---	< 0.006	---	< 0.002	---	< 0.001	---	< 0.001	---	0.0130	---	0.0110	---
12/7/2004	Storm II	12.0	7.50	---	---	30	190	---	---	---	< 0.006	---	< 0.002	---	< 0.001	---	< 0.001	---	0.0054	---	0.0022	---
3/27/2005	Storm III	14.4	7.12	---	---	29	150	---	---	---	---	---	< 0.002	---	---	---	< 0.001	---	0.0060	---	0.0110	---
10/28/2005	1st Flush	11.4	7.28	---	---	21	260	---	---	---	< 0.006	---	< 0.002	---	< 0.001	---	< 0.001	---	0.0054	---	0.0088	---
1/17/2006		10.6	7.73	---	---	28	140	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/5/2006		16.7	7.58	---	---	---	270	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/26/2006		10.1	7.37	---	---	93	85	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/22/2007		10.1	7.67	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

STORMWATER RESULTS FOR: Station C1

SAMPLE DATE	Event	Temp.	pH	Residual CL2	BOD	TSS	TDS	COD	O & G	Hardness	Antimony		Arsenic		Beryllium		Cadmium		Chromium		Copper	
		°C	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Method →		Field	Field	SM4500	405.1	160.2	160.1	410.4	413.1	SM2340B	200.9		200.9		200.7		200.7		200.7		200.7	
											Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
MAXIMUM		17.6	8.2	0.16	15.0	370	370	990	14	192	0.006	0.006	0.003	0.002	0.001	0.001	0.001	0.001	0.020	0.012	0.0450	0.0082
MINIMUM		7.9	5.5	0.00	< 5.0	< 4	69	8	< 5	87	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.002	0.0022	0.0020
AVERAGE		12.8	7.3	0.08	6.9	84	178	92	6	149	0.006	0.006	0.002	0.002	0.001	0.001	0.001	0.001	0.009	0.005	0.0113	0.0042
MEDIAN		12.7	7.3	0.10	5.2	70	160	43	5	159	0.006	0.006	0.002	0.002	0.001	0.001	0.001	0.001	0.008	0.002	0.0096	0.0037

STORMWATER RESULTS FOR: Station C1

SAMPLE DATE	Lead		Mercury		Nickel		Selenium		Silver		Thallium		Zinc		Cyanide	Phosphorus		Total Nitrogen	Nitrate as N	Nitrite as N	TKN	Ammonia	Fecal Coli
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mpn/100ml
Method →	200.9		245.1		200.9		200.9		200.9		200.9		200.7		335.2	365.4		NM	353.2	353.3	351.20	SM4500C	SM9221
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Total	Diss						
10/1/1997	0.7100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.027	< 0.002	---	< 0.03	---	0.41	---	---	
10/8/1997	0.0140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.01	< 0.002	---	0.03	---	3.90	---	> 1600	
12/14/1997	0.0100	ND	ND	ND	0.007	ND	ND	ND	ND	ND	ND	ND	0.091	0.057	ND	0.20	< 0.002	---	0.81	---	1.60	---	---
4/3/1998	0.0075	ND	ND	ND	0.005	ND	ND	ND	0.00024	ND	ND	ND	0.046	ND	ND	0.26	0.09	---	0.42	---	1.90	---	> 1600
10/24/1998	ND	ND	0.00021	0.00023	0.0056	0.0043	ND	ND	ND	ND	ND	ND	0.016	ND	ND	0.011	0.014	---	1.10	---	1.20	---	> 1600
1/20/1999	0.0140	ND	ND	ND	0.029	0.0029	ND	ND	ND	ND	ND	ND	0.085	0.018	ND	ND	ND	---	---	---	1.40	---	> 1600
1/30/1999	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.047	0.014	ND	ND	ND	---	0.52	---	1.30	---	> 1600
4/3/1999	0.0053	ND	ND	ND	0.013	ND	ND	ND	ND	ND	ND	ND	0.025	0.018	ND	ND	ND	---	0.37	---	1.10	---	> 1600
10/27/1999	0.0130	ND	ND	ND	0.025	0.0043	ND	ND	ND	ND	ND	ND	0.094	ND	ND	1.2	ND	---	ND	---	3.70	---	> 1600
1/30/2000	0.0073	ND	ND	ND	0.024	ND	ND	ND	ND	ND	ND	ND	0.054	ND	ND	ND	ND	---	2.10	---	1.30	---	> 1600
4/13/2000	0.0057	ND	ND	ND	0.015	0.0043	ND	ND	ND	ND	ND	ND	0.083	0.031	ND	ND	ND	---	0.49	---	4.20	---	> 1600
9/2/2000	ND	ND	ND	ND	0.0068	0.0042		ND	ND	ND	ND	ND	0.021	ND	ND	ND	ND	---	ND	---	0.86	---	---
1/23/2001	0.0074	ND	ND	ND	0.012	---	ND	ND	ND	ND	ND	ND	0.058	0.056	ND	ND	ND	---	0.40	---	2.00	---	> 1600
2/17/2001	0.0029	ND	ND	ND	0.005	ND	ND	ND	ND	ND	ND	ND	0.019	ND	ND	ND	ND	---	ND	---	0.68	---	> 1600
10/30/2001	0.0073	ND	ND	ND	0.014	0.0038	ND	ND	ND	ND	ND	ND	0.045	ND	ND	ND	ND	---	ND	---	5.40	---	1600000
12/14/2001	0.0073	ND	ND	---	0.028	ND	ND	ND	ND	ND	ND	ND	0.05	0.014	ND	ND	ND	---	0.54	---	2.10	---	3800000
11/7/2002	0.0100	< 0.002	< 0.0002	< 0.0002	0.0210	0.0047	< 0.005	< 0.005	< 0.0002	< 0.0002	< 0.002	< 0.002	0.079	< 0.010	< 0.005	< 1.0	< 1.0	---	ND	---	3.00	---	5000000
2/12/2003	0.0040	< 0.002	< 0.0002	< 0.0002	0.0064	0.012	< 0.005	< 0.005	< 0.0002	< 0.0002	< 0.002	< 0.002	0.036	< 0.010	< 0.005	< 1.0	< 1.0	---	0.20	---	1.10	---	13000
4/4/2003	0.0034	< 0.002	< 0.0002	< 0.0002	0.0100	< 0.002	< 0.005	< 0.005	< 0.0002	< 0.0002	< 0.002	< 0.002	0.049	< 0.01	< 0.005	< 1.0	< 1.0	---	< 0.20	---	2.30	---	190000
11/8/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	1.2	0.33	< 0.2	0.74	0.38	280000
12/19/2003	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	---	0.68	---	0.46	< 0.20	340000
3/25/2004	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	3.2	0.36	< 0.2	2.30	0.43	60000
10/19/2004	0.0086	---	< 0.0002	---	0.0220	---	< 0.005	---	< 0.0002	---	< 0.002	---	0.067	---	---	< 1.0	< 1.0	5.0	0.43	< 0.2	4.60	0.49	1300000
12/7/2004	0.0044	---	< 0.0002	---	0.0096	---	< 0.005	---	< 0.0002	---	< 0.002	---	0.076	---	---	< 1.0	< 1.0	1.2	0.33	< 0.2	0.95	0.22	500000
3/27/2005	0.0029	---	< 0.0002	---	0.0110	---	< 0.005	---	< 0.0002	---	---	---	0.034	---	---	< 1.0	< 1.0	3.2	0.42	< 0.2	2.70	0.38	50000
10/28/2005	0.0028	---	< 0.0002	---	0.0098	---	< 0.005	---	< 0.0002	---	< 0.002	---	0.028	---	---	< 1.0	1.0	1.2	0.36	< 0.2	0.88	0.20	410000
1/17/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	< 0.5	0.42	< 0.2	0.28	0.26	20000
10/5/2006	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	3.1	0.53	< 0.2	2.60	0.94	
11/26/2006	---	---	< 0.0002	< 0.0002	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	1.5	0.21	< 0.2	1.20	0.68	300000
2/22/2007	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1.0	< 1.0	---	---	---	---	< 2	140000

STORMWATER RESULTS FOR: Station C1

SAMPLE DATE	Lead		Mercury		Nickel		Selenium		Silver		Thallium		Zinc		Cyanide	Phosphorus			Total Nitrogen	Nitrate as N	Nitrite as N	TKN	Ammonia	Fecal Coli
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mpn/100ml
Method →	200.9		245.1		200.9		200.9		200.9		200.9		200.7		335.2	365.4			NM	353.2	353.3	351.20	SM4500C	SM9221
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Total	Diss							
MAXIMUM	0.7100	0.002	0.0002	0.0002	0.029	0.012	0.005	0.005	0.0002	0.0002	0.002	0.002	0.094	0.057	0.005	1.200	1.000	5.0	2.10	0.2	5.40	0.94	5000000	
MINIMUM	0.0028	< 0.002	< 0.0002	< 0.0002	0.005	< 0.002	< 0.005	< 0.005	< 0.0002	< 0.0002	< 0.002	< 0.002	0.016	< 0.010	< 0.005	< 0.010	< 0.002	0.50	0.03	< 0.2	0.28	< 0.20	> 1600	
AVERAGE	0.0424	0.002	0.0002	0.0002	0.014	0.005	0.005	0.005	0.0002	0.0002	0.002	0.002	0.053	0.024	0.005	0.785	0.743	2.2	0.49	0.2	1.94	0.42	539254	
MEDIAN	0.0073	0.002	0.0002	0.0002	0.012	0.004	0.005	0.005	0.0002	0.0002	0.002	0.002	0.049	0.016	0.005	1.000	1.000	1.5	0.42	0.2	1.40	0.38	35000	

SAMPLE DATE	Fecal Strep
	mpn/100ml
Method →	SM9230
10/1/1997	920
10/8/1997	> 1600
12/14/1997	---
4/3/1998	---
10/24/1998	---
1/20/1999	---
1/30/1999	> 1600
4/3/1999	> 1600
10/27/1999	> 1600
1/30/2000	> 1600
4/13/2000	> 1600
9/2/2000	> 1600
1/23/2001	> 1600
2/17/2001	> 1600
10/30/2001	300000
12/14/2001	50000
11/7/2002	77000
2/12/2003	3000
4/4/2003	180000
11/8/2003	220000
12/19/2003	140000
3/25/2004	60000
10/19/2004	1300000
12/7/2004	22000
3/27/2005	28000
10/28/2005	83000
1/17/2006	30000
10/5/2006	
11/26/2006	340000
2/22/2007	50000

SAMPLE DATE	Fecal Strep
	mpn/100ml
Method →	SM9230
MAXIMUM	1300000
MINIMUM	920
AVERAGE	115933
MEDIAN	28000

STORMWATER RESULTS FOR: STATION C2

SAMPLE DATE	Event	Temp.	pH	Residual CL2	BOD	TSS	TDS	COD	O & G	Hardness	Antimony		Arsenic		Beryllium		Cadmium		Chromium		Copper		Lead	
		°C	Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Method →		Field	Field	SM4500	405.1	160.2	160.1	410.4	413.1		200.9	200.9	200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.7	200.9			
											Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss
10/1/97	1st Flush	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/8/97	Storm I	---	8	---	10	97	180	36	< 5	< 0.006	---	0.0033	---	< 0.001	---	< 0.001	---	0.0024	---	0.0080	---	0.011	---	
12/14/97	Storm II	---	8.10	---	< 5	1500	120	140	< 5	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0094	0.0030	0.0068	0.0028	0.0026	< 0.002	
4/3/98	Storm III	---	8.10	---	< 5	41	230	19	< 5	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0037	0.0021	0.0170	0.0065	< 0.002	< 0.002	
10/24/98	Storm I	---	7.8	ND	10	11	175	44	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0025	---	0.0068	0.0120	ND	ND	
1/30/99	Storm II	---	7.5	---	7	42	144	31	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0200	ND	ND	ND	ND	ND	
3/8/99	Storm III	---	---	---	5	121	116	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0310	0.0026	0.0067	0.0033	0.0032	ND	
10/27/99	Storm I	---	7.6	ND	6	10	207	69	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0051	0.0036	0.0039	0.0028	
1/30/00	Storm II	---	7.9	ND	ND	5	166	14	8.3	ND	ND	ND	ND	ND	ND	ND	ND	0.0069	0.0024	0.0029	ND	ND	ND	
4/13/00	Storm III	---	---	ND	6	44	238	9.1	12	ND	ND	ND	ND	ND	ND	ND	ND	0.0073	0.0047	ND	ND	ND	ND	
9/2/00	1st Flush	---	8.3	ND	9	4	278	37	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1/23/01	Storm I	11.8	8.31	< 0.1	ND	10	187	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0030	0.0028	ND	ND	0.0024	ND	
2/17/01	Storm II	12.5	7.85	ND	11	17	170	21	ND	ND	ND	ND	ND	ND	ND	0.0014	ND	0.0054	ND	0.0043	0.0020	ND	ND	
10/30/01	1st Flush	---	7.4	ND	7.3	14	240	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0038	0.0028	ND	ND	
12/14/01	Storm I	---	---	ND	ND	110	170	27	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0130	0.0023	0.0052	ND	ND	ND	
11/7/02	1st Flush	---	---	< 0.1	12	23	220	110	< 5	90	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.002	< 0.002	0.0077	0.005	0.0042	< 0.002
2/12/03	Storm II	---	---	< 0.1	5.2	6.9	200	23	< 5	173	< 0.006	---	< 0.002	---	< 0.001	---	< 0.001	---	0.0057	---	0.0028	---	< 0.0020	---
4/4/03	Storm III	---	---	< 0.1	< 5	1.4	220	8	< 5	194	< 0.006	< 0.006	< 0.002	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0048	0.0031	< 0.002	< 0.002	< 0.0020	< 0.002
11/8/03	Storm I	14.2	7.57	---	---	8.1	210	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/19/03		9.9	8.23	---	---	11	170	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/10/04		---	---	---	---	2.0	210	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/25/04		---	---	---	---	5.0	210	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/19/04		14.4	7.65	---	---	11	200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/7/04		10.2	7.76	---	---	4.2	150	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/27/05		---	---	---	---	10	170	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/7/05	1st Flush	11.1	7.36	---	---	1.0	230	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1/17/06		10.4	7.57	---	---	15	170	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/5/06		15.9	7.85	---	---	---	260	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/26/06		9.5	7.46	---	---	16	190	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/22/07		10.8	7.62	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MAXIMUM		14.4	8.3	0.1	12	1500	278	140	12	194	0.006	0.006	0.0033	0.002	0.001	0.001	0.001	0.001	0.0310	0.0047	0.0170	0.012	0.0110	0.003
MINIMUM		9.9	7.4	< 0.1	< 5	1.0	116	8	< 5	90	< 0.006	< 0.006	< 0.0020	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.0020	< 0.0020	0.0020	0.002	0.0020	0.002
AVERAGE		11.8	7.8	0.1	7	79	194	41	6	152	0.006	0.006	0.0022	0.002	0.001	0.001	0.001	0.001	0.0084	0.0028	0.0061	0.004	0.0037	0.002
MEDIAN		11.5	7.8	0.1	7	11	195	27	5	173	0.006	0.006	0.0020	0.002	0.001	0.001	0.001	0.001	0.0056	0.0026	0.0052	0.003	0.0026	0.002

STORMWATER RESULTS FOR: STATION C2

SAMPLE DATE	Mercury		Nickel		Selenium		Silver		Thallium		Zinc		Cyanide	Phosphorus			Total Nitrogen	Nitrate as N	Nitrite as N	TKN	Ammonia	Fecal Coli	Fecal Strep
	µg/L		µg/L		µg/L		µg/L		µg/L		µg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mpn/100ml	mpn/100ml
Method →	245.1		200.9		200.9		200.9		200.9		200.7		335.2	365.4			NM	353.2	353.3	351.2	M4500NH3	SM9221	SM9230
	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Diss	Total	Total	Diss								
10/1/97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		---	---	---	---	---	---	---
10/8/97	0.00048	---	0.0048	---	< 0.005	---	0.00038	---	< 0.002	---	0.027	---	< 0.005	---	---		ND		0.75	---	---	---	
12/14/97	0.00046	< 0.002	0.0032	0.0025	< 0.005	< 0.005	< 0.010	< 0.01	< 0.002	---	< 0.010	< 0.010	< 0.005	---	---		0.58		2.2	---	> 1600	> 1600	
4/3/98	0.00038	< 0.002	< 0.002	< 0.002	< 0.005	< 0.005	< 0.002	< 0.002	< 0.002	< 0.002	< 0.010	< 0.010	< 0.005	0.11	---		< 0.2		1.1	---	---	---	
10/24/98	ND	ND	0.014	0.0062	ND	ND	ND	ND	ND	ND	0.025	0.025	ND	0.25	0.2		2.5		2.1	---	> 1600	> 1600	
1/30/99	ND	ND	0.037	ND	ND	ND	ND	ND	ND	ND	0.047	0.047	ND	ND	ND		0.3		0.93	---	---	---	
3/8/99	ND	ND	0.050	0.0025	ND	ND	ND	ND	ND	ND	0.015	0.015	ND	ND	ND		ND		0.93	---	> 1600	---	
10/27/99	ND	ND	0.0051	0.0047	ND	ND	ND	ND	ND	ND	0.023	0.023	ND	ND	ND		0.3		1.6	---	> 1600	> 1600	
1/30/00	ND	ND	0.0110	0.0026	ND	ND	ND	ND	ND	ND	0.025	0.025	ND	ND	ND		ND		ND	---	170	110	
4/13/00	ND	ND	0.0023	0.0070	ND	ND	ND	ND	ND	ND	0.026	0.026	ND	ND	ND		ND		0.75	---	220	900	
9/2/00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		0.44	---	1600	13	
1/23/01	ND	ND	0.0031	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	ND		0.286		0.47	---	900	1600	
2/17/01	ND	ND	0.0088	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		5.0		ND	---	> 1600	> 1600	
10/30/01	ND	ND	0.0022	0.0022	ND	ND	ND	ND	ND	ND	0.02	0.02	ND	ND	ND		0.28		1.4	---	24000	13000	
12/14/01	ND	ND	0.0220	ND	ND	ND	ND	ND	ND	ND	0.029	0.029	ND	ND	ND		0.37		1.4	---	17000	3000	
11/7/02	< 0.0002	< 0.0002	0.0039	0.0038	< 0.005	< 0.005	< 0.0002	< 0.0002	< 0.002	< 0.002	0.046	0.033	< 0.005	< 1	< 1		0.57		4.6	---	90000	30000	
2/12/03	< 0.0002	---	0.0054	---	< 0.005	---	< 0.0002	---	< 0.002	---	0.031	---	< 0.005	< 1	< 1		< 0.2		1.4	---	30000	450	
4/4/03	< 0.0002	< 0.0002	0.0038	< 0.002	< 0.005	< 0.005	< 0.0002	< 0.0002	< 0.002	< 0.002	< 0.01	< 0.01	< 0.005	< 1	< 1		< 0.2		4.4	---	2400	3000	
11/8/03	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	< 0.50	< 0.2	< 0.2	0.21	< 0.2	70000	30000	
12/19/03	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	1.10	0.33	< 0.2	0.77	< 0.2	2400000	1800000	
3/10/04	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	0.61	< 0.2	< 0.2	0.52	< 0.2	1700	500	
3/25/04	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	0.78	< 0.2	< 0.2	0.77	< 0.2	400000	14000	
10/19/04	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	1.20	< 0.2	< 0.2	1.1	0.33	300000	160000	
12/7/04	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	< 0.50	< 0.2	< 0.2	0.38	< 0.2	22000	11000	
3/27/05	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	0.56	< 0.2	< 0.2	0.42	0.28	30000	85000	
11/7/05	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	< 0.50	< 0.2	< 0.2	0.38	< 0.2	34000	95000	
1/17/06	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	0.59	0.56	< 0.2	0.32	< 0.2	17000	11000	
10/5/06	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	1.20	< 0.2	< 0.2	1.0	0.21	---	---	
11/26/06	< 0.0002	< 0.0002	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	0.59	< 0.2	< 0.2	0.49	0.3	17000	30000	
2/22/07	---	---	---	---	---	---	---	---	---	---	---	---	---	< 1	< 1	---	---	---	---	< 0.2	1700000	3800000	
MAXIMUM	0.00048	0.00200	0.050	0.0070	0.005	0.005	0.01000	0.0100	0.002	0.002	0.047	0.047	0.005	1.000	1.000	1.20	5.00	0.20	4.60	0.33	2400000	3800000	
MINIMUM	0.00020	0.00020	0.002	0.0020	0.005	0.005	0.00020	0.0002	0.002	0.002	0.010	0.010	< 0.005	0.110	0.200	< 0.50	< 0.20	< 0.20	0.21	< 0.20	170	13	
AVERAGE	0.00032	0.00110	0.011	0.0036	0.005	0.005	0.00216	0.0031	0.002	0.002	0.025	0.023	0.005	0.883	0.938	0.74	0.59	0.20	1.19	0.23	206640	253957	
MEDIAN	0.00020	0.00020	0.005	0.0026	0.005	0.005	0.00029	0.0011	0.002	0.002	0.025	0.024	0.005	1.000	1.000	0.59	0.20	0.20	0.85	0.20	17000	3000	

2006/2007 BIOASSAY SURVEY LAB RESULTS

Appendix V.B

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CETIS Test Summary

Report Date:

16 Oct-06 4:15 PM

Test Link:

09-1981-9861/21436

Acute Fish Survival Test		Pacific EcoRisk						
Test No:	03-9536-9627	Test Type:	Survival (96h)	Duration:	95h	Species:	Oncorhynchus mykiss	
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Source:	Thomas Fish Co.			
Ending Date:	10 Oct-06 03:20 PM	Dil Water:	Not Applicable					
Setup Date:	06 Oct-06 04:00 PM	Brine:	Not Applicable					
Sample No:	05-7617-2920	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 11:00 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	29h (11.1 °C)	Station:	Brush Creek @ Flat Rock					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
08-3215-4545	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Analysis Detail

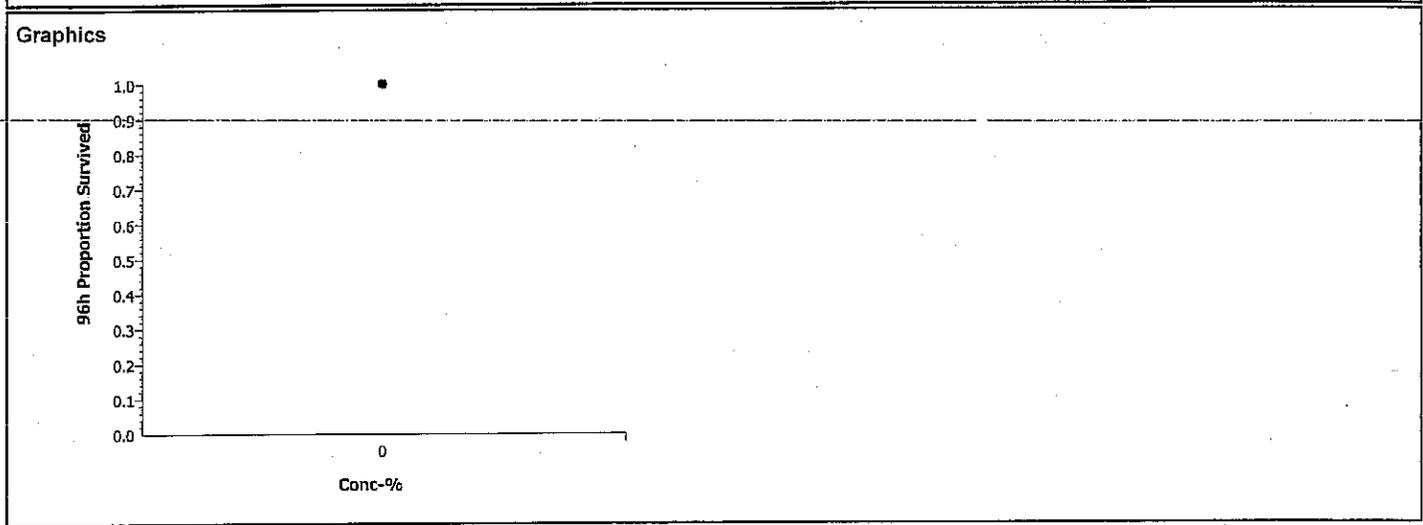
Acute Fish Survival Test					Pacific EcoRisk	
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	09-1981-9861	09-1981-9861	16 Oct-06 4:15 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3033 Age: 18 days
 Test Material: Brush Creek at Flat Rock Organism Supplier: Thomas Fish Co.
 Test ID#: 21436 Project #: 11689 Control: EPAMH
 Test Date: 10/6/06 Randomization: - Control Water Batch: 968
 Feeding To Time: 1500 Initials: KN

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: 10/6/06 Sample ID: 16133 Test Solution Prep: KN
100%	12.5	8.15		7.5		327		10	10	New WQ: KN Initiation Time: 1600 Initiation Signoff: KN
Meter ID	41	pH12		D012		E003				
Control	12.7		7.89		8.3		326	10	10	Count Date: 10/7/06 Count Time: 1200 Count Signoff: MN
100%	12.7		7.81		7.1		326	10	10	Old WQ: JM
Meter ID	41		pH12		D012		E003			
Control	12.4		7.66		11.9		321	10	10	Count Date: 10/8/06 Count Time: 1102 Count Signoff: JM
100%	12.4		7.7		10.3		313	10	10	Old WQ: JM
Meter ID	41		pH03		D002		E002			
Control	12.0		7.95		9.1		329	10	10	Count Date: 10/9/06 Count Time: 1408 Count Signoff: JM
100%	12.0		7.90		8.6		325	10	10	Old WQ: JM
Meter ID	41		pH09		D002		E002			
Control	12.6		7.80		8.0		343	10	10	Date: 10/10/06 Termination Time: 1520 Termination Signoff: MN
100%	12.6		7.80		7.3		331	10	10	Old WQ: JM
Meter ID	41		pH12		D010		E01			

Report Date: 11 Oct-06 2:31 PM

Test Link: 14-4446-2337/21437

CETIS Test Summary

Acute Fish Survival Test		Pacific EcoRisk						
Test No:	03-9536-9627	Test Type:	Survival (96h)	Duration:	95h	Species:	Oncorhynchus mykiss	
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Source:	Thomas Fish Co.			
Ending Date:	10 Oct-06 03:20 PM	Dil Water:	Not Applicable					
Setup Date:	06 Oct-06 04:00 PM	Brine:	Not Applicable					
Sample No:	17-4019-1464	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 11:43 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	28h (10.8 °C)	Station:	Colgan Creek @ Bellevue Ave					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
16-5400-2169	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	0.90000	0.90000	0.90000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		0.90000	0.90000					

CETIS Analysis Detail

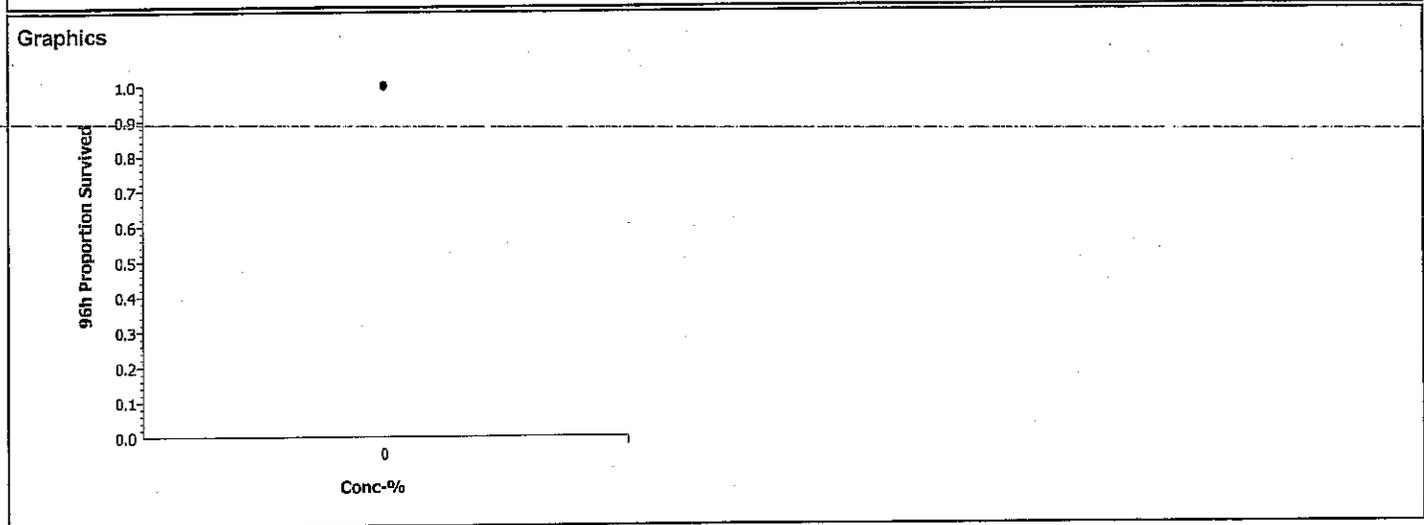
Acute Fish Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	14-4446-2337	14-4446-2337	11 Oct-06 2:30 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	0.24359	0.24359	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		18	2	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa
 Test Material: Colgan Creek at Bellevue Avenue
 Test ID#: 21437 Project # 11689
 Test Date: 10/16/06 Randomization: -
 Feeding To Time: 1500 Initials: KN

Organism Log #: 3033 Age: 18 days
 Organism Supplier: Thomas Fish Co.
 Control: EPAMH
 Control Water Batch: 968

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: <u>10/16/06</u> Sample ID: <u>16134</u> Test Solution Prep: <u>KN</u> New WQ: <u>KN</u> Initiation Time: <u>1600</u> Initiation Signoff: <u>KN</u>
100%	12.5	7.86		7.0		384		10	10	
Meter ID	<u>41</u>	<u>pH12</u>		<u>D012</u>		<u>E003</u>				
Control	12.7		7.89		8.3	326		10	10	Count Date: <u>10/7/06</u> Count Time: <u>1200</u> Count Signoff: <u>MN</u> Old WQ: <u>JM</u>
100%	12.7		7.53		7.3	387		10	10	
Meter ID	<u>41</u>		<u>pH12</u>		<u>D012</u>	<u>E003</u>				
Control	12.4		7.66		11.9	321		10	10	Count Date: <u>10/8/06</u> Count Time: <u>1102</u> Count Signoff: <u>KN</u> Old WQ: <u>BL</u>
100%	12.4		7.58		9.9	385		10	10	
Meter ID	<u>41</u>		<u>pH03</u>		<u>D002</u>	<u>E002</u>				
Control	12.0		7.95		9.1	329		10	10	Count Date: <u>10/9/06</u> Count Time: <u>1408</u> Count Signoff: <u>KN</u> Old WQ: <u>JM</u>
100%	12.0		7.75		8.2	382		9	9	
Meter ID	<u>41</u>		<u>pH01</u>		<u>D002</u>	<u>E002</u>				
Control	12.6		7.80		8.0	343		10	10	Date: <u>10/10/06</u> Termination Time: <u>1520</u> Termination Signoff: <u>MN</u> Old WQ: <u>BL</u>
100%	12.6		7.6		6.6	386		9	9	
Meter ID	<u>41</u>		<u>pH12</u>		<u>D010</u>	<u>E001</u>				

CETIS Test Summary

Acute Fish Survival Test		Pacific EcoRisk						
Test No:	03-9536-9627	Test Type:	Survival (96h)					
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)					
Ending Date:	10 Oct-06 03:20 PM	Dil Water:	Not Applicable					
Setup Date:	06 Oct-06 04:00 PM	Brine:	Not Applicable					
Duration:	95h	Species:	Oncorhynchus mykiss					
Source:	Thomas Fish Co.							
Sample No:	10-5000-6585	Code:	11689					
Sample Date:	05 Oct-06 11:20 AM	Material:	Stormwater					
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	29h (10.3 °C)	Station:	Matanzas Creek @ Hoen Frontage Rd					
Client:	City of Santa Rosa	Project:	Stormwater					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
08-5884-1589	96h Proportion Survived	< 100	100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	0.40000	0.20000	0.60000	0.20000	0.28284	70.71%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		0.20000	0.60000					

CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 11 Oct-06 2:32 PM
 Analysis: 08-5884-1589/21438

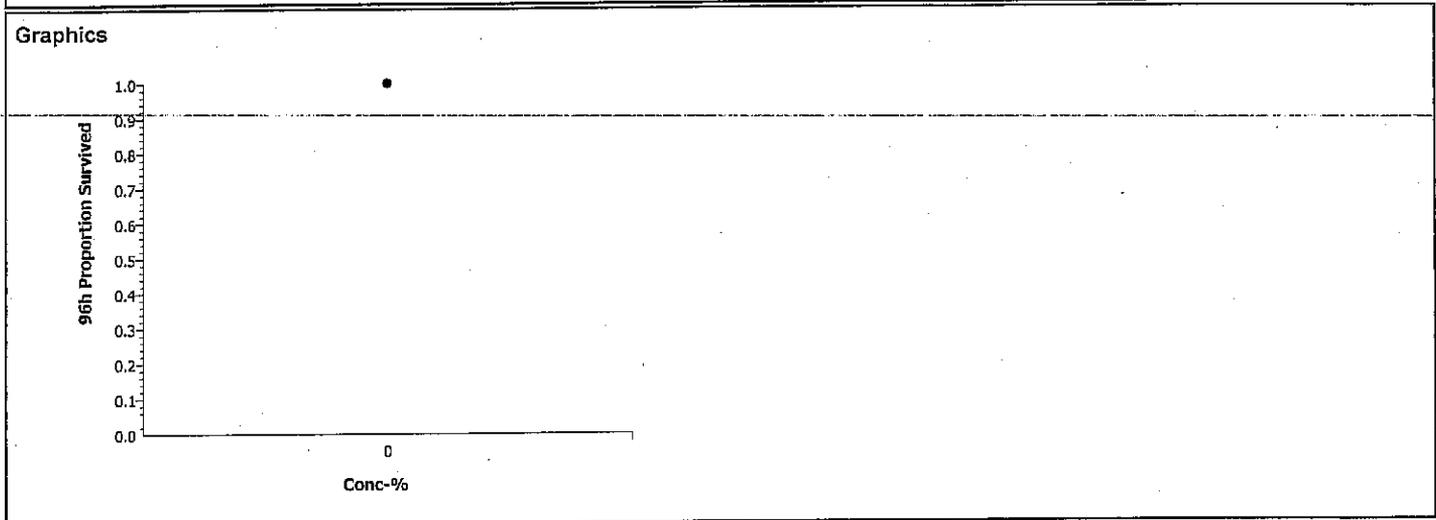
Acute Fish Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	06-4486-5197	06-4486-5197	11 Oct-06 2:32 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		<100	100		N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	0.00002	0.00002	Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		8	12	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa
 Test Material: Matanzas Creek at Hoen Frontage
 Test ID#: 21438 Project #: 11689
 Test Date: 10/6/06 Randomization: -
 Feeding To Time: 1500 Initials: KN

Organism Log #: 3037 Age: 18 days
 Organism Supplier: Thomas Fish Co.
 Control: EPAMH
 Control Water Batch: 968

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: <u>10/6/06</u> Sample ID: <u>16135</u> Test Solution Prep: <u>KN</u> New WQ: <u>KN</u> Initiation Time: <u>1600</u> Initiation Signoff: <u>KN</u>
100%	12.5	7.96		7.1		270		10	10	
Meter ID	<u>41</u>	<u>pH12</u>		<u>D012</u>		<u>E003</u>				
Control	12.7		7.89		8.3		326	10	10	Count Date: <u>10/7/06</u> Count Time: <u>1200</u> Count Signoff: <u>MN</u> Old WQ: <u>JM</u>
100%	12.7		7.59		7.1 <u>JJM</u>		273	10	10	
Meter ID	<u>41</u>		<u>pH12</u>		<u>D012</u>		<u>E003</u>			
Control	12.4		7.66		11.9		321	10	10	Count Date: <u>10/8/06</u> Count Time: <u>1100</u> Count Signoff: <u>KN</u> Old WQ: <u>OL</u>
100%	12.4		7.63		9.9		272	7	9	
Meter ID	<u>41</u>		<u>pH03</u>		<u>D002</u>		<u>E202</u>			
Control	12.0		7.95		9.1		329	10	10	Count Date: <u>10/9/06</u> Count Time: <u>1408</u> Count Signoff: <u>KN</u> Old WQ: <u>JM</u>
100%	12.0		7.77		8.0		272	2	6	
Meter ID	<u>41</u>		<u>pH07</u>		<u>D002</u>		<u>E002</u>			
Control	12.6		7.80		8.0		343	10	10	Date: <u>10/10/06</u> Termination Time: <u>MN 9:00 1520</u> Termination Signoff: <u>MN</u> Old WQ: <u>OL</u>
100%	12.6		7.69		6.7		272	<u>MN</u> 12	6	
Meter ID	41 <u>MN</u>		<u>pH12</u>		<u>D010</u>		<u>E101</u>			

Report Date: 16 Oct-06 4:17 PM

Test Link: 15-0462-3469/21439

CETIS Test Summary

Acute Fish Survival Test							Pacific EcoRisk	
Test No:	03-9536-9627	Test Type:	Survival (96h)	Duration:	95h			
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss			
Ending Date:	10 Oct-06 03:20 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.			
Setup Date:	06 Oct-06 04:00 PM	Brine:	Not Applicable					
Sample No:	16-8162-9928	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 10:12 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	30h (13.9 °C)	Station:	Paulin Creek @ Administration Dr					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
03-4829-8204	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Analysis Detail

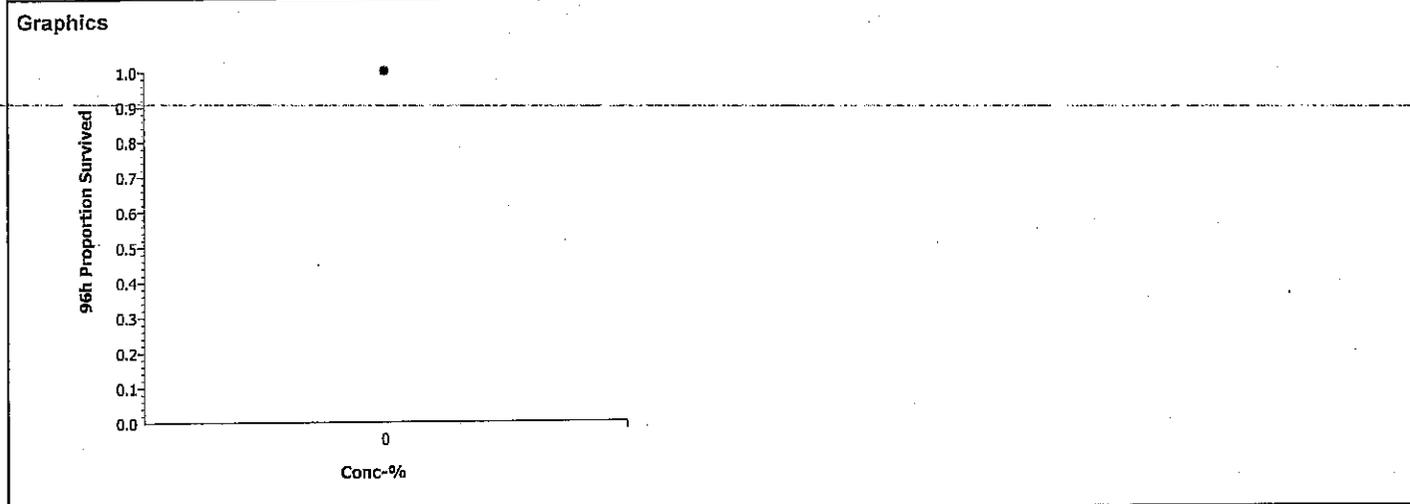
Acute Fish Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	15-0462-3469	14-4446-2337	16 Oct-06 4:17 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa
 Test Material: Paulin Creek at Administration Drive
 Test ID#: 21439 Project # 11689
 Test Date: 10/16/06 Randomization: -
 Feeding Time: 1500 Initials: KN

Organism Log #: 3033 Age: 18 days
 Organism Supplier: Thomas Fish Co.
 Control: EPAMH
 Control Water Batch: 968

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: 10/16/06 Sample ID: 16136 Test Solution Prep: KN New WQ: KN
100%	12.5	8.05		7.9		227		10	10	Initiation Time: 1600 Initiation Signoff: KN
Meter ID	41	pH12		D012		E003				
Control	12.7		7.89		8.3		326	10	10	Count Date: 10/17/06 Count Time: 1200 Count Signoff: MJ Old WQ: JTM
100%	12.7		7.53		7.4		230	10	10	
Meter ID	41		pH12		D012		E003			
Control	12.4		7.66		11.9		321	10	10	Count Date: 10/18/06 Count Time: 1102 Count Signoff: KN Old WQ: MJ
100%	12.4		7.63		10.9		227	10	10	
Meter ID	41		pH03		D002		E002			
Control	12.0		7.95		9.1		329	10	10	Count Date: 10/19/06 Count Time: 1408 Count Signoff: KN Old WQ: JTM
100%	12.0		7.72		8.5		232	10	10	
Meter ID	41		pH07		D002		E002			
Control	12.6		7.80		8.0		343	10	10	Date: 10/20/06 Termination Time: 1520 Termination Signoff: KN Old WQ: MJ
100%	12.4		7.67 mm		7.2 mm		229	10	10	
Meter ID	41		pH12		D010		E001			

Report Date: 16 Oct-06 4:19 PM

Test Link: 17-7359-0184/21440

CETIS Test Summary

Acute Fish Survival Test				Pacific EcoRisk				
Test No:	03-9536-9627	Test Type:	Survival (96h)	Duration:	95h			
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss			
Ending Date:	10 Oct-06 03:20 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.			
Setup Date:	06 Oct-06 04:00 PM	Brine:	Not Applicable					
Sample No:	18-2380-6556	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 09:36 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	30h (12.8 °C)	Station:	Peterson Creek @ Fulton Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
16-6505-8826	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Analysis Detail

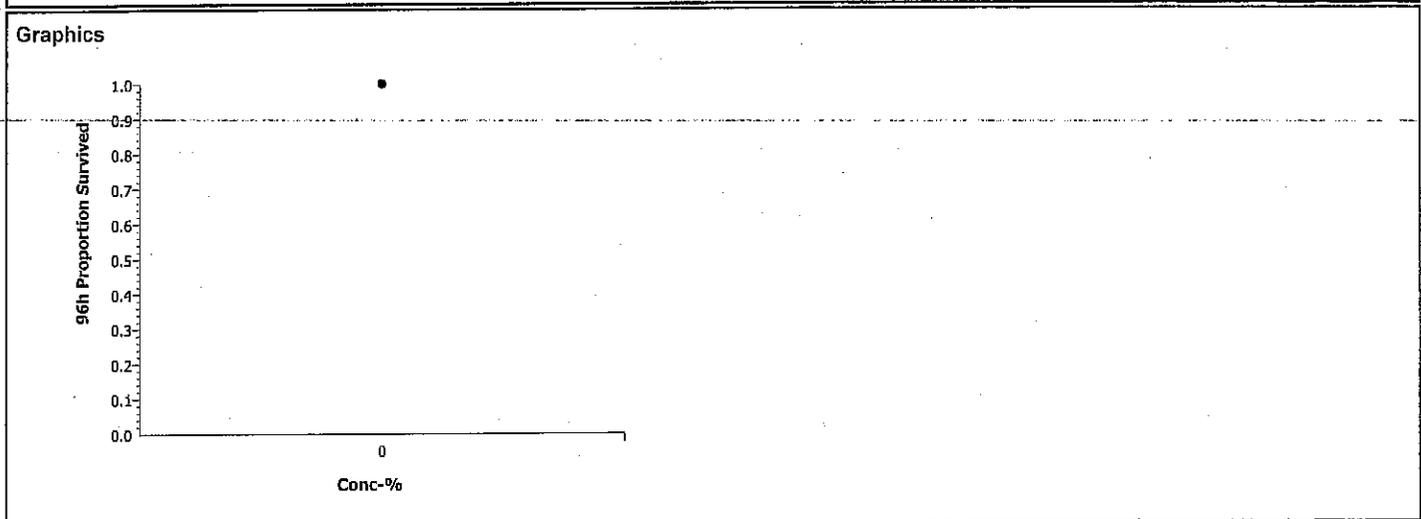
Acute Fish Survival Test					Pacific EcoRisk	
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	17-7359-0184	14-4446-2337	16 Oct-06 4:19 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3033 Age: 18 days
 Test Material: Peterson Creek at Fulton Road Organism Supplier: Thomas Fish Co.
 Test ID#: 21440 Project #: 11689 Control: EPAMH
 Test Date: 10/6/06 Randomization: ~ Control Water Batch: 968
 Feeding To Time: 1500 Initials: KN

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: 10/6/06 Sample ID: 16137 Test Solution Prep: KN New WQ: KN
100%	12.5	7.76		7.6		129		10	10	Initiation Time: 1600 Initiation Signoff: KN
Meter ID	41	pH12		D012		E003				
Control	12.7		7.89		8.3		326	10	10	Count Date: 10/7/06 Count Time: 1200 Count Signoff: MN Old WQ: JM
100%	12.7		7.43		7.5		131	10	10	
Meter ID	41		pH12		D012		E003			
Control	12.4		7.66		8.19		321	10	10	Count Date: 10/8/06 Count Time: 1102 Count Signoff: KN Old WQ: AL
100%	12.4		7.39		10.5		137	10	10	
Meter ID	41		pH03		D002		E002			
Control	12.0		7.95		9.1		329	10	10	Count Date: 10/9/06 Count Time: 1408 Count Signoff: KN Old WQ: JM
100%	12.0		7.69		8.3		134	10	10	
Meter ID	41		pH01		D002		E002			
Control	12.6		7.80		8.0		343	10	10	Date: 10/10/06 Termination Time: 1520 Termination Signoff: MN Old WQ: AL
100%	12.6		7.43		7.1		133	10	10	
Meter ID	41		pH12		D010		E001			

CETIS Test Summary

Acute Fish Survival Test Pacific EcoRisk

Test No: 10-3281-3573	Test Type: Survival (96h)	Duration: 95h
Start Date: 06 Oct-06 04:00 PM	Protocol: EPA/821/R-02-012 (2002)	Species: Oncorhynchus mykiss
Ending Date: 10 Oct-06 03:20 PM	Dil Water: Not Applicable	Source: Thomas Fish Co.
Setup Date: 06 Oct-06 04:00 PM	Brine: Not Applicable	

Sample No: 20-0146-7291	Code: 11689	Client: City of Santa Rosa
Sample Date: 05 Oct-06 09:54 AM	Material: Stormwater	Project: Stormwater
Receive Date: 05 Oct-06 01:40 PM	Source: City of Santa Rosa	
Sample Age: 30h (12.4 °C)	Station: Piner Ck @ Marlow Rd	

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method
09-5987-8378	96h Proportion Survived	< 100	100	N/A	N/A	Fisher Exact

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	0.75000	0.70000	0.80000	0.05000	0.07071	9.43%

96h Proportion Survived Detail			
Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water	1.00000	1.00000
100		0.70000	0.80000

CETIS Analysis Detail

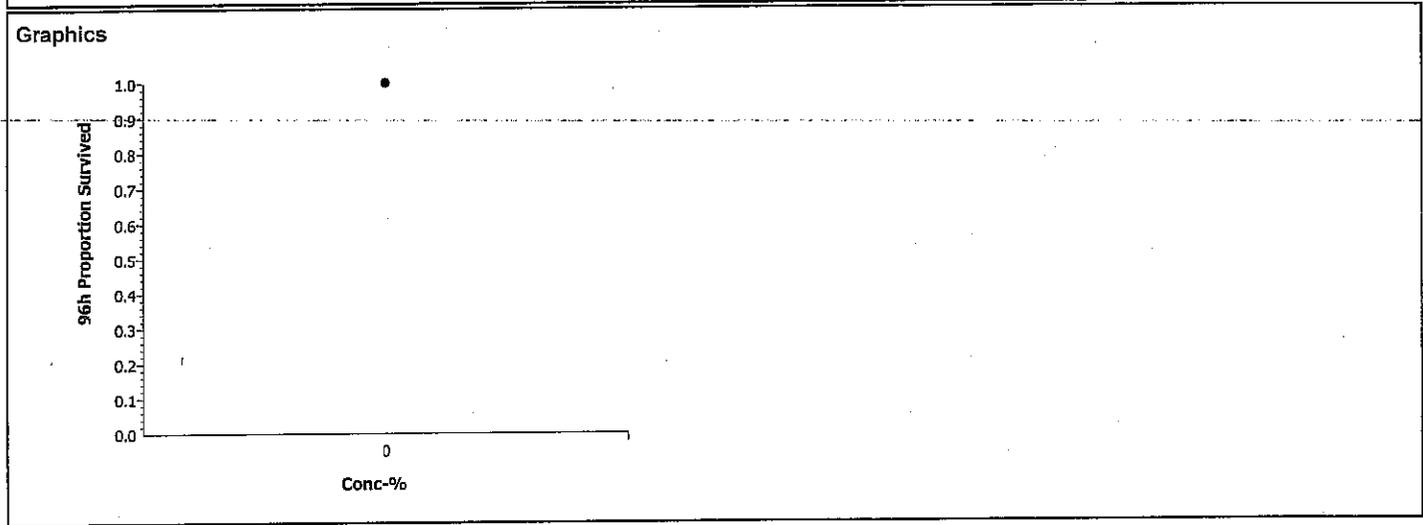
Acute Fish Survival Test					Pacific EcoRisk	
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	06-9670-7619	06-9670-7619	11 Oct-06 2:35 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		<100	100		N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	0.02356	0.02356	Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		15	5	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa
 Test Material: Piner Creek at Marlow Road
 Test ID#: 21441 Project #: 11689
 Test Date: 10/6/06 Randomization:
 Feeding To Time: 1500 Initials: KN

Organism Log #: 3033 Age: 18 days
 Organism Supplier: Thomas Fish Co.
 Control: EPAMH
 Control Water Batch: 968

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control (2)	12.5	8.64		8.2		331		10	10	Date: 10/6/06 Sample ID: 16138 Test Solution Prep: KN
100%	12.5	7.72		7.5		258		10	10	New WQ: KN Initiation Time: 1600 Initiation Signoff: KN
Meter ID	41	PH12		DO12		EC03				
Control	12.7		7.57		8.9		324	10	10	Count Date: 10/7/06 Count Time: 1200 Count Signoff: MN Old WQ: JM
100%	12.7		7.51		7.9		261	10	10	
Meter ID	41		PH12		DO12		EC03			
Control	12.4		7.73		12		325	10	10	Count Date: 10/8/06 Count Time: 1102 Count Signoff: KN Old WQ: AC
100%	12.4		7.41		10.1		255	10	10	
Meter ID	41		PH03		DO02		EC02			
Control	12.0		7.70		9.0		325	10	10	Count Date: 10/9/06 Count Time: 1408 Count Signoff: KN Old WQ: OM
100%	12.0		7.64		8.0		262	9	8	
Meter ID	41		PH09		DO02		EC02			
Control	12.6		7.78		7.9		328	10	10	Date: 10/10/06 Termination Time: MN 9:00 15:20 Termination Signoff: MN Old WQ: AC
100%	12.6		7.55		7.0		260	7	8	
Meter ID	41		PH12		DO10		EC01			

CETIS Test Summary

Report Date: 16 Oct-06 4:22 PM
 Test Link: 11-7437-6104/21442

Acute Fish Survival Test							Pacific EcoRisk		
Test No:	10-3281-3573	Test Type:	Survival (96h)	Duration:	95h	Species:	Oncorhynchus mykiss	Source:	Thomas Fish Co.
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Dil Water:	Not Applicable	Brine:	Not Applicable		
Ending Date:	10 Oct-06 03:20 PM								
Setup Date:	06 Oct-06 04:00 PM								
Sample No:	08-9692-9873	Code:	11689	Client:	City of Santa Rosa	Project:	Stormwater		
Sample Date:	05 Oct-06 10:40 AM	Material:	Stormwater						
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa						
Sample Age:	29h (11.9 °C)	Station:	Santa Rosa Ck @ Melita Rd						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
19-2031-4519	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2						
0	Lab Water	1.00000	1.00000						
100		1.00000	1.00000						

CETIS Analysis Detail

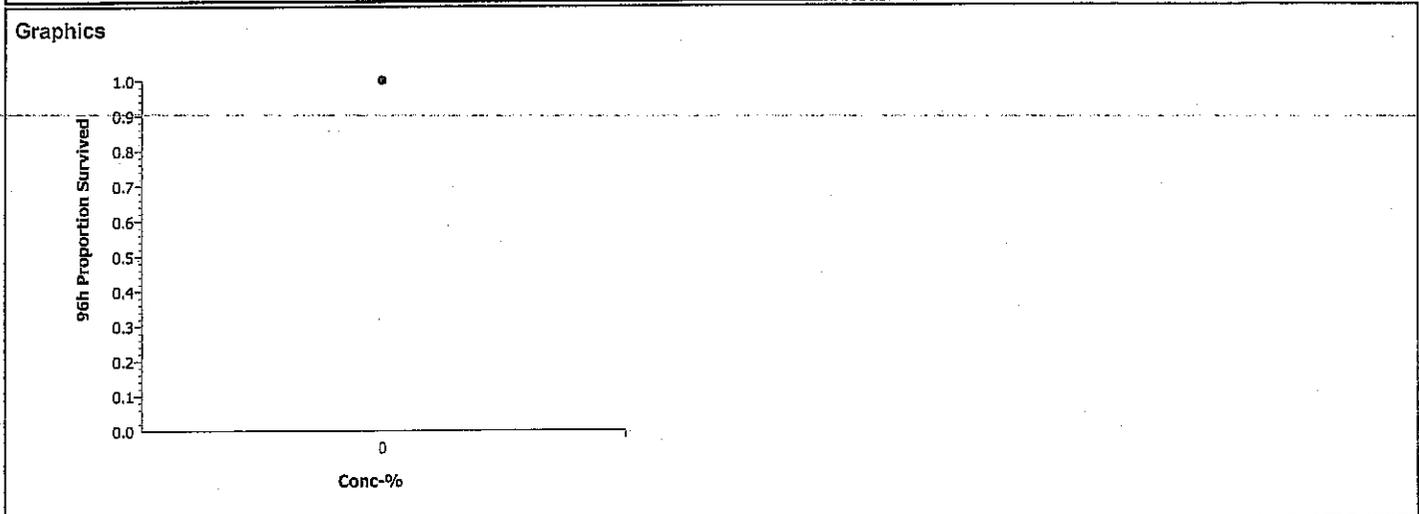
Acute Fish Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	11-7437-6104	06-9670-7619	16 Oct-06 4:21 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa
 Test Material: Santa Rosa Creek at Melita Road
 Test ID#: 21442 Project # 11689
 Test Date: 10/6/06 Randomization: -
 Feeding To Time: 1500 Initials: KN

Organism Log #: 3033 Age: 18 days
 Organism Supplier: Thomas Fish Co.
 Control: EPAMH
 Control Water Batch: 968

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: 10/6/06 Sample ID: 16139 Test Solution Prep: KN New WQ: KN Initiation Time: 1600 Initiation Signoff: KN
100%	12.5	8.54		8.3		410		10	10	
Meter ID	41	PH12		DO12		EC03				
Control	12.7		7.87		8.9		324	10	10	Count Date: 10/7/06 Count Time: 1200 Count Signoff: MN Old WQ: JM
100%	12.7		8.07		7.9		411	10	10	
Meter ID	41		PH12		DO12		EC03			
Control	12.4		7.93		12		325	10	10	Count Date: 10/8/06 Count Time: 1102 Count Signoff: KN Old WQ: BL
100%	12.4		8.1		11.7		369	10	10	
Meter ID	41		PH03		DO02		EC02			
Control	12.0		7.70		9.0		325	10	10	Count Date: 10/9/06 Count Time: 1408 Count Signoff: KN Old WQ: JM
100%	12.0		8.17		8.7		466	10	10	
Meter ID	41		PH09		DO02		EC02			
Control	12.6		7.78		7.9		328	10	10	Date: 10/10/06 Termination Time: 1520 Termination Signoff: MN Old WQ: BL
100%	12.6		8.17		7.7		407	10	10	
Meter ID	41		PH12		DO10		EC01			

Report Date: 16 Oct-06 4:28 PM
 Test Link: 15-7736-3397/21443

CETIS Test Summary

Acute Fish Survival Test						Pacific EcoRisk			
Test No:	10-3281-3573	Test Type:	Survival (96h)	Duration:	95h	Species:	Oncorhynchus mykiss	Source:	Thomas Fish Co.
Start Date:	06 Oct-06 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Dil Water:	Not Applicable	Brine:	Not Applicable	Client:	City of Santa Rosa
Ending Date:	10 Oct-06 03:20 PM	Material:	Stormwater	Project:	Stormwater	Sample No:	13-8928-8400	Code:	11689
Setup Date:	06 Oct-06 04:00 PM	Source:	City of Santa Rosa	Sample Date:	05 Oct-06 09:14 AM	Receive Date:	05 Oct-06 01:40 PM	Station:	Santa Rosa Ck @ Piner Ck
Sample Age:	31h (11.5 °C)								
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
07-0598-8655	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2						
0	Lab Water	1.00000	1.00000						
100		1.00000	1.00000						

CETIS Analysis Detail

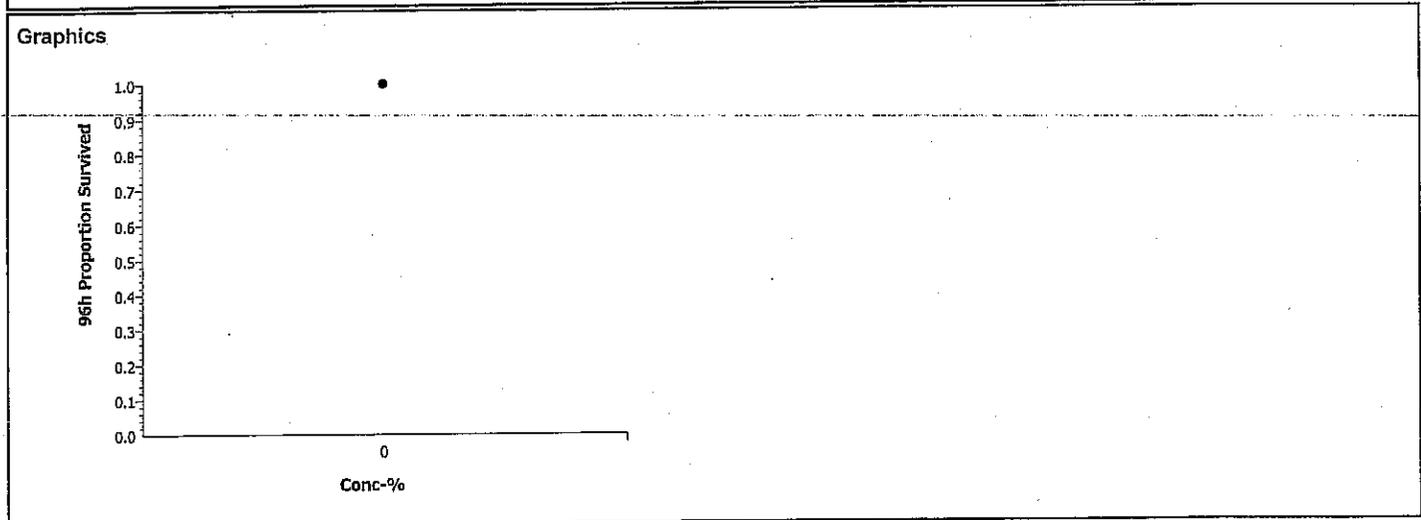
Acute Fish Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	15-7736-3397	06-9670-7619	16 Oct-06 4:23 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*O. mykiss*) Toxicity Test

Client: City of Santa Rosa
 Test Material: Santa Rosa Creek at Piner Creek
 Test ID#: 21443 Project # 11689
 Test Date: 10/6/06 Randomization: -
 Feeding To Time: 1500 Initials: KN

Organism Log #: 3033 Age: 18 days
 Organism Supplier: Thomas Fish Co.
 Control: EPAMH
 Control Water Batch: 968

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.64		8.2		331		10	10	Date: 10/6/06 Sample ID: 16140 Test Solution Prep: KN New WQ: KN Initiation Time: 1600 Initiation Signoff: KN
100%	12.5	8.27		7.5		471		10	10	
Meter ID	41	PH12		DO12		EC03				
Control	12.7		7.82		8.9		324	10	10	Count Date: 10/7/06 Count Time: 1200 Count Signoff: MN Old WQ: JM
100%	12.7		7.86		7.6		476	10	10	
Meter ID	41		PH12		DO12		EC03			
Control	12.4		7.73		12		325	10	10	Count Date: 10/8/06 Count Time: 1102 Count Signoff: KN Old WQ: RL
100%	12.4		7.95		10.0		462	10	10	
Meter ID	41		PH03		DO02		EC02			
Control	12.0		2.70		8.0		325	10	10	Count Date: 10/9/06 Count Time: 1408 Count Signoff: KN Old WQ: JM
100%	12.0		8.13		8.4		468	10	10	
Meter ID	41		PH09		DO02		EC02			
Control	12.6		7.78		7.9		328	10	10	Date: 10/10/06 Termination Time: 1520 900 MN Termination Signoff: MN Old WQ: RL
100%	12.6		8.14		7.4		463	10	10	
Meter ID	41		PH12		DO10		EC01			

Report Date: 16 Oct-06 4:38 PM

Test Link: 11-2280-2973/21428

CETIS Test Summary

Acute Ceriodaphnia Survival Test		Pacific EcoRisk						
Test No:	16-6233-7763	Test Type:	Survival (96h)					
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)					
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable					
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable					
Duration:	46h	Species:	Ceriodaphnia dubia					
Source:	In-House Culture							
Sample No:	05-7617-2920	Code:	11689					
Sample Date:	05 Oct-06 11:00 AM	Material:	Stormwater					
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	29h (11.1 °C)	Station:	Brush Creek @ Flat Rock					
Client:	City of Santa Rosa	Project:	Stormwater					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
04-9541-0765	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	11-2280-2973	13-4575-8110	16 Oct-06 4:38 PM	CETISv1.1.2

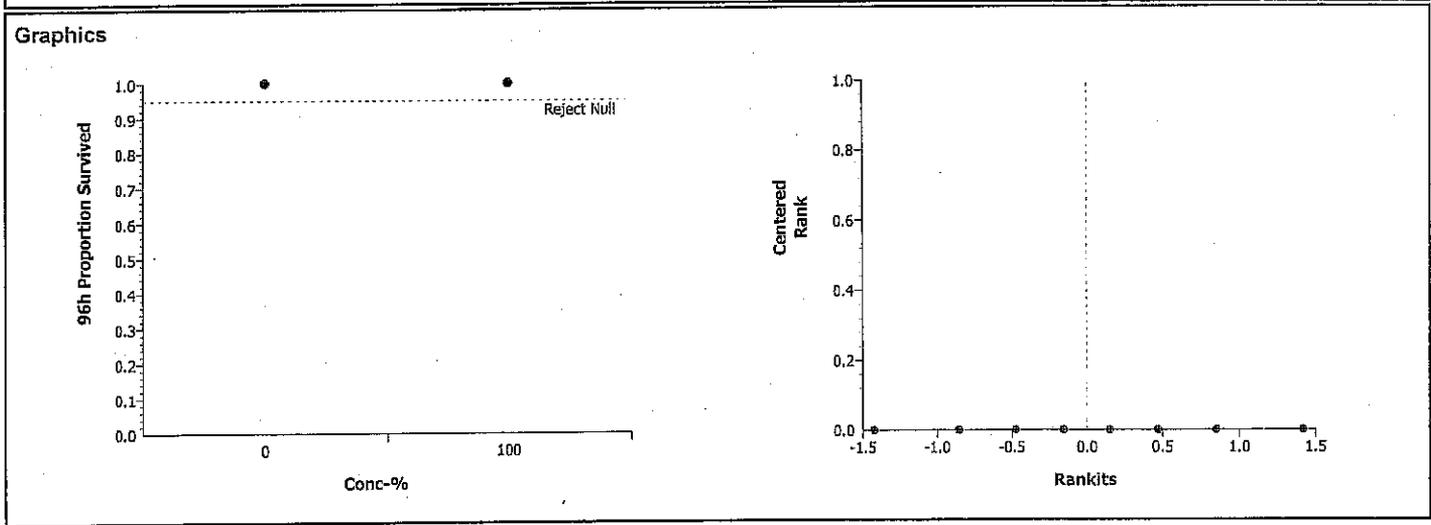
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Brush Creek at Flat Rock
 Test ID#: 21428 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: 503
 Feeding To Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16133 Test Solution Prep: KN New WQ: KN
100%	20.1	8.15		7.5		327	5	5	5	5	Initiation Time: 1615 Initiation Signoff: KKN
Meter ID	35	PH12		DO12		EC03					
Control	19.4 18.6 MN		8.21		8.4	213	5	5	5	5	Date: 10/7/06 Count Time: 1330 Count Signoff: MAJ
100%	19.4 18.6 MN		8.08		8.2	315	5	5	5	5	Old WQ: AMB
Meter ID	35		PH12		DO12	EC03					
Control	19.6		8.17		8.6	216	5	5	5	5	Date: 10/8/06 Termination Time: 1424 Termination Signoff: JN
100%	19.6		8.22		8.4	322	5	5	5	5	Old WQ: JM
Meter ID	33		PH12		DO12	EC03					

CETIS Test Summary

Report Date: 16 Oct-06 4:41 PM
 Test Link: 04-8427-5893/21429

Acute Ceriodaphnia Survival Test							Pacific EcoRisk		
Test No:	16-6233-7763	Test Type:	Survival (96h)	Duration:	46h				
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia				
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable	Source:	In-House Culture				
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable						
Sample No:	17-4019-1464	Code:	11689	Client:	City of Santa Rosa				
Sample Date:	05 Oct-06 11:43 AM	Material:	Stormwater	Project:	Stormwater				
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa						
Sample Age:	29h (10.8 °C)	Station:	Colgan Creek @ Bellevue Ave						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
02-0629-7665	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4				
0	Lab Water	1.00000	1.00000	1.00000	1.00000				
100		1.00000	1.00000	1.00000	1.00000				

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	04-8427-5893	13-4575-8110	16 Oct-06 4:40 PM	CETISv1.1.2

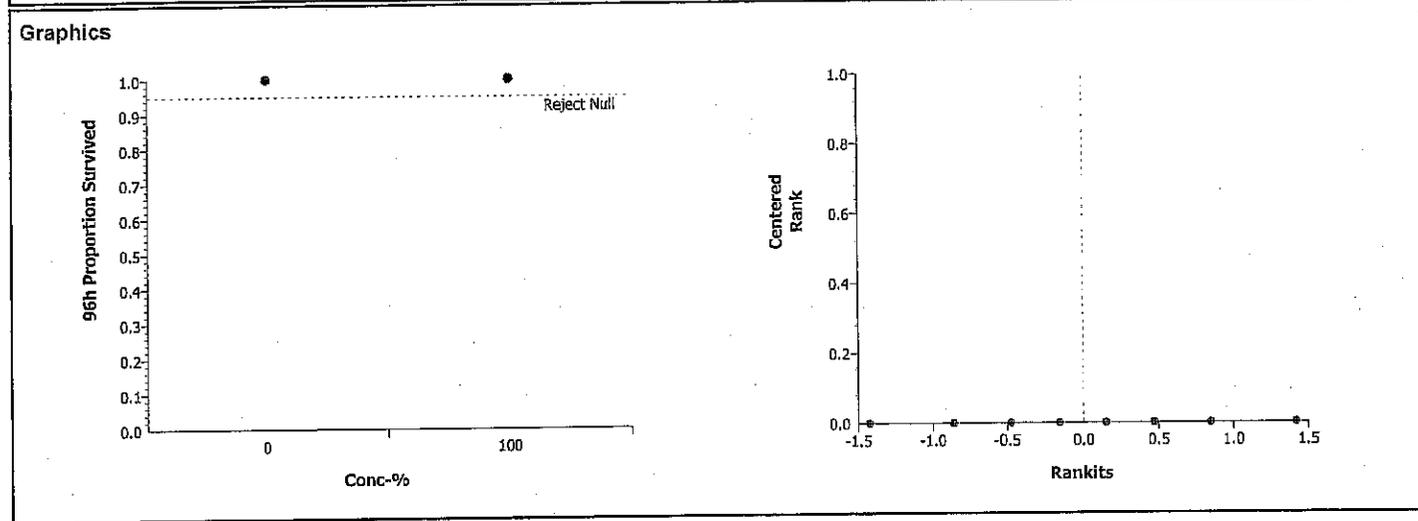
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons						
Control	vs	Conc-%	Statistic	Critical	P-Value	Decision(0.05)
Lab Water		100	18		0.4429	4 Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions						
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)	
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances	

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Colgan Creek at Bellevue Avenue
 Test ID#: 21429 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: S03
 Feeding T0 Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16134 Test Solution Prep: KN New WQ: KN
100%	20.1	7.86		7.0		384	5	5	5	5	Initiation Time: 1615 Initiation Signoff: KJCN
Meter ID	35	pH12		DO12		EC03					
Control	19.4		8.21		8.4	213	5	5	5	5	Date: 10/7/06 Count Time: 1330 Count Signoff: MN
100%	19.4		7.70		7.2	374	5	5	5	5	Old WQ: ANB
Meter ID	35		pH12		DO12	EC03					
Control	19.6		8.17		8.6	216	5	5	5	5	Date: 10/8/06 Termination Time: 1429 Termination Signoff: KN
100%	19.6		7.98		8.1	380	5	5	5	5	Old WQ: SW
Meter ID	33		pH12		DO12	EC03					

CETIS Test Summary

Acute Ceriodaphnia Survival Test						Pacific EcoRisk		
Test No:	16-6233-7763	Test Type:	Survival (96h)	Duration:	46h			
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable	Source:	In-House Culture			
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable					
Sample No:	10-5000-6585	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 11:20 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	29h (10.3 °C)	Station:	Matanzas Creek @ Hoen Frontage Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
10-5429-1005	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	02-3755-6605	13-4575-8110	16 Oct-06 4:43 PM	CETISv1.1.2

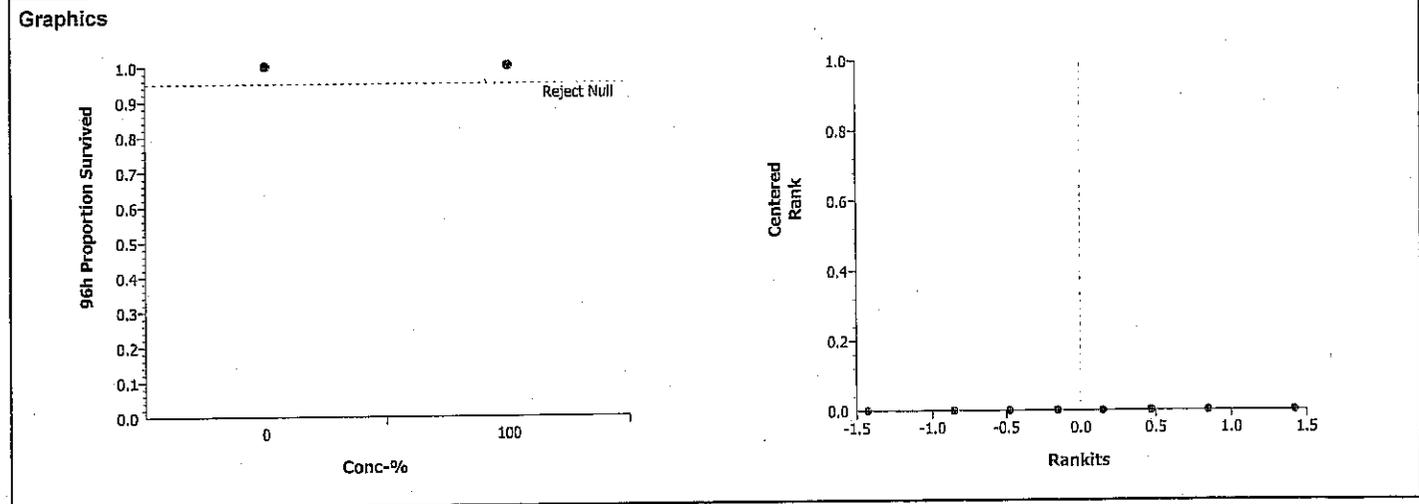
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Matanzas Creek at Hoen Frontage
 Test ID#: 21430 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: 503
 Feeding T0 Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16135 Test Solution Prep: KN New WQ: KN
100%	20.1	7.96		7.1		270	5	5	5	5	Initiation Time: 1615 Initiation-Signoff: KKN
Meter ID	35	PH12		DO12		ECO3					
Control	19.4		8.21		8.4	213	5	5	5	5	Date: 10/7/06 Count Time: 1330 Count Signoff: MN
100%	19.4		7.88		7.7	205	5	5	5	5	Old WQ: AMB
Meter ID	35		PH12		DO12	ECO3					
Control	19.6		8.17		8.6	216	5	5	5	5	Date: 10/8/06 Termination Time: 1725 Termination Signoff: JWA
100%	19.6		8.07		8.0	202	5	5	5	5	Old WQ: JWA
Meter ID	33		PH12		DO12	ECO3					

Report Date: 16 Oct-06 4:45 PM

Test Link: 15-0775-5183/21431

CETIS Test Summary

Acute Ceriodaphnia Survival Test							Pacific EcoRisk		
Test No:	16-6233-7763	Test Type:	Survival (96h)	Duration:	46h				
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia				
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable	Source:	In-House Culture				
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable						
Sample No:	16-8162-9928	Code:	11689	Client:	City of Santa Rosa				
Sample Date:	05 Oct-06 10:12 AM	Material:	Stormwater	Project:	Stormwater				
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa						
Sample Age:	30h (13.9 °C)	Station:	Paulin Creek @ Administration Dr						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
02-6451-1501	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4				
0	Lab Water	1.00000	1.00000	1.00000	1.00000				
100		1.00000	1.00000	1.00000	1.00000				

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	15-0775-5183	13-4575-8110	16 Oct-06 4:44 PM	CETISv1.1.2

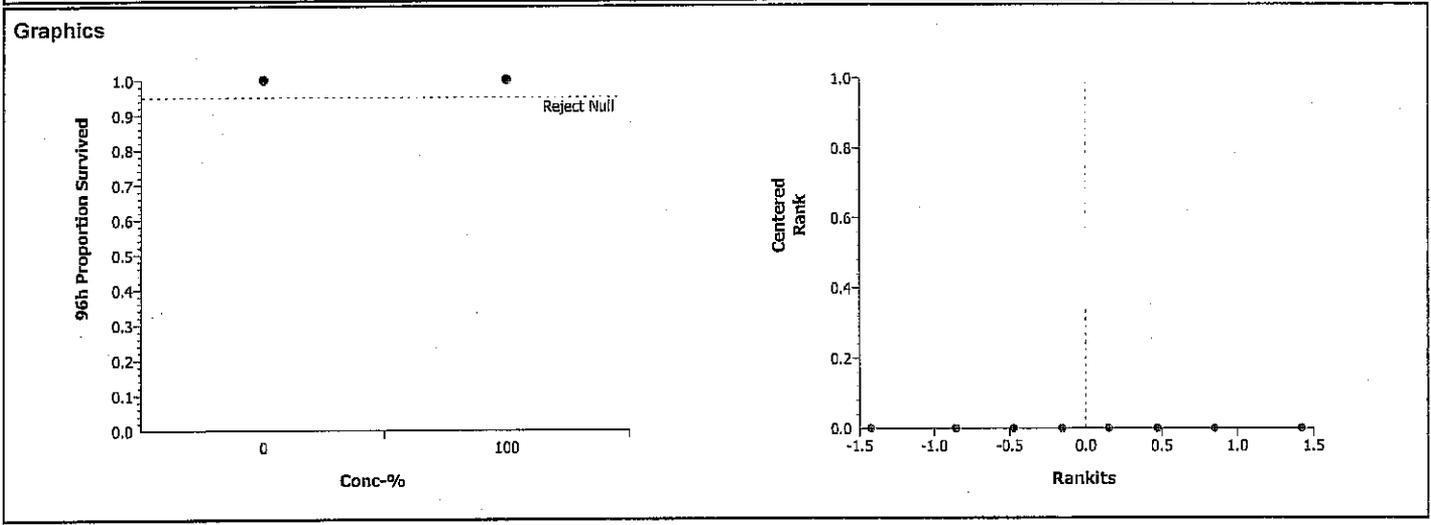
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table							
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)	
Between	0	0	1	65535.0	0.00000	Significant Effect	
Error	0	0	6				
Total	0	0	7				

ANOVA Assumptions						
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)	
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances	

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Paulin Creek at Administration Drive
 Test ID#: 21431 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: 503
 Feeding T0 Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16136 Test Solution Prep: RN New WQ: RN
100%	20.1	8.05		7.9		227	5	5	5	5	Initiation Time: 1615 Initiation Signoff: KKN
Meter ID	35	PH12		DO12		EC03					
Control	19.4		8.21		8.4	213	5	5	5	5	Date: 10/7/06 Count Time: 1330 Count Signoff: MN Old WQ: AMB
100%	19.4		7.85		7.8	222	5	5	5	5	
Meter ID	35		PH12		DO12	EC03					
Control	19.6		8.17		8.6	216	5	5	5	5	Date: 10/8/06 Termination Time: 1029 Termination Signoff: JN Old WQ: JM
100%	19.6		7.99		8.1	229	5	5	5	5	
Meter ID	33		PH12		DO12	EC03					

CETIS Test Summary

Report Date:

11 Oct-06 2:44 PM

Test Link:

15-1947-2073/21432

Acute Ceriodaphnia Survival Test							Pacific EcoRisk	
Test No:	17-1275-5840	Test Type:	Survival (96h)	Duration:	46h			
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable	Source:	In-House Culture			
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable					
Sample No:	18-2380-6556	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 09:36 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	31h (12.8 °C)	Station:	Peterson Creek @ Fulton Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
11-2842-0657	96h Proportion Survived	100	> 100	N/A	12.35%	Equal Variance t Two-Sample		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	0.90000	0.80000	1.00000	0.05774	0.11547	12.83%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	0.80000	0.80000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	15-1947-2073	15-1947-2073	11 Oct-06 2:44 PM	CETISv1.1.2

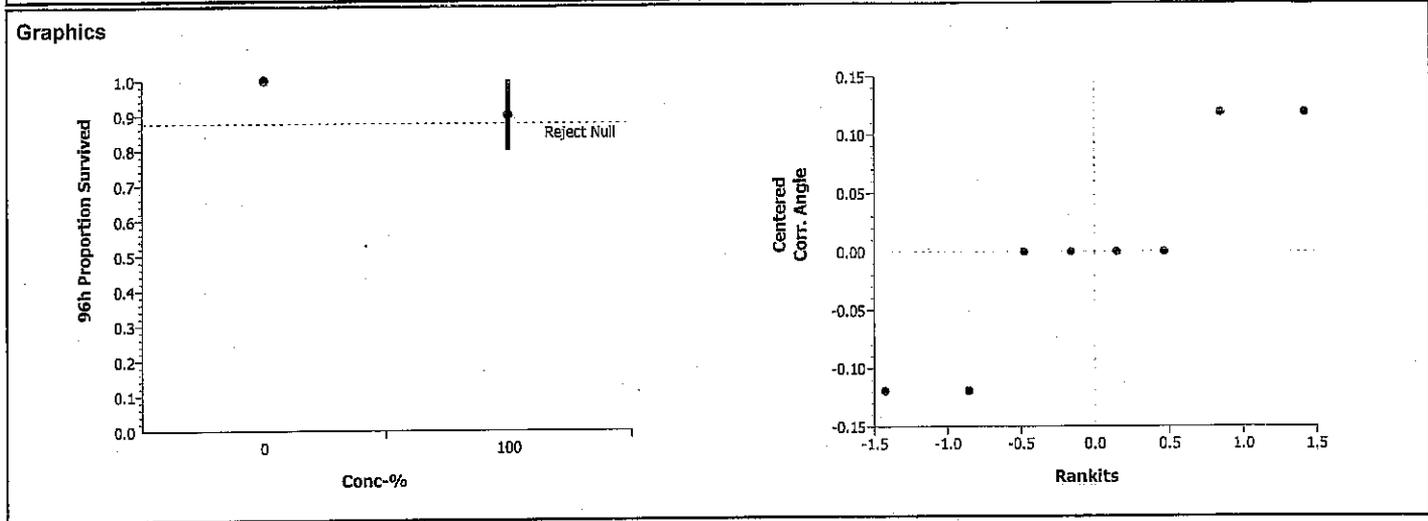
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Equal Variance t Twp-Sample	C > T	Angular (Corrected)		100	>100	1	N/A	12.35%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	MSD	Decision(0.05)
Lab Water		100	1.73205	1.94318	0.0670	0.13358	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0.028354	0.028354	1	3.00	0.13397	Non-Significant Effect
Error	0.0567079	0.0094513	6			
Total	0.08506185	0.0378053	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances
Distribution	Shapiro-Wilk W	0.84891		0.09288	Normal Distribution

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	1.34528	1.34528	1.34528	0.00021
100		4	0.90000	0.80000	1.00000	0.11547	1.22622	1.10715	1.34528	0.13749



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Peterson Creek at Fulton Road
 Test ID#: 21432 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: S03
 Feeding To Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16137 Test Solution Prep: EN New WQ: EN
100%	20.1	7.76		7.6		129	5	5	5	5	Initiation Time: 1615 Initiation-Signoff: KKA
Meter ID	35	PH12		DO12		EC03					
Control	19.4		8.21		8.4	213	5	5	5	5	Date: 10/7/06 Count Time: 1330 Count Signoff: MAJ
100%	19.4		7.73		8.0	120	5	5	5	4	Old WQ: AMB
Meter ID	35		PH12		DO12	EC03					
Control	19.6		8.17		8.6	216	5	5	5	5	Date: 10/8/06 Termination Time: 1429 Termination Signoff: EN
100%	19.6		7.95		8.0	138	5	5	4	4	Old WQ: JM
Meter ID	33		PH12		DO12	EC03					

Report Date: 16 Oct-06 4:32 PM

Test Link: 13-4575-8110/21433

CETIS Test Summary

Acute Ceriodaphnia Survival Test							Pacific EcoRisk	
Test No:	16-6233-7763	Test Type:	Survival (96h)	Duration:	46h	Species:	Ceriodaphnia dubia	
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Source:	In-House Culture			
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable					
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable					
Sample No:	20-0146-7291	Code:	11689	Client:	City of Santa Rosa	Project:	Stormwater	
Sample Date:	05 Oct-06 09:54 AM	Material:	Stormwater					
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	30h (12.4 °C)	Station:	Piner Ck @ Marlow Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
04-2427-9028	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	13-4575-8110	13-4575-8110	16 Oct-06 4:32 PM	CETISv1.1.2

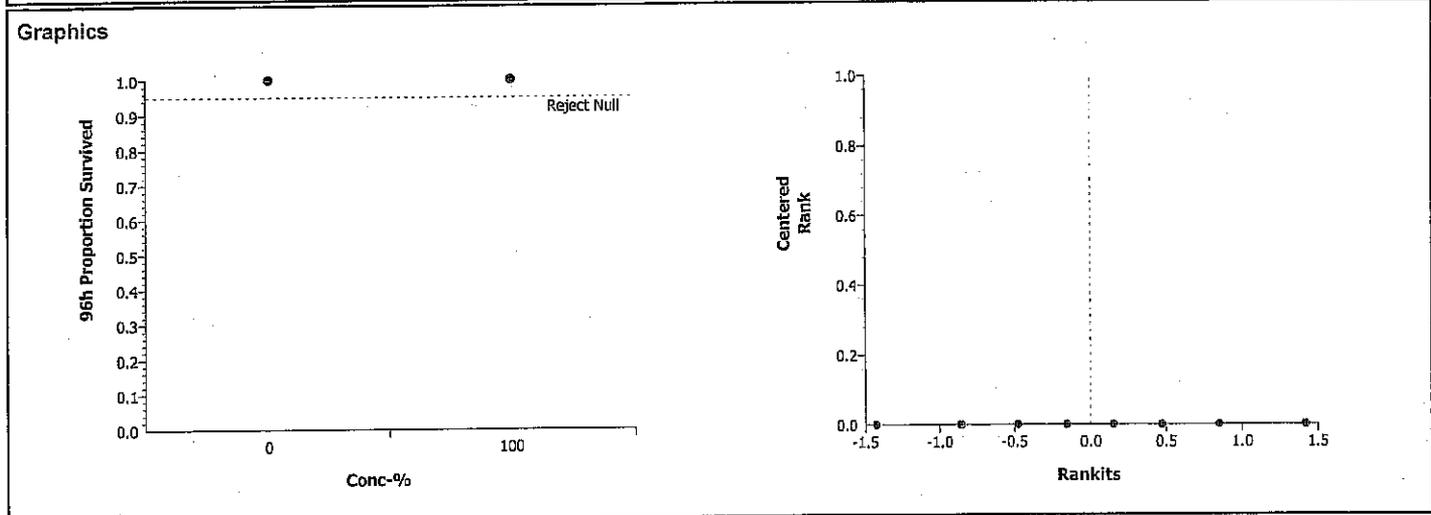
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions						
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)	
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances	

Data Summary			Original Data				Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Piner Creek at Marlow Road
 Test ID#: 21433 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: S03
 Feeding T0 Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16138 Test Solution Prep: KN New WQ: KN
100%	20.1	7.72		7.5		258	5	5	5	5	Initiation Time: 1615 Initiation Signoff: KKN
Meter ID	35	PH12		D012		EC03					
Control	19.4		8.24		8.2	205	5	5	5	5	Date: 10/7/06 Count Time: 1400 Count Signoff: MN
100%	19.4		7.68		7.3	250	5	5	5	5	Old WQ: AMB
Meter ID	35		PH12		D012	EC03					
Control	19.6		8.20		8.2	25	5	5	5	5	Date: 10/8/06 Termination Time: 1424 Termination Signoff: KN
100%	19.6		7.84 8.25M		7.8	258	5	5	5	5	Old WQ: JM
Meter ID	33		PH12		D012	EC03					

Report Date: 16 Oct-06 4:34 PM

Test Link: 18-1728-8474/21434

CETIS Test Summary

Acute Ceriodaphnia Survival Test						Pacific EcoRisk		
Test No:	16-6233-7763	Test Type:	Survival (96h)	Duration:	46h			
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable	Source:	In-House Culture			
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable					
Sample No:	08-9692-9873	Code:	11689	Client:	City of Santa Rosa			
Sample Date:	05 Oct-06 10:40 AM	Material:	Stormwater	Project:	Stormwater			
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa					
Sample Age:	30h (11.9 °C)	Station:	Santa Rosa Ck @ Melita Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
07-0775-0056	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	18-1728-8474	13-4575-8110	16 Oct-06 4:33 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons

Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table

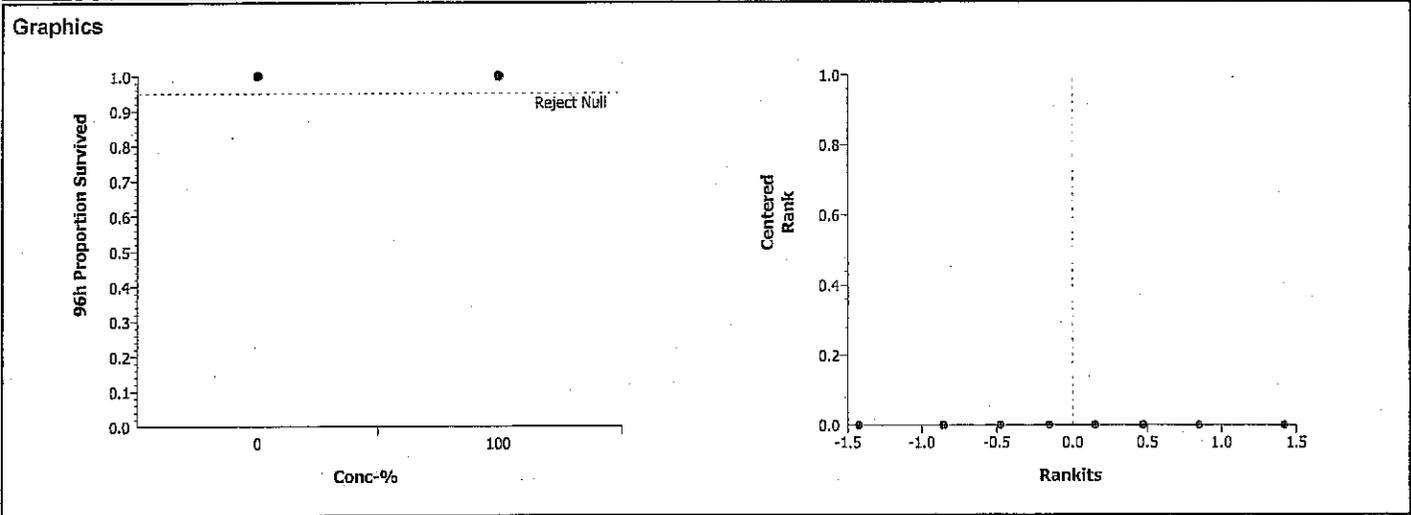
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary

Conc-%	Control Type	Count	Original Data				Transformed Data			
			Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa
 Test Material: Santa Rosa Creek at Melita Road
 Test ID#: 21434 Project # 11689
 Randomization: N/A

Test Date: 10-6-06
 Control Water: 80:20
 Control Water Batch: 503
 Feeding T0 Time: 025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16139 Test Solution Prep: KEN
100%	20.1	8.54		8.3		410	5	5	5	5	New WQ: KEN Initiation Time: 1615 Initiation Signoff: KEN
Meter ID	35	PH12		DO12		EC03					
Control	19.4		8.24		8.2	205	5	5	5	5	Date: 10/7/06 Count Time: 1400 Count Signoff: MN
100%	19.4		8.37		8.0	399	5	5	5	5	Old WQ: AMB
Meter ID	35		PH12		DO12	EC03					
Control	19.6		8.20		8.2	215	5	5	5	5	Date: 10/8/06 Termination Time: 1620 Termination Signoff: KEN
100%	19.6		8.50		8.1	403	5	5	5	5	Old WQ: JM
Meter ID	33		PH12		DO12	EC03					

CETIS Test Summary

Acute Ceriodaphnia Survival Test							Pacific EcoRisk		
Test No:	16-6233-7763	Test Type:	Survival (96h)	Duration:	46h				
Start Date:	06 Oct-06 04:15 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia				
Ending Date:	08 Oct-06 02:24 PM	Dil Water:	Not Applicable	Source:	In-House Culture				
Setup Date:	06 Oct-06 04:15 PM	Brine:	Not Applicable						
Sample No:	13-8928-8400	Code:	11689	Client:	City of Santa Rosa				
Sample Date:	05 Oct-06 09:14 AM	Material:	Stormwater	Project:	Stormwater				
Receive Date:	05 Oct-06 01:40 PM	Source:	City of Santa Rosa						
Sample Age:	31h (11.5 °C)	Station:	Santa Rosa Ck @ Piner Ck						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
16-9681-3506	96h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4				
0	Lab Water	1.00000	1.00000	1.00000	1.00000				
100		1.00000	1.00000	1.00000	1.00000				

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	05-9213-5109	13-4575-8110	16 Oct-06 4:36 PM	CETISv1.1.2

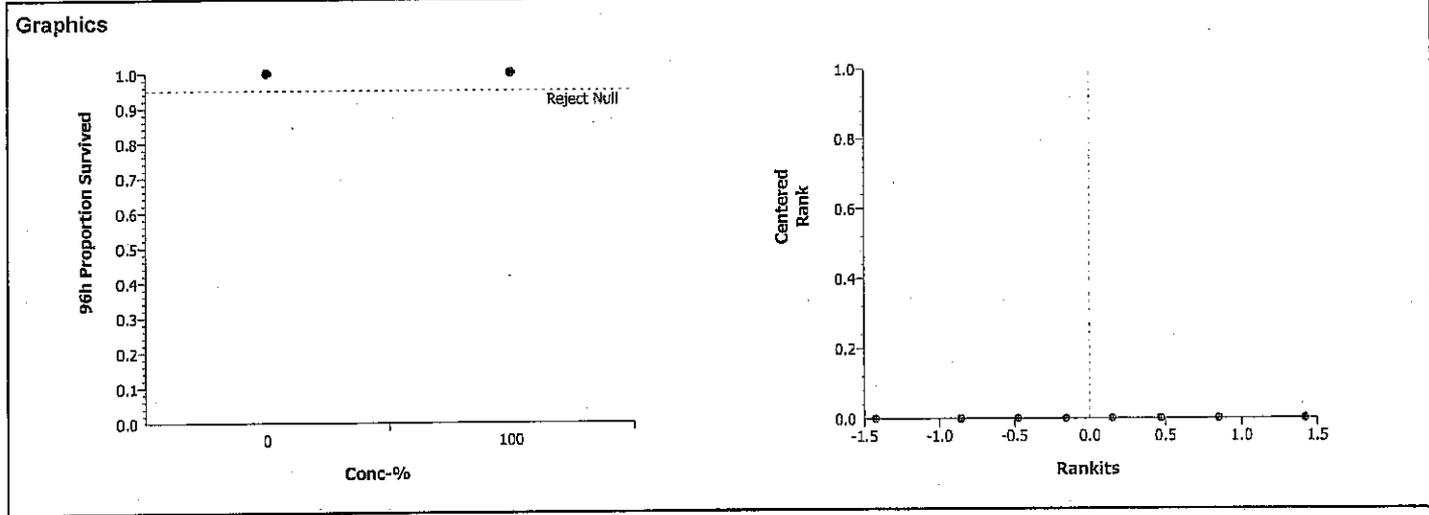
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions						
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)	
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances	

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



96 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: City of Santa Rosa

Test Date: 10-6-06

Test Material: Santa Rosa Creek at Piner Creek

Control Water: 80:20

Test ID#: 21435 Project # 11689

Control Water Batch: 503

Randomization: N/A

Feeding T0 Time: 1025 Initials: NC

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.1	8.60		8.3		213	5	5	5	5	Date: 10/6/06 Sample ID: 16140 Test Solution Prep: KN New WQ: KN
100%	20.1	8.27		7.5		471	5	5	5	5	Initiation Time: 1615 Initiation Signoff: KKN
Meter ID	35	PH12		DO12		EC03					
Control	19.4		8.24		8.2	205	5	5	5	5	Date: 10/7/06 Count Time: 1300 Count Signoff: MN
100%	19.4		8.30		7.8	443	5	5	5	5	Old WQ: AMB
Meter ID	35		PH12		DO12	EC03					
Control	19.6		8.20		8.2	215	5	5	5	5	Date: 10/8/06 Termination Time: 1901 Termination Signoff: KN
100%	19.6		8.46		8.1	463	5	5	5	5	Old WQ: JM
Meter ID	33		PH12		DO12	EC03					

CETIS Test Summary

Report Date:

05 Apr-07 5:06 PM

Test Link:

09-4675-7119/24015

Acute Fish Survival Test			Pacific EcoRisk					
Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h			
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss			
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.			
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable					
Sample No:	11-2336-9738	Code:	12147	Client:	City of Santa Rosa			
Sample Date:	26 Mar-07 02:14 PM	Material:	Stormwater	Project:	NPDES			
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa					
Sample Age:	27h (5.8 °C)	Station:	Brush Creek @ Flat Rock					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
03-3962-9019	96h Proportion Survived	100	>100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h-Proportion-Survived-Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

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CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 4:47 PM
 Analysis: 03-3962-9019/24015

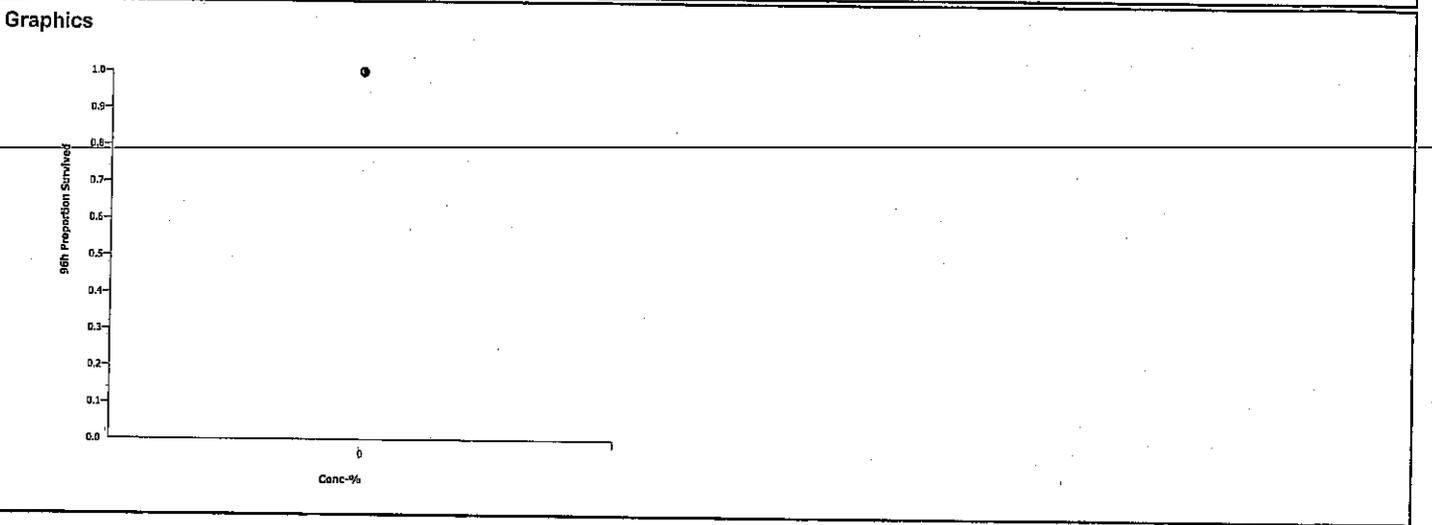
Acute Fish Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	09-4675-7119	09-4675-7119	05 Apr-07 4:47 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa
 Sample ID: Brush Creek @ Flat Rock - 299
 Test ID#: 24015 Project # 12147
 Test Date: 3.27.07
 Feeding To Time: 1100 Initials: MC

Organism Log #: 3268 Age: 22 D.O.
 Organism Supplier: TFC
 Control: EPAMH
 Control Water Batch: 1018

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.41		8.2		337		10	10	Date: 3/27/07 Sample ID: 17195 Test Solution Prep: KKN
100%	12.5	8.04		7.8		185		10	10	New WQ: MK Initiation Time: 1700 Initiation Signoff: MK
Meter ID	12	pH12		D012		E03				
Control	12.8		8.08		8.5			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KKN
100%	12.8		7.94		8.5			10	10	Old WQ: YK
Meter ID	12		pH12		D012					
Control	12.7		8.06		8.5 7.6 MSM			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KKN
100%	12.7		7.92		8.1 6.9 MSM			10	10	Old WQ: MSM
Meter ID	12		pH13		D014					
Control	11.8		8.36		8.7			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KKN
100%	11.8		8.19		7.9			10	10	Old WQ: MC
Meter ID	12		pH11		D012					
Control	12.0		7.75		10.3		344	10	10	Date: 3/31/07 Termination Time: 1545 Termination Signoff: KKN
100%	12.0		7.75		10.2		202	10	10	Old WQ: SW
Meter ID	12		pH13		D014		E04			

CETIS Test Summary

Report Date: 05 Apr-07 5:06 PM
 Test Link: 03-8562-9685/24016

Acute Fish Survival Test		Pacific EcoRisk						
Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h			
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss			
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.			
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable					
Sample No:	17-4217-1089	Code:	12147	Client:	City of Santa Rosa			
Sample Date:	26 Mar-07 03:05 PM	Material:	Stormwater	Project:	NPDES			
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa					
Sample Age:	26h (5.9 °C)	Station:	Colgan Creek @ Bellevue Ave					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
17-5143-2752	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 4:48 PM
 Analysis: 17-5143-2752/24016

Acute Fish Survival Test Pacific EcoRisk

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	03-8562-9685	03-8562-9685	05 Apr-07 4:48 PM	CETISv1.1.2

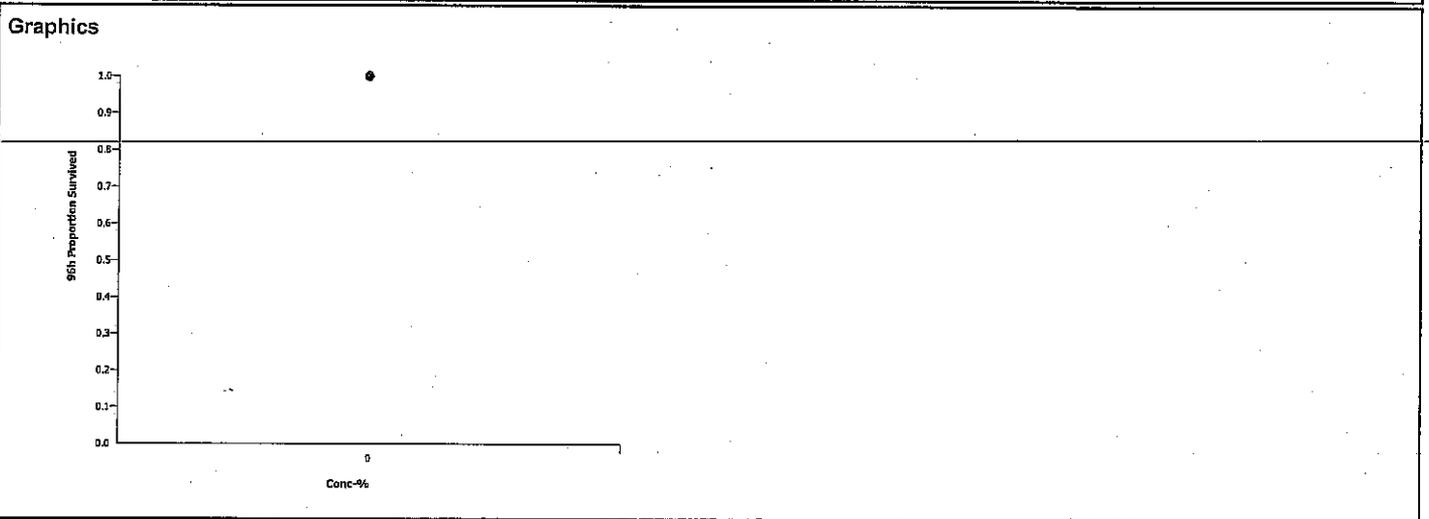
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons

Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary

Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3268 Age: 22 D.O.
 Sample ID: Colgan Creek @ Bellevue Ave-300 Organism Supplier: TFC
 Test ID#: 24016 Project #: 12147 Control: EPAMH
 Test Date: 3.27.07 Control Water Batch: 1018
 Feeding T0 Time: 1100 Initials: MC

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.91		8.2		337		10	10	Date: 3/27/07 Sample ID: 17196 Test Solution Prep: KFN
100%	12.5	7.75		8.7		320		10	10	New WQ: MK Initiation Time: 1700 Initiation Signoff: ML
Meter ID	12	pH02		D012		EC03				
Control	12.8		8.08		8.5			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KFN
100%	12.8		7.87		8.7			10	10	Old WQ: LM
Meter ID	12		pH12		D012					
Control	12.7		8.06		8.5 7.6 MFM			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KFN
100%	12.7		7.81		7.9 6.8 MFM			10	10	Old WQ: MFM
Meter ID	12		pH13		D014					
Control	11.8		8.36		8.7			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KFN
100%	11.8		8.10		7.9			10	10	Old WQ: TK
Meter ID	12		pH11		D012					
Control	12.0		7.75		10.3		344	10	10	Date: 3/31/07 Termination Time: 1845 Termination Signoff: KFN
100%	12.0		7.84		10.3		324	10	10	Old WQ: SN
Meter ID	12		pH13		D014		EC04			

CETIS Test Summary

Report Date:

05 Apr-07 5:06 PM

Test Link:

14-7758-2801/24017

Acute Fish Survival Test							Pacific EcoRisk	
Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h			
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss			
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.			
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable					
Sample No:	10-9166-5981	Code:	12147	Client:	City of Santa Rosa			
Sample Date:	26 Mar-07 02:42 PM	Material:	Stormwater	Project:	NPDES			
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa					
Sample Age:	26h (5.8 °C)	Station:	Matanzas Creek @ Hoen Frontage Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
05-8449-3100	96h Proportion Survived	100	>100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

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CETIS Analysis Detail

Acute Fish Survival Test Pacific EcoRisk

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	14-7758-2801	14-7758-2801	05 Apr-07 4:49 PM	CETISv1.1.2

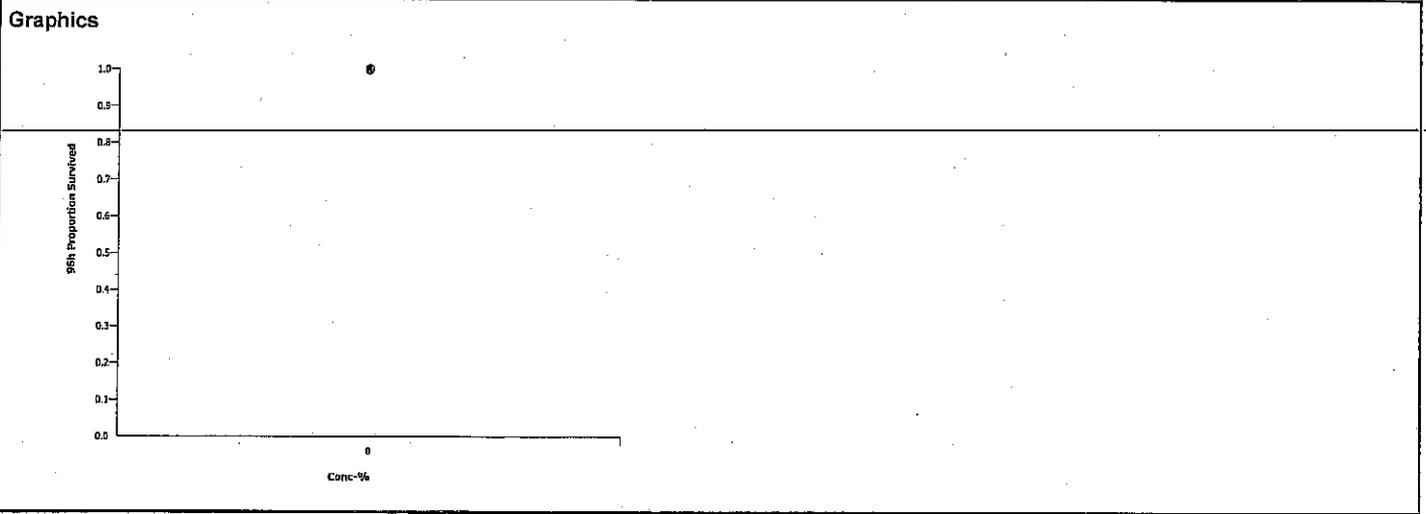
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons

Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary

Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3208 Age: 22 d.
 Sample ID: Moranzas Creek @ Hen Frontage Rd - 301 Organism Supplier: TFC
 Test ID#: 24017 Project #: 12147 Control: EPAMH
 Test Date: 3-27-07 Control Water Batch: 1078
 Feeding To Time: 1100 Initials: MC

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.11		8.2		337		10	10	Date: 3.27.07 Sample ID: 17192 Test Solution Prep: KFN
100%	12.5	7.74		8.6		350		10	10	New WQ: MK Initiation Time: 1700 Initiation Signoff: MK
Meter ID	12	PH12		D012		6603				
Control	12.8		8.08		8.5			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KFN
100%	12.8		7.94		8.2			10	10	Old WQ: MM
Meter ID	12		PH12		D012					
Control	12.7		8.06		8.5			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KFN
100%	12.7		7.83		7.6			10	10	Old WQ: MM
Meter ID	12		PH13		D014					
Control	11.8		8.36		8.7			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KFN
100%	11.8		8.22		8.1			10	10	Old WQ: ME
Meter ID	12		PH11		D012					
Control	12.0		7.75		10.3		344	10	10	Date: 3/31/07 Termination Time: 1845 Termination Signoff: KFN
100%	12.0		7.96		10.2		369	10	10	Old WQ: SN
Meter ID	12		PH13		D014		6604			

CETIS Test Summary

Report Date: 05 Apr-07 5:07 PM
 Test Link: 07-7201-9328/24018

Acute Fish Survival Test	Pacific EcoRisk
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Test No: 12-8460-5166	Test Type: Survival (96h)	Duration: 95h
Start Date: 27 Mar-07 05:00 PM	Protocol: EPA/821/R-02-012 (2002)	Species: Oncorhynchus mykiss
Ending Date: 31 Mar-07 03:45 PM	Dil Water: Not Applicable	Source: Thomas Fish Co.
Setup Date: 27 Mar-07 05:00 PM	Brine: Not Applicable	

Sample No: 10-9593-3739	Code: 12147	Client: City of Santa Rosa
Sample Date: 26 Mar-07 01:30 PM	Material: Stormwater	Project: NPDES
Receive Date: 27 Mar-07 10:30 AM	Source: City of Santa Rosa	
Sample Age: 28h (5.2 °C)	Station: Paulin Creek @ Administration Dr	

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method
10-7906-0359	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact

96h Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

96h Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water	1.00000	1.00000
100		1.00000	1.00000

CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 4:50 PM
 Analysis: 10-7906-0359/24018

Acute Fish Survival Test **Pacific EcoRisk**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	07-7201-9328	07-7201-9328	05 Apr-07 4:50 PM	CETISv1.1.2

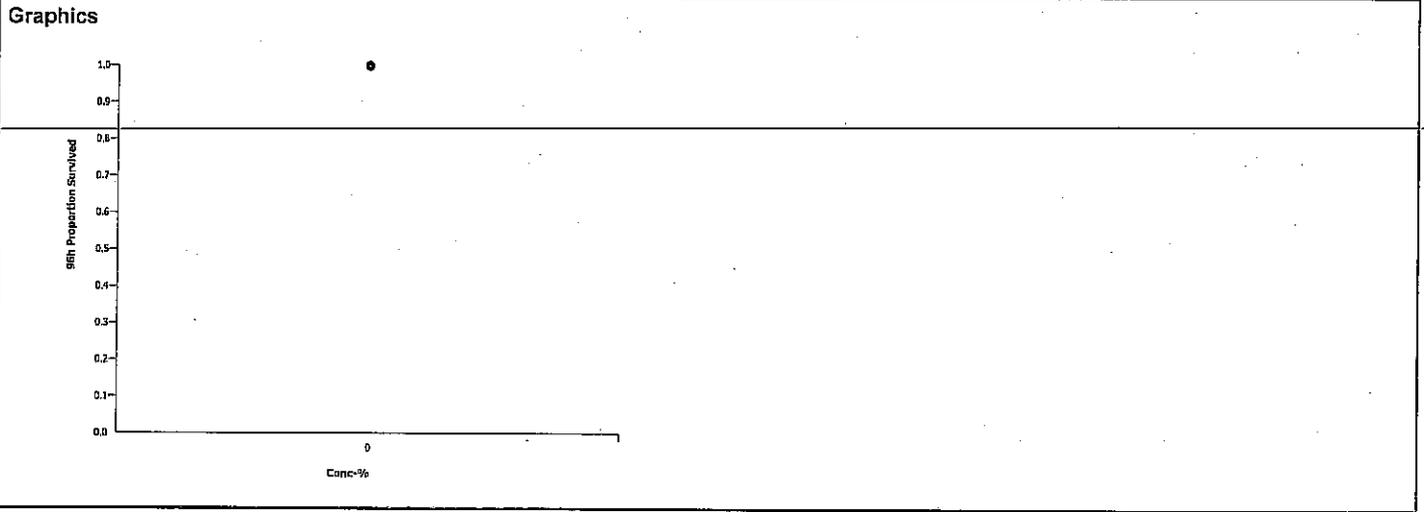
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons

Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1,00000	1,00000	Non-Significant Effect

Data Summary

Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3268 Age: 22 D.O.
 Sample ID: Poulin Creek @ Administration Dr -302 Organism Supplier: TFC
 Test ID#: 24018 Project #: 12147 Control: EPAMH
 Test Date: 3.27.07 Control Water Batch: 1018
 Feeding To Time: 1100 Initials: MC

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.91		8.2		337		10	10	Date: 3.27.07 Sample ID: 17198 Test Solution Prep: MCKEN
100%	12.5	7.86		9.1		139		10	10	New WQ: MCK Initiation Time: 1700 Initiation Signoff: MCK
Meter ID	12	PH12		DO12		EC03				
Control	12.8		8.08		8.5			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KKN
100%	12.8		7.99		8.1			10	10	Old WQ: MCK
Meter ID	12		PH12		DO12					
Control	12.7		8.06		8.5 7.6 MCK			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KKN
100%	12.7		7.94 8.00 MCK		7.7			10	10	Old WQ: MCK
Meter ID	12		PH13		DO14					
Control	11.8		8.36		8.7			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KKN
100%	11.8		8.38		8.1			10	10	Old WQ: MCK
Meter ID	12		PH11		DO12					
Control	12.0		7.75		10.3		344	10	10	Date: 3/31/07 Termination Time: 1845 Termination Signoff: KKN
100%	12.0		7.57		10.2		141	10	10	Old WQ: SN
Meter ID	12		PH13		DO14		EC04			

CETIS Test Summary

Report Date:

05 Apr-07 5:07 PM

Test Link:

13-2579-4779/24019

Acute Fish Survival Test		Pacific EcoRisk
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Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable		

Sample No:	06-9912-8571	Code:	12147	Client:	City of Santa Rosa
Sample Date:	26 Mar-07 12:55 PM	Material:	Stormwater	Project:	NPDES
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa		
Sample Age:	28h (6.1 °C)	Station:	Peterson Creek @ Fulton Rd		

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method
14-7108-9098	96h Proportion Survived	100	>100	N/A	N/A	Fisher Exact

96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

96h Proportion Survived Detail			
Conc-%	Control Type	Rep 1	Rep 2
0	Lab Water	1.00000	1.00000
100		1.00000	1.00000

CETIS Analysis Detail

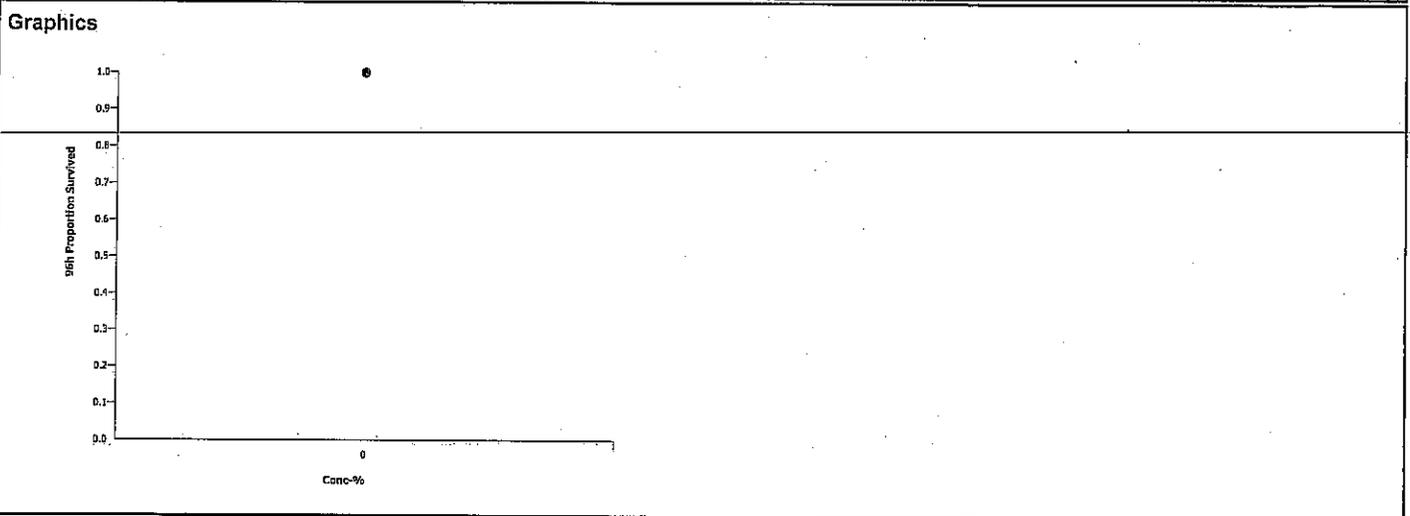
Acute Fish Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	13-2579-4779	13-2579-4779	05 Apr-07 4:51 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa
 Sample ID: Peterson Creek @ Fulton Rd -303
 Test ID#: 24019 Project # 12147
 Test Date: 3.27.07
 Feeding TO Time: 1100 Initials: MC

Organism Log #: 3268 Age: 22 D.O.
 Organism Supplier: TFC
 Control: EPAMH
 Control Water Batch: 101P

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.91		8.2		337		10	10	Date: 3/27/07 Sample ID: 17191 Test Solution Prep: KEN
100%	12.5	7.58		8.4		130		10	10	New WQ: MK Initiation Time: 1703 Initiation Signoff: MC
Meter ID	12	PH12		DO12		EL03				
Control	12.8		7.98		8.8			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KEN
100%	12.8		7.88		8.5			10	10	Old WQ: MK
Meter ID	12		PH12		DO12					
Control	12.7		7.79		8.4			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KEN
100%	12.7		7.86		7.7			10	10	Old WQ: MK
Meter ID	12		PH13		DO13					
Control	11.8		8.31		8.2			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KEN
100%	11.8		8.10		7.6			10	10	Old WQ: TC
Meter ID	12		PH11		DO12					
Control	12.0		7.77		10.3	342		10	10	Date: 3/31/07 Termination Time: 1845 Termination Signoff: KEN
100%	12.0		7.50		9.9	140		10	10	Old WQ: SN
Meter ID	12		PH13		DO14	EC04				

CETIS Test Summary

Report Date:

05 Apr-07 5:07 PM

Test Link:

04-8483-5447/24020

Acute Fish Survival Test							Pacific EcoRisk		
Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h				
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss				
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.				
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable						
Sample No:	08-2691-7830	Code:	12147	Client:	City of Santa Rosa				
Sample Date:	26 Mar-07 01:09 PM	Material:	Stormwater	Project:	NPDES				
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa						
Sample Age:	28h (6.5 °C)	Station:	Piner Ck @ Marlow Rd						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
10-9833-6601	96h Proportion Survived	100	> 100	N/A	N/A	Fisher Exact			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2						
0	Lab Water	1.00000	1.00000						
100		1.00000	1.00000						

CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 4:52 PM
 Analysis: 10-9833-6601/24020

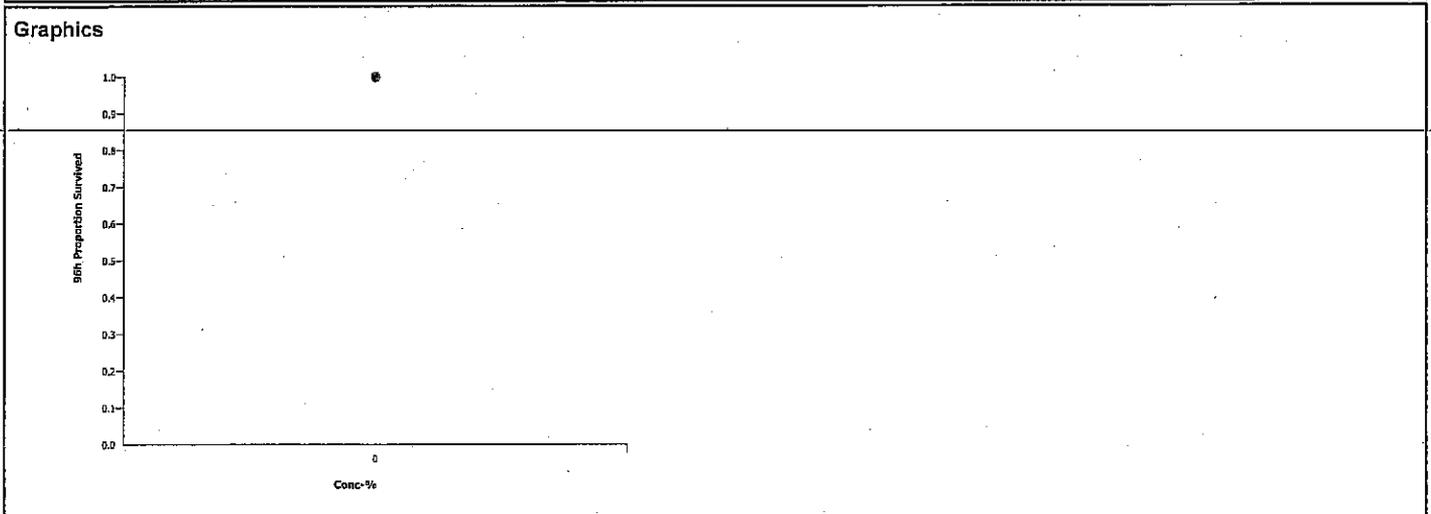
Acute Fish Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	04-8483-5447	04-8483-5447	05 Apr-07 4:52 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa
 Sample ID: Piner Creek @ Marlow Rd - 304
 Test ID#: 24020 Project #: 12147
 Test Date: 3.27.07
 Feeding To Time: 1100 Initials: MC

Organism Log #: 3268 Age: 22 D.O.
 Organism Supplier: TFC
 Control: EPAMH
 Control Water Batch: 1018

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.41		8.2		337		10	10	Date: 3.27.07 Sample ID: 17200 Test Solution Prep: KJN
100%	12.5	7.92		8.6		296		10	10	New WQ: ANK Initiation Time: 1700 Initiation Signoff: ANK
Meter ID	12	PH12		D012		E003				
Control	12.8		7.98		8.8			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KJN
100%	12.8		7.66		8.0			10	10	Old WQ: ANK
Meter ID	12		PH12		D012					
Control	12.7		7.79		8.4			10	10	Count Date: 2/29/07 Count Time: 850 Count Signoff: KJN
100%	12.7		7.66 7.80 MOM		7.7 7.5 MOM			10	10	Old WQ: ANK
Meter ID	12		PH13		D014					
Control	11.8		8.31		8.2			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KJN
100%	11.8		8.02		7.7			10	10	Old WQ: MC
Meter ID	12		PH11		D012					
Control	12.0		7.77		10.3	342		10	10	Date: 3/31/07 Termination Time: 1545 Termination Signoff: KJN
100%	12.0		7.83		9.8	301		10	10	Old WQ: SN
Meter ID	12		PH13		D014	E104				

CETIS Test Summary

Report Date: 05 Apr-07 5:06 PM
 Test Link: 12-2682-4929/24021

Acute Fish Survival Test							Pacific EcoRisk		
Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h				
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss				
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.				
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable						
Sample No:	05-8859-5815	Code:	12147	Client:	City of Santa Rosa				
Sample Date:	26 Mar-07 01:58 PM	Material:	Stormwater	Project:	NPDES				
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa						
Sample Age:	27h (5.5 °C)	Station:	Santa Rosa Ck @ Melita Rd						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
06-7052-1011	96h Proportion Survived	100	>100	N/A	N/A	Fisher Exact			
96h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
96h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2						
0	Lab Water	1.00000	1.00000						
100		1.00000	1.00000						

CETIS Analysis Detail

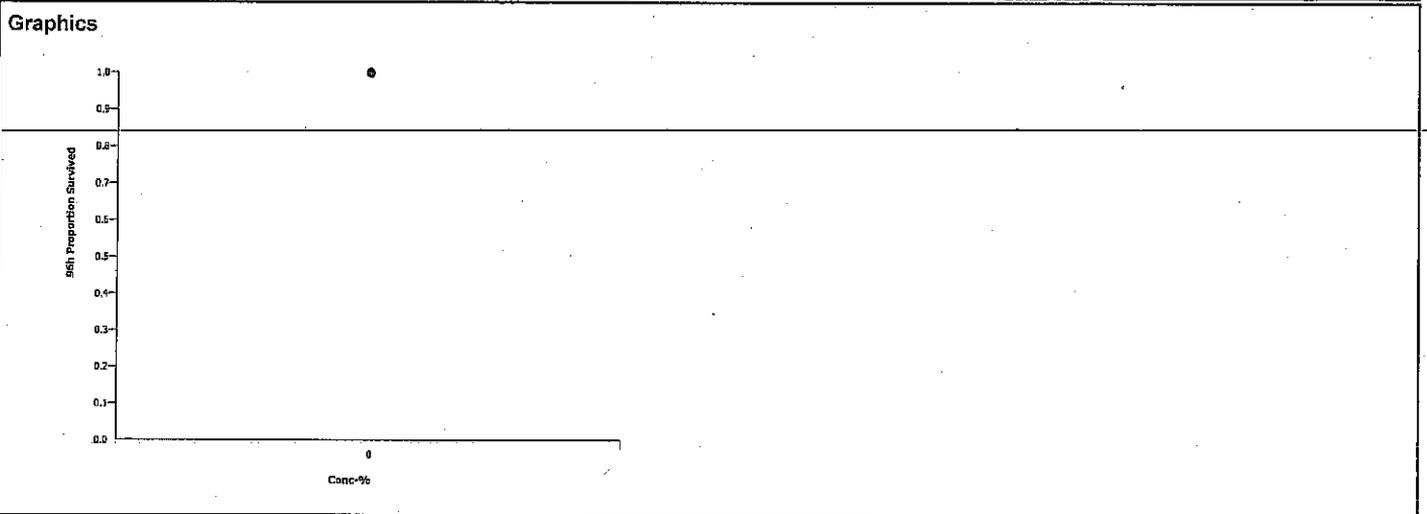
Acute Fish Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	12-2682-4929	12-2682-4929	05 Apr-07 4:53 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 4:54 PM
 Analysis: 17-5918-8845/24022

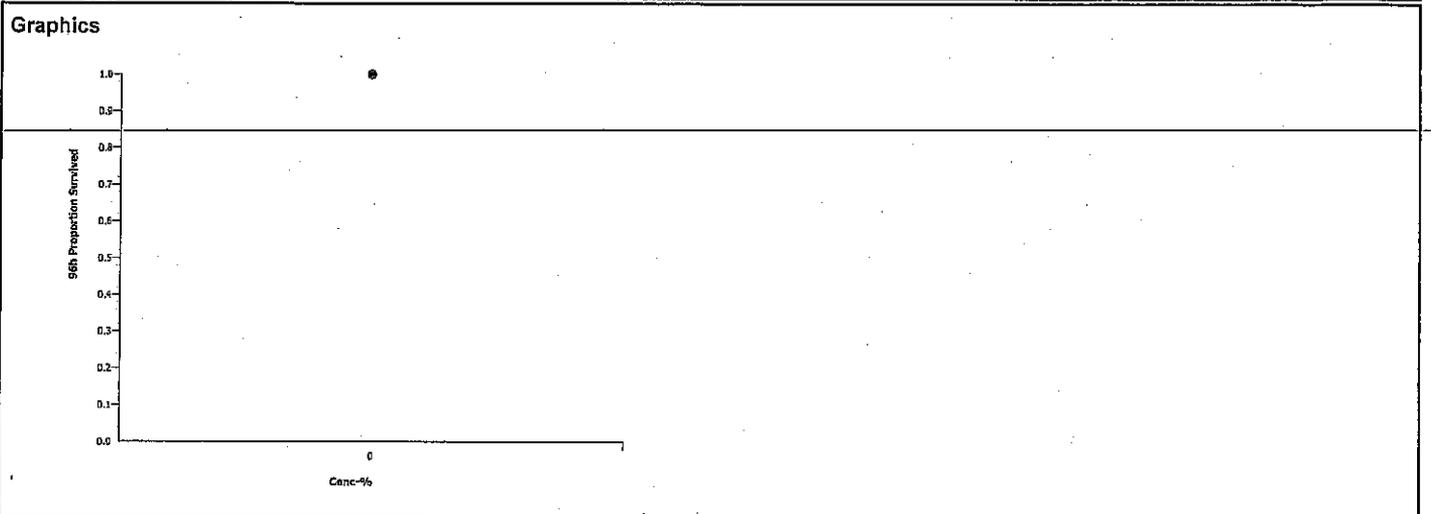
Acute Fish Survival Test					Pacific EcoRisk	
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
96h Proportion Survived	Comparison	02-2038-7098	02-2038-7098	05 Apr-07 4:54 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Fisher Exact	C > T	Untransformed		100	>100	1	N/A	

Group Comparisons					
Control	vs	Conc-%	Statistic	P-Value	Decision(0.05)
Lab Water		100	1.00000	1.00000	Non-Significant Effect

Data Summary				
Conc-%	Control Type	Non-Responders	Responders	Total Observed
0	Lab Water	20	0	20
100		20	0	20



96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3268 Age: 22 D.O.
 Sample ID: Santa Rosa Creek @ Melito Rd - 305 Organism Supplier: TFC
 Test ID#: 24021 Project #: 12147 Control: EPAMH
 Test Date: 3-27-07 Control Water Batch: 7018
 Feeding To Time: 1100 Initials: MC

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.5	8.41		8.2		337		10	10	Date: 3-27-07 Sample ID: 17201 Test Solution Prep: KKN New WQ: NMC Initiation Time: 1700 Initiation Signoff: NMC
100%	12.5	8.50		10.1		394		10	10	
Meter ID	12	PH12		DO12		EC03				
Control	12.8		7.98		8.8			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KKN Old WQ: YK
100%	12.8		8.35		9.0			10	10	
Meter ID	12		PH12		DO12					
Control	12.7		7.79		8.4			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KKN Old WQ: NMC
100%	12.7		8.21 7.62 NMC		8.7 7.5 NMC			10	10	
Meter ID	12		PH13		DO14					
Control	11.8		8.31		8.2			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KKN Old WQ: NMC
100%	11.8		7.88		7.4			10	10	
Meter ID	12		PH11		DO12					
Control	12.0		7.77		10.3	342		10	10	Date: 3/31/07 Termination Time: 1545 Termination Signoff: KKN Old WQ: SN
100%	12.0		8.07		9.6	404		10	10	
Meter ID	12		PH13		DO14	EC04				

CETIS Test Summary

Report Date:

05 Apr-07 5:07 PM

Test Link:

02-2038-7098/24022

Acute Fish Survival Test		Pacific EcoRisk						
Test No:	12-8460-5166	Test Type:	Survival (96h)	Duration:	95h			
Start Date:	27 Mar-07 05:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Oncorhynchus mykiss			
Ending Date:	31 Mar-07 03:45 PM	Dil Water:	Not Applicable	Source:	Thomas Fish Co.			
Setup Date:	27 Mar-07 05:00 PM	Brine:	Not Applicable					
Sample No:	07-9033-7343	Code:	12147	Client:	City of Santa Rosa			
Sample Date:	26 Mar-07 12:34 PM	Material:	Stormwater	Project:	NPDES			
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa					
Sample Age:	28h (6.3 °C)	Station:	Santa Rosa Ck @ Piner Ck					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
17-5918-8845	96h Proportion Survived	100	>100	N/A	N/A	Fisher Exact		
96h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		2	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
96h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2					
0	Lab Water	1.00000	1.00000					
100		1.00000	1.00000					

96 Hour Acute Rainbow Trout (*Oncorhynchus mykiss*) Toxicity Test

Client: City of Santa Rosa Organism Log #: 3268 Age: 22 D.O.
 Sample ID: Santa Rosa Creek @ Piner Creek -306 Organism Supplier: TFC
 Test ID#: 24022 Project #: 12147 Control: EPAMH
 Test Date: 3.27.07 Control Water Batch: 1018
 Feeding TO Time: 1100 Initials: MC

Treatment	Temp (°C)	pH		D.O. (mg/L)		Conductivity (µS/cm)		# Live Organisms		SIGN-OFF
		new	old	new	old	new	old	Rep A	Rep B	
Control	12.4	8.41		8.2		337		10	10	Date: 3/27/07 Sample ID: 17202 Test Solution Prep: KFN
100%	12.5	8.16		10.0		426		10	10	New WQ: MC Initiation Time: 1700 Initiation Signoff: MC
Meter ID	12	PH12		DO12		EC05				
Control	12.8		7.98		8.8			10	10	Count Date: 3/28/07 Count Time: 910 Count Signoff: KFN
100%	12.8		8.34		8.1			10	10	Old WQ: VL
Meter ID	12		PH12		DO12					
Control	12.7		7.79		8.4			10	10	Count Date: 3/29/07 Count Time: 850 Count Signoff: KFN
100%	12.7		8.15		8.4			10	10	Old WQ: WDM
Meter ID	12		PH13		DO14					
Control	11.8		8.31		8.2			10	10	Count Date: 3/30/07 Count Time: 830 Count Signoff: KFN
100%	11.8		8.30		7.8			10	10	Old WQ: JL
Meter ID	12		PH11		DO12					
Control	12.0		7.77		10.3		342	10	10	Date: 3/31/07 Termination Time: 1545 Termination Signoff: KFN
100%	12.0		8.16		10.2		424	10	10	Old WQ: SN
Meter ID	12		PH13		DO14		EC04			

CETIS Test Summary

Report Date:

05 Apr-07 4:57 PM

Test Link:

17-6696-4951/24014

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Test No:	09-5215-8763	Test Type:	Survival (48h)	Duration:	48h
Start Date:	27 Mar-07 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia
Ending Date:	29 Mar-07 04:00 PM	Dil Water:	Not Applicable	Source:	In-House Culture
Setup Date:	27 Mar-07 04:00 PM	Brine:	Not Applicable		

Sample No:	11-2336-9738	Code:	12147	Client:	City of Santa Rosa
Sample Date:	26 Mar-07 02:14 PM	Material:	Stormwater	Project:	NPDES
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa		
Sample Age:	26h (5.8 °C)	Station:	Brush Creek @ Flat Rock		

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method
10-3767-0082	48h Proportion Survived	100	>100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample

48h Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

48h Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water	1.00000	1.00000	1.00000	1.00000
100		1.00000	1.00000	1.00000	1.00000

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	17-6696-4951	17-6696-4951	05 Apr-07 4:57 PM	CETISv1.1.2

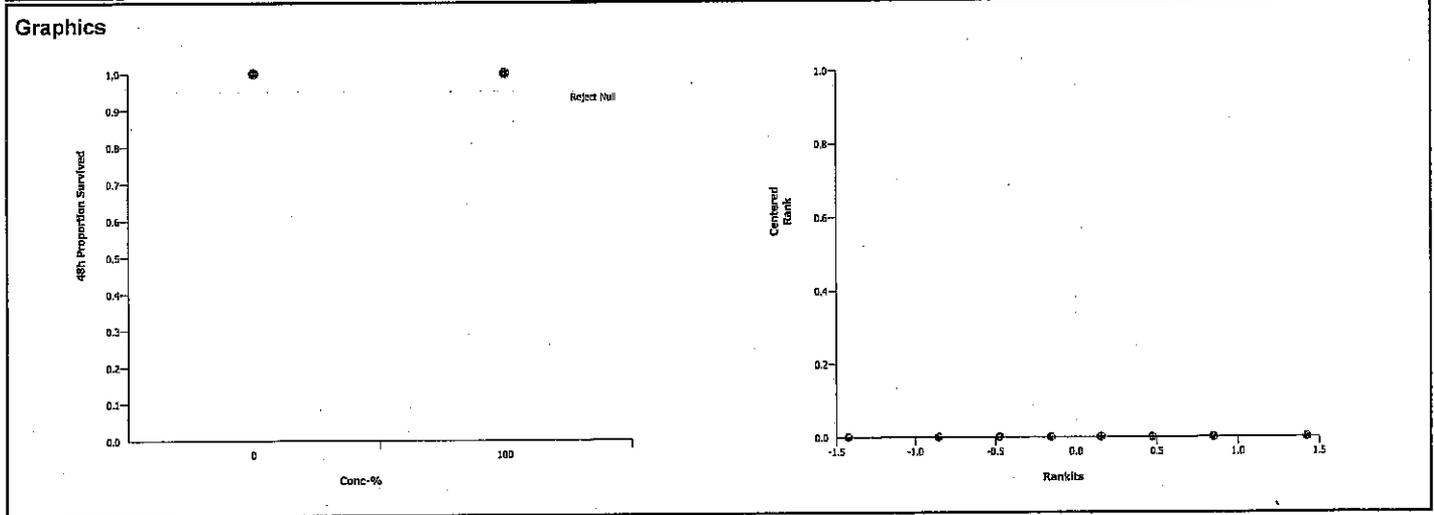
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater
 Sample ID: Brush Creek @ Flat Rock - 299
 Test ID#: 24014 Project # 12147

Test Date: 3/27/07
 Control Water: 80:20
 Control Water Batch: 529
 Feeding T0 Time: 1015 Initials: YJK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3.27.07 Test Solution Prep: KKP New WQ: MK Initiation Time: 1600 Initiation Signoff: MK
100% Sample	20.3	8.04		7.8		185	5	5	5	5	
Meter ID	19	PH2		DO12		EC03					
Control	20.5		8.61		7.3		S	S	S	S	Date: 3/28/07 Count Time: 940 Count Signoff: KEN Old WQ: YJK
100% Sample	20.5		8.44		7.0		S	S	S	S	
Meter ID	19		PH2		DO12						
Control	19.8		8.60		7.7	569 560 MK	S	S	S	S	Date: 3/29/07 Termination Time: 1800 Termination Signoff: KEN Old WQ: MK
100% Sample	19.8		8.71		7.9	225	S	S	S	S	
Meter ID	19		PH2		DO12	EC04					

CETIS Test Summary

Report Date:

05 Apr-07 4:58 PM

Test Link:

08-5422-8661/24013

Acute Ceriodaphnia Survival Test		Pacific EcoRisk						
Test No:	09-5215-8763	Test Type:	Survival (48h)	Duration:	48h			
Start Date:	27 Mar-07 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia			
Ending Date:	29 Mar-07 04:00 PM	Dil Water:	Not Applicable	Source:	In-House Culture			
Setup Date:	27 Mar-07 04:00 PM	Brine:	Not Applicable					
Sample No:	17-4217-1089	Code:	12147	Client:	City of Santa Rosa			
Sample Date:	26 Mar-07 03:05 PM	Material:	Stormwater	Project:	NPDES			
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa					
Sample Age:	25h (5.9 °C)	Station:	Colgan Creek @ Bellevue Ave					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
01-3576-9601	48h Proportion Survived	100	>100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample		
48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
48h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	08-5422-8661	08-5422-8661	05 Apr-07 4:58 PM	CETISv1.1.2

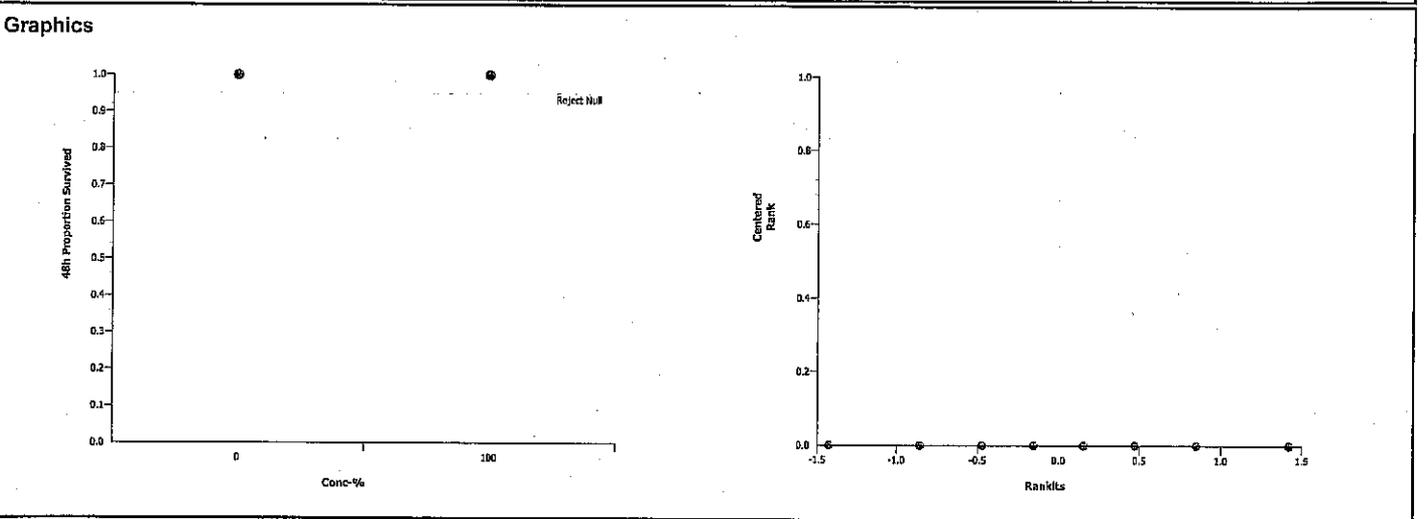
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons						
Control	vs	Conc-%	Statistic	Critical	P-Value	Decision(0.05)
Lab Water		100	18		0.4429	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary			Original Data				Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater
 Sample ID: Collan Creek @ Bellevue Ave-300
 Test ID#: 24013 Project # 12147

Test Date: 3/27/07
 Control Water: 80:20
 Control Water Batch: 529
 Feeding T0 Time: 1015 Initials: YK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3.27.07 Test Solution Prep: KFN New WQ: MK
100% Sample	20.3	7.75		8.7		320	5	5	5	5	Initiation Time: 1600 Initiation Signoff: MK
Meter ID	19	PH12		DO12		EC15					
Control	20.5		8.61		7.3		S	S	S	S	Date: 3/28/07 Count Time: 940 Count Signoff: KFN Old WQ: MK
100% Sample	20.5		8.21		7.7		S	S	S	S	
Meter ID	19		PH12		DO12						
Control	19.8		8.60		7.7	569	S	S	S	S	Date: 3/29/07 Termination Time: 1000 Termination Signoff: KFN Old WQ: MK
100% Sample	19.8		8.55		7.9	353	S	S	S	S	
Meter ID	19		PH12		DO12	EC04					

CETIS Test Summary

Report Date:

05 Apr-07 4:59 PM

Test Link:

18-2251-6341/24012

Acute Ceriodaphnia Survival Test						Pacific EcoRisk		
Test No:	09-5215-8763	Test Type:	Survival (48h)	Duration:	48h	Species:	Ceriodaphnia dubia	
Start Date:	27 Mar-07 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Source:	In-House Culture			
Ending Date:	29 Mar-07 04:00 PM	Dil Water:	Not Applicable					
Setup Date:	27 Mar-07 04:00 PM	Brine:	Not Applicable					
Sample No:	10-9166-5981	Code:	12147	Client:	City of Santa Rosa			
Sample Date:	26 Mar-07 02:42 PM	Material:	Stormwater	Project:	NPDES			
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa					
Sample Age:	25h (5.8 °C)	Station:	Matanzas Creek @ Hoen Frontage Rd					
Comparison Summary								
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method		
04-3845-6538	48h Proportion Survived	100	>100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample		
48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
48h Proportion Survived Detail								
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4			
0	Lab Water	1.00000	1.00000	1.00000	1.00000			
100		1.00000	1.00000	1.00000	1.00000			

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test **Pacific EcoRisk**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	18-2251-6341	18-2251-6341	05 Apr-07 4:59 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons

Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0,4429	4	Non-Significant Effect

ANOVA Table

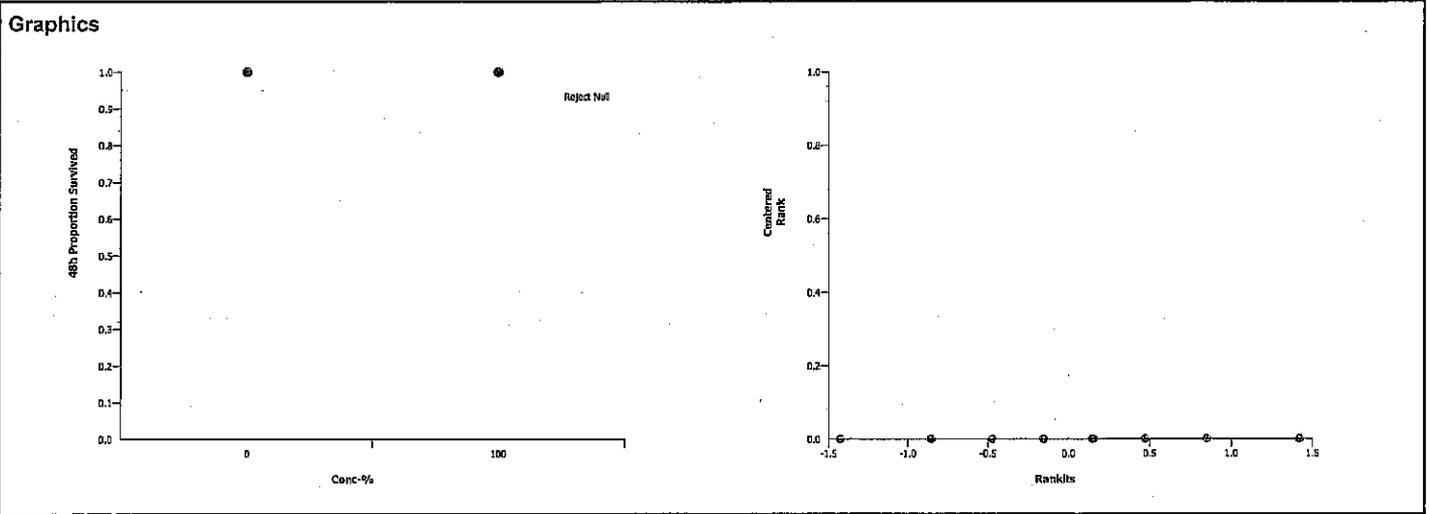
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary

Conc-%	Control Type	Count	Original Data				Transformed Data			
			Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater Test Date: 3/27/07
 Sample ID: Matanzas Creek @ Haen Franchise Rd-301 Control Water: 80:20
 Test ID#: 24012 Project #: 12147 Control Water Batch: 529
 Feeding To Time: 10:15 Initials: VK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.1		283	5	5	5	5	Date: 3/27/07 Test Solution Prep: <u>KN</u> New WQ: <u>MK</u>
100% Sample	21.3	7.74		8.6		350	5	5	5	5	Initiation Time: 1600 Initiation Signoff: <u>MK</u>
Meter ID	19	pH12		DO12		EC03					
Control	20.5		8.61		7.3		S	S	S	S	Date: 3/28/07 Count Time: 940 Count Signoff: <u>KN</u> Old WQ: <u>KN</u>
100% Sample	20.5		8.34		7.4		S	S	S	S	
Meter ID	19		pH12		DO12						
Control	19.8		8.60		7.7	569	S	S	S	S	Date: 3/29/07 Termination Time: 1600 Termination Signoff: <u>KN</u> Old WQ: <u>KN</u>
100% Sample	19.8		8.53		7.9	360	S	S	S	S	
Meter ID	19		pH12		DO12	EC04					

CETIS Test Summary

Report Date: 05 Apr-07 5:00 PM
 Test Link: 14-6474-6392/24011

Acute Ceriodaphnia Survival Test							Pacific EcoRisk		
Test No:	09-5215-8763	Test Type:	Survival (48h)	Duration:	48h				
Start Date:	27 Mar-07 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia				
Ending Date:	29 Mar-07 04:00 PM	Dil Water:	Not Applicable	Source:	In-House Culture				
Setup Date:	27 Mar-07 04:00 PM	Brine:	Not Applicable						
Sample No:	10-9593-3739	Code:	12147	Client:	City of Santa Rosa				
Sample Date:	26 Mar-07 01:30 PM	Material:	Stormwater	Project:	NPDES				
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa						
Sample Age:	26h (5.2 °C)	Station:	Paulin Creek @ Administration Dr						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
05-1699-3077	48h Proportion Survived	100	>100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample			
48h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
48h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4				
0	Lab Water	1.00000	1.00000	1.00000	1.00000				
100		1.00000	1.00000	1.00000	1.00000				

CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 5:00 PM
 Analysis: 05-1699-3077/24011

Acute Ceriodaphnia Survival Test						Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	14-6474-6392	14-6474-6392	05 Apr-07 5:00 PM	CETISv1.1.2

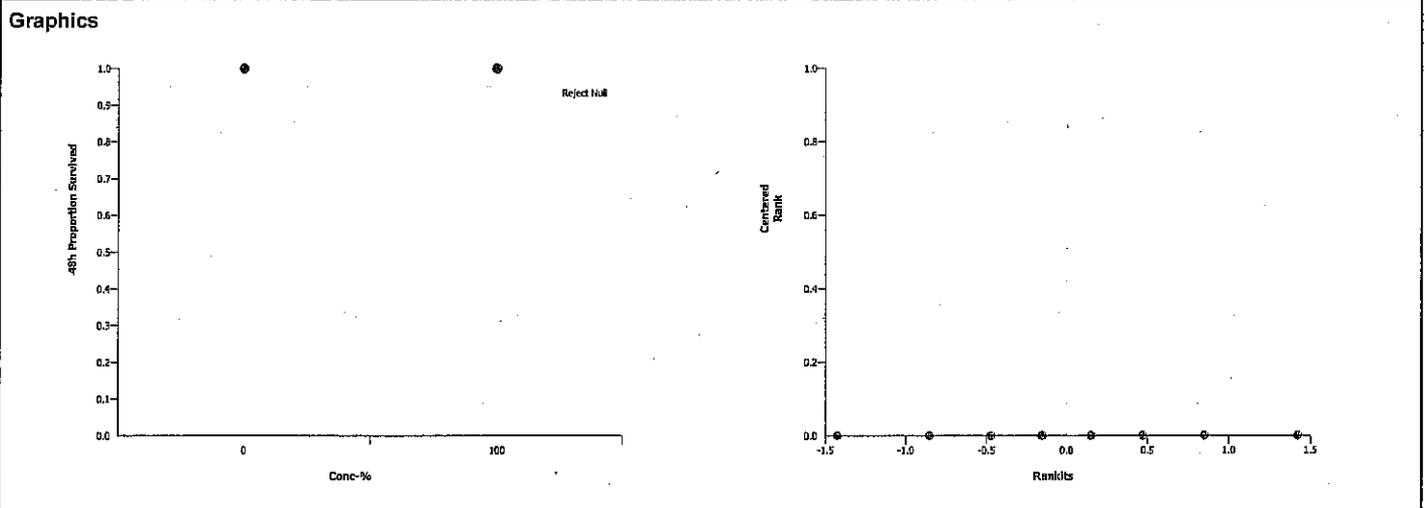
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary		Original Data					Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater Test Date: 3/27/07
 Sample ID: Paulin Creek @ Administration Dr-302 Control Water: 80:20
 Test ID#: 24011 Project #: 12147 Control Water Batch: 529
 Feeding To Time: 1015 Initials: YK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3/27/07 Test Solution Prep: KFN New WQ: MK
100% Sample	20.3	7.86		9.1		134	5	5	5	5	Initiation Time: 1600 Initiation Signoff: MK
Meter ID	19	11172		1012		EC03					
Control	20.5		8.61		7.3		S	S	S	S	Date: 3/28/07 Count Time: 940 Count Signoff: KFN
100% Sample	20.5		8.36		7.4		S	S	S	S	Old WQ: MK
Meter ID	19		Ph12		dp12						
Control	19.8		8.60		7.7	569	S	S	S	S	Date: 3/29/07 Termination Time: 1200 Termination Signoff: KFN
100% Sample	19.8		8.65		7.9	151	S	S	S	S	Old WQ: MK
Meter ID	19		ph12		0612	EC04					

CETIS Test Summary

Report Date: 05 Apr-07 5:01 PM
 Test Link: 10-4533-9929/24010

Acute Ceriodaphnia Survival Test						Pacific EcoRisk			
Test No:	09-5215-8763	Test Type:	Survival (48h)	Duration:	48h	Species:	Ceriodaphnia dubia	Source:	In-House Culture
Start Date:	27 Mar-07 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Dil Water:	Not Applicable	Brine:	Not Applicable		
Ending Date:	29 Mar-07 04:00 PM								
Setup Date:	27 Mar-07 04:00 PM								
Sample No:	06-9912-8571	Code:	12147	Client:	City of Santa Rosa	Project:	NPDES		
Sample Date:	26 Mar-07 12:55 PM	Material:	Stormwater						
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa						
Sample Age:	27h (6.1 °C)	Station:	Peterson Creek @ Fulton Rd						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
14-3330-2088	48h Proportion Survived	100	>100	N/A	11.20%	Wilcoxon Rank Sum Two-Sample			
48h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		4	0.95000	0.80000	1.00000	0.05000	0.10000	10.53%	
48h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4				
0	Lab Water	1.00000	1.00000	1.00000	1.00000				
100		1.00000	1.00000	1.00000	0.80000				

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test Pacific EcoRisk

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	10-4533-9929	10-4533-9929	05 Apr-07 5:01 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	11.20%

Group Comparisons

Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	16		0.3429	4	Non-Significant Effect

ANOVA Table

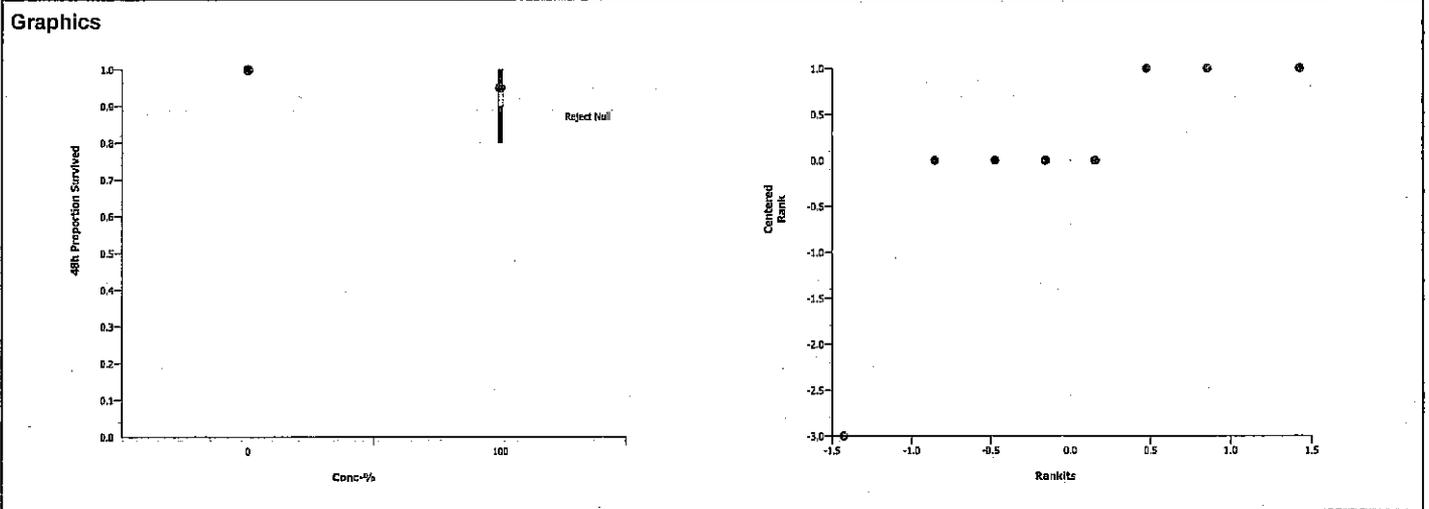
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0.0070885	0.0070885	1	1.00	0.35592	Non-Significant Effect
Error	0.0425309	0.0070885	6			
Total	0.04961941	0.014177	7			

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	1.00000	13.74502	0.35592	Equal Variances
Distribution	Shapiro-Wilk W	0.70648		0.00267	Non-normal Distribution

Data Summary

Conc-%	Control Type	Count	Original Data				Transformed Data			
			Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	5.00000	5.00000	5.00000	0.00000
100		4	0.95000	0.80000	1.00000	0.10000	4.00000	1.00000	5.00000	2.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater
 Sample ID: Peterson Creek @ Fulton Rd - 203
 Test ID#: 24010 Project # 12147

Test Date: 3/27/07
 Control Water: 80:20
 Control Water Batch: 529
 Feeding To Time: 1015 Initials: YK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3/27/07 Test Solution Prep: KFN New WQ: MK
100% Sample	20.3	7.58		8.4		130	5	5	5	5	Initiation Time: 1600 Initiation Signoff: MK
Meter ID	19	PH12		DO12		203					
Control	20.5		8.33		7.7		5	5	5	5	Date: 3/28/07 Count Time: 940 Count Signoff: KFN
100% Sample	20.5		8.38		7.9		5	5	5	4	Old WQ: CM
Meter ID	19		PH12		DO12						
Control	19.8		8.30		7.6	300	5	5	5	5	Date: 3/29/07 Termination Time: 1000 Termination Signoff: KFN
100% Sample	19.8		8.43		7.7	141	5	5	5	4	Old WQ: CM
Meter ID	19		PH12		DO12	ECO4					

CETIS Test Summary

 Report Date: 05 Apr-07 5:02 PM
 Test Link: 17-5806-5103/24009

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Test No: 09-5215-8763	Test Type: Survival (48h)	Duration: 48h
Start Date: 27 Mar-07 04:00 PM	Protocol: EPA/821/R-02-012 (2002)	Species: Ceriodaphnia dubia
Ending Date: 29 Mar-07 04:00 PM	Dil Water: Not Applicable	Source: In-House Culture
Setup Date: 27 Mar-07 04:00 PM	Brine: Not Applicable	

Sample No: 08-2691-7830	Code: 12147	Client: City of Santa Rosa
Sample Date: 26 Mar-07 01:09 PM	Material: Stormwater	Project: NPDES
Receive Date: 27 Mar-07 10:30 AM	Source: City of Santa Rosa	
Sample Age: 27h (6.5 °C)	Station: Piner Ck @ Marlow Rd	

Comparison Summary						
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method
09-7613-1859	48h Proportion Survived	100	>100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample

48h Proportion Survived Summary								
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

48h Proportion Survived Detail					
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water	1.00000	1.00000	1.00000	1.00000
100		1.00000	1.00000	1.00000	1.00000

CETIS Analysis Detail

Comparisons: Page 1 of 1
 Report Date: 05 Apr-07 5:02 PM
 Analysis: 09-7613-1859/24009

Acute Ceriodaphnia Survival Test **Pacific EcoRisk**

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	17-5806-5103	17-5806-5103	05 Apr-07 5:02 PM	CETISv1.1.2

Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons

Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table

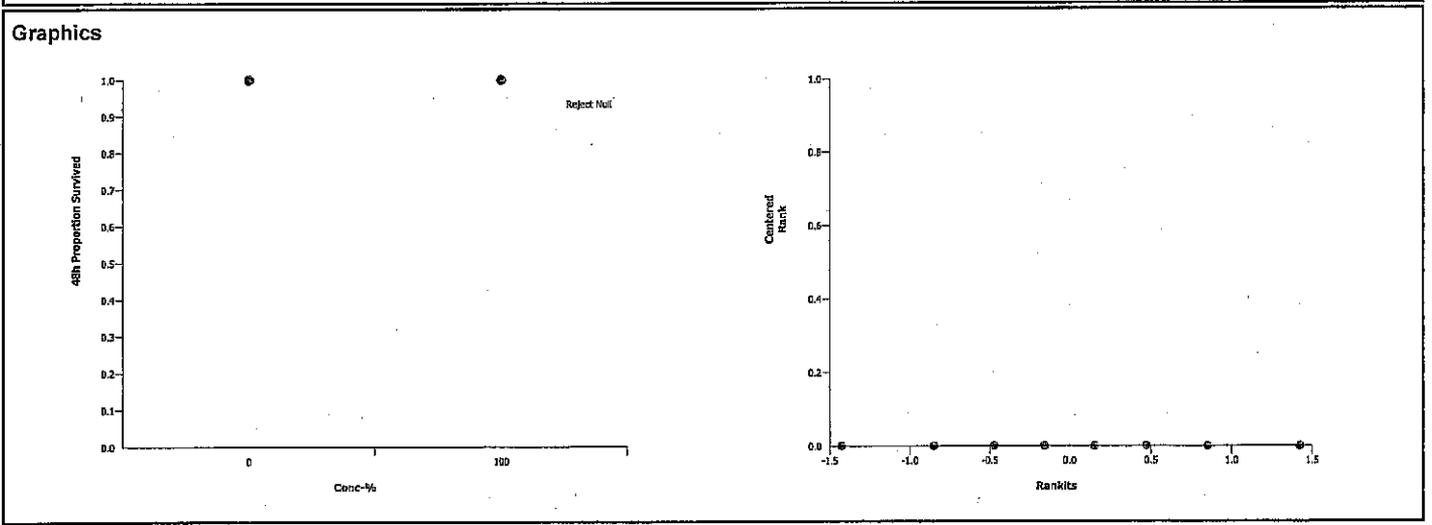
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions

Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary

Conc-%	Control Type	Count	Original Data				Transformed Data			
			Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater
 Sample ID: Piner Creek @ Marlow Rd - 304
 Test ID#: 24009 Project #: 12147

Test Date: 3/27/07
 Control Water: 80:20
 Control Water Batch: 521
 Feeding TO Time: 1015 Initials: YE

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3/27/07 Test Solution Prep: KEN New WQ: MLK
100% Sample	20.3	7.52		8.6		296	5	5	5	5	Initiation Time: M600 Initiation Signoff: MLK
Meter ID	19	pH12		D012		2003					
Control	20.5		8.33		7.7		S	S	S	S	Date: 3/28/07 Count Time: 940 Count Signoff: KEN Old WQ: YL
100% Sample	20.5		8.12		7.0		S	S	S	S	
Meter ID	19		pH12		D012						
Control	19.8		8.30		7.6	306	S	S	S	S	Date: 3/29/07 Termination Time: 1000 Termination Signoff: KEN Old WQ: MLK
100% Sample	19.8		8.25		7.8	297	S	S	S	S	
Meter ID	19		pH12		D012	2004					

CETIS Test Summary

Report Date:

05 Apr-07 5:04 PM

Test Link:

06-3334-9028/24008

Acute Ceriodaphnia Survival Test							Pacific EcoRisk		
Test No:	09-5215-8763	Test Type:	Survival (48h)	Duration:	48h				
Start Date:	27 Mar-07 04:00 PM	Protocol:	EPA/821/R-02-012 (2002)	Species:	Ceriodaphnia dubia				
Ending Date:	29 Mar-07 04:00 PM	Dil Water:	Not Applicable	Source:	In-House Culture				
Setup Date:	27 Mar-07 04:00 PM	Brine:	Not Applicable						
Sample No:	05-8859-5815	Code:	12147	Client:	City of Santa Rosa				
Sample Date:	26 Mar-07 01:58 PM	Material:	Stormwater	Project:	NPDES				
Receive Date:	27 Mar-07 10:30 AM	Source:	City of Santa Rosa						
Sample Age:	26h (5.5 °C)	Station:	Santa Rosa Ck @ Melita Rd						
Comparison Summary									
Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method			
06-2838-9604	48h Proportion Survived	100	> 100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample			
48h Proportion Survived Summary									
Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV	
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%	
48h Proportion Survived Detail									
Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4				
0	Lab Water	1.00000	1.00000	1.00000	1.00000				
100		1.00000	1.00000	1.00000	1.00000				

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
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Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	06-3334-9028	06-3334-9028	05 Apr-07 5:04 PM	CETISv1.1.2

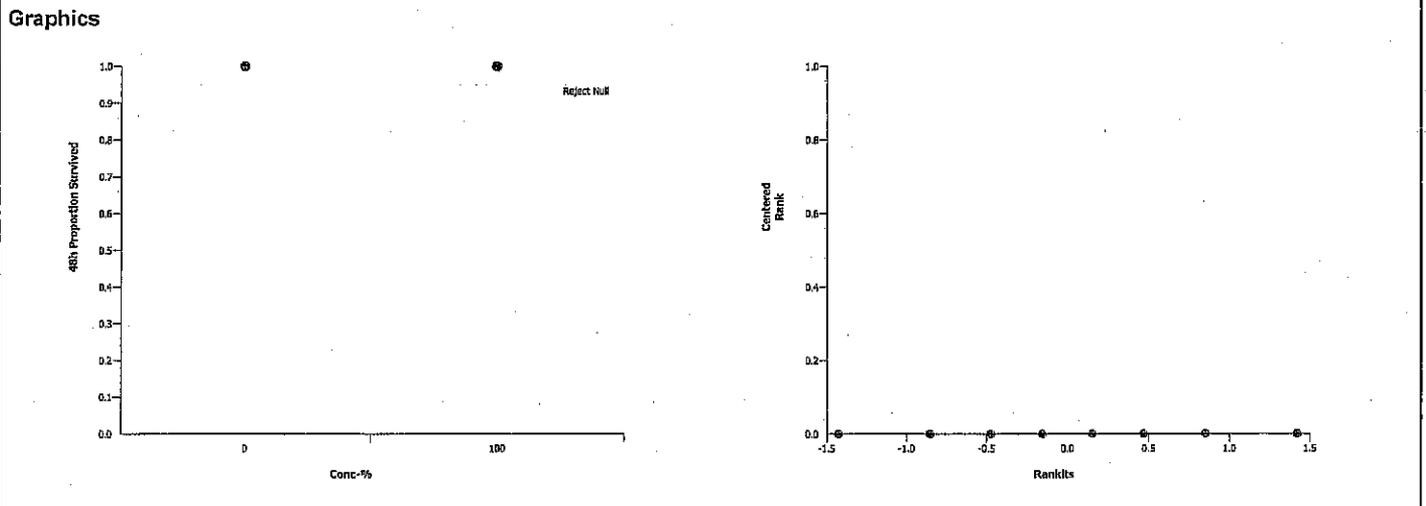
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table						
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)
Between	0	0	1	65535.0	0.00000	Significant Effect
Error	0	0	6			
Total	0	0	7			

ANOVA Assumptions					
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances

Data Summary			Original Data				Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater Test Date: 3/27/07
 Sample ID: Santa Rosa Crak @ Melita Rd -305 Control Water: 80:20
 Test ID#: 24008 Project # 12147 Control Water Batch: 529
 Feeding T0 Time: 1015 Initials: JK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3/27/07 Test Solution Prep: <u>JKN</u> New WQ: <u>JK</u>
100% Sample	20.3	8.50		10.1		394	5	5	5	5	Initiation Time: <u>1600</u> Initiation Signoff: <u>mc</u>
Meter ID	17	pH12		D012		2203					
Control	20.5		8.33		7.7		S	S	S	S	Date: 3/28/07 Count Time: <u>940</u> Count Signoff: <u>JKN</u> Old WQ: <u>JK</u>
100% Sample	20.5		8.58		7.6		S	S	S	S	
Meter ID	19		pH12		D012						
Control	19.8		8.30		7.6	300	S	S	S	S	Date: 3/29/07 Termination Time: <u>1200</u> Termination Signoff: <u>JK</u> Old WQ: <u>JK</u>
100% Sample	19.8		8.48		7.9	397	S	S	S	S	
Meter ID	19		pH12		D012	E004					

CETIS Test Summary

Report Date: 05 Apr-07 5:04 PM
 Test Link: 10-8335-0986/24007

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
----------------------------------	-----------------

Test No: 09-5215-8763	Test Type: Survival (48h)	Duration: 48h
Start Date: 27 Mar-07 04:00 PM	Protocol: EPA/821/R-02-012 (2002)	Species: Ceriodaphnia dubia
Ending Date: 29 Mar-07 04:00 PM	Dil Water: Not Applicable	Source: In-House Culture
Setup Date: 27 Mar-07 04:00 PM	Brine: Not Applicable	

Sample No: 07-9033-7343	Code: 12147	Client: City of Santa Rosa
Sample Date: 26 Mar-07 12:34 PM	Material: Stormwater	Project: NPDES
Receive Date: 27 Mar-07 10:30 AM	Source: City of Santa Rosa	
Sample Age: 27h (6.3 °C)	Station: Santa Rosa Ck @ Piner Ck	

Comparison Summary

Analysis	Endpoint	NOEL	LOEL	ChV	PMSD	Method
10-3937-1704	48h Proportion Survived	100	>100	N/A	5.00%	Wilcoxon Rank Sum Two-Sample

48h Proportion Survived Summary

Conc-%	Control Type	Reps	Mean	Minimum	Maximum	SE	SD	CV
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%
100		4	1.00000	1.00000	1.00000	0.00000	0.00000	0.00%

48h Proportion Survived Detail

Conc-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Lab Water	1.00000	1.00000	1.00000	1.00000
100		1.00000	1.00000	1.00000	1.00000

CETIS Analysis Detail

Acute Ceriodaphnia Survival Test	Pacific EcoRisk
----------------------------------	-----------------

Endpoint	Analysis Type	Sample Link	Control Link	Date Analyzed	Version
48h Proportion Survived	Comparison	10-8335-0986	10-8335-0986	05 Apr-07 5:04 PM	CETISv1.1.2

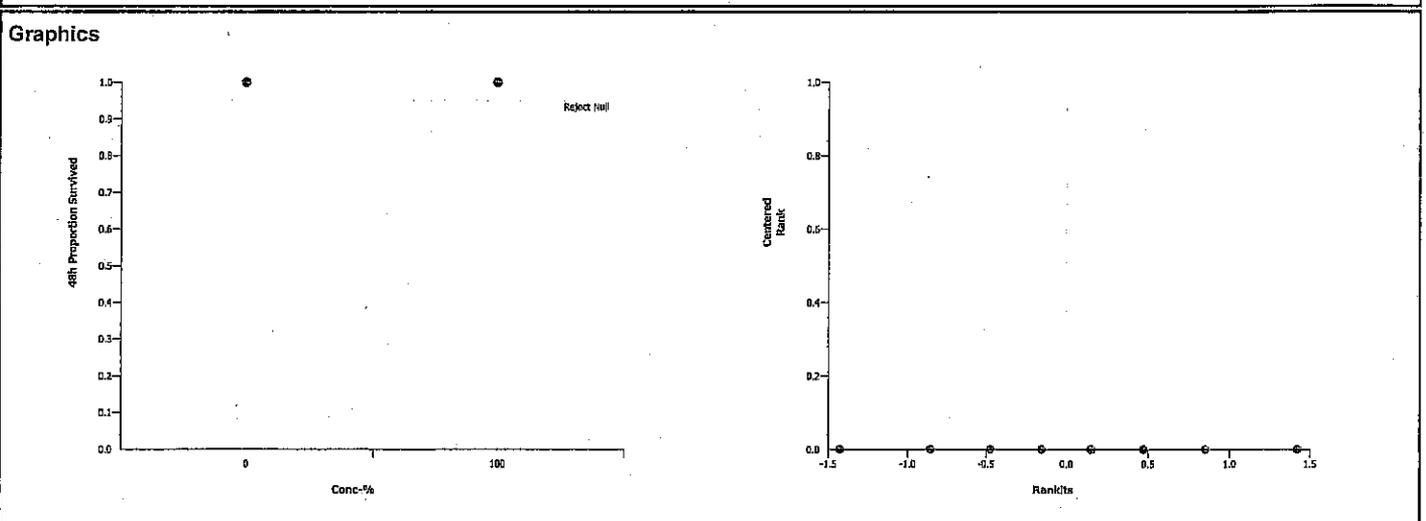
Method	Alt H	Data Transform	Zeta	NOEL	LOEL	Toxic Units	ChV	PMSD
Wilcoxon Rank Sum Two-Sample	C > T	Rank		100	>100	1	N/A	5.00%

Group Comparisons							
Control	vs	Conc-%	Statistic	Critical	P-Value	Ties	Decision(0.05)
Lab Water		100	18		0.4429	4	Non-Significant Effect

ANOVA Table							
Source	Sum of Squares	Mean Square	DF	F Statistic	P-Value	Decision(0.05)	
Between	0	0	1	65535.0	0.00000	Significant Effect	
Error	0	0	6				
Total	0	0	7				

ANOVA Assumptions						
Attribute	Test	Statistic	Critical	P-Value	Decision(0.01)	
Variances	Modified Levene	65535.00000	13.74502	0.00000	Unequal Variances	

Data Summary			Original Data				Transformed Data			
Conc-%	Control Type	Count	Mean	Minimum	Maximum	SD	Mean	Minimum	Maximum	SD
0	Lab Water	4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000
100		4	1.00000	1.00000	1.00000	0.00000	4.50000	4.50000	4.50000	0.00000



48 Hour Acute *Ceriodaphnia dubia* Toxicity Test Data

Client: Santa Rosa Stormwater
 Sample ID: Santa Rosa Creek @ Pine Creek - 306
 Test ID#: 24007 Project # 12147

Test Date: 3/27/07
 Control Water: 80:20
 Control Water Batch: 524
 Feeding T0 Time: 1015 Initials: YK

Treatment	Temp (°C)	pH		D.O.		Conductivity (µS/cm)	# Live Animals				Sign-Off
		New	Old	New	Old		A	B	C	D	
Control	20.3	8.36		8.9		283	5	5	5	5	Date: 3/27/07 Test Solution Prep: KFN New WQ: MHC
100% Sample	20.3	8.16		10.0		426	5	5	5	5	Initiation Time: 1500 Initiation Signoff: MK
Meter ID	19	PH12		DO12		ECO3					
Control	20.5		8.33		7.7		S	S	S	S	Date: 3/28/07 Count Time: 940 Count Signoff: KFN Old WQ: YK
100% Sample	20.5		8.57		7.6		S	S	S	S	
Meter ID	19		PH12		DO12						
Control	19.8		8.30		7.6	300	S	S	S	S	Date: 3/29/07 Termination Time: 1200 Termination Signoff: KFN Old WQ: MCM
100% Sample	19.8		8.61		7.9	416	S	S	S	S	
Meter ID	19		PH12		DO12	ECO4					

2006/2007 OUTFALL LAB RESULTS

Appendix V.C

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Alpha Analytical Laboratories Inc.

208 Mason St. Ukiah, California 95482

e-mail: clientservices@alpha-labs.com • Phone: (707) 468-0401 • Fax: (707) 468-5267

CHEMICAL EXAMINATION REPORT

Page 1 of 8

Santa Rosa, City of
69 Stony Circle
Santa Rosa, CA 95401
Attn: Steve Brady

Report Date: 10/19/06 13:52
Project No: Stormwater Runoff - 2006
Project ID: Outfall Sampling

Order Number A610226	Receipt Date/Time 10/05/2006 14:55	Client Code SRGITY	Client PO/Reference
-------------------------	---------------------------------------	-----------------------	---------------------

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
54" Outfall to Colgan Ck SW 292	A610226-01	Water	10/05/06 11:09	10/05/06 14:55
48" Outfall to Piner Ck SW 293	A610226-02	Water	10/05/06 11:35	10/05/06 14:55

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Bruce Gove
Laboratory Director

10/19/2006



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CHEMICAL EXAMINATION REPORT

Santa Rosa, City of
69 Stony Circle
Santa Rosa, CA 95401
Attn: Steve Brady

Report Date: 10/19/06 13:52
Project No: Stormwater Runoff - 2006
Project ID: Outfall Sampling

Order Number A610226	Receipt Date/Time 10/05/2006 14:55	Client Code SRCITY	Client PO/Reference
-------------------------	---------------------------------------	-----------------------	---------------------

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
54" Outfall to Colgan Ck SW 292 (A610226-01)							
Sample Type: Water							
Sampled: 10/05/06 11:09							
Conventional Chemistry Parameters by APHA/EPA Methods							
Phosphorus, Dissolved	EPA 365.2	AJ61804	10/18/06	10/19/06	1	ND mg/l	1.0
Total Nitrogen	SM4500-N	AJ61108	10/11/06	10/19/06	"	3.5 "	1.0
Ammonia as N	SM4500NH3C	AJ60916	10/09/06	10/12/06	"	0.87 "	0.20
Phosphorus, Total	EPA 365.2	AJ61803	10/18/06	10/19/06	2	0.46 "	0.20
Total Dissolved Solids	EPA 160.1	AJ61229	10/12/06	10/15/06	1	94 "	10
Total Kjeldahl Nitrogen	EPA 351.3	AJ61610	10/17/06	10/17/06	"	3.2 "	1.0
Total Suspended Solids	EPA 160.2	AJ61115	10/11/06	10/13/06	"	77 "	1.0
Anions by EPA Method 300.0							
Nitrate as N	EPA 300.0	AJ60607	10/06/06	10/06/06	1	0.35 mg/l	0.20
Nitrite as N	"	"	"	"	"	ND "	0.20
Microbiological Parameters by APHA Standard Methods							
Fecal Streptococcus - Hi Dilution	SM9230	AJ60939	10/05/06	10/08/06	1	300000 MPN/100 ml	2.0 T-2
Total Coliforms	SM9221	"	"	"	"	22000000 "	2.0 T-2
E. Coli	SM9223	"	"	"	"	9665 "	1.0
Fecal Coliforms	SM9221	"	"	"	"	850000 "	2.0 T-2
48" Outfall to Finer Ck SW 293 (A610226-02)							
Sample Type: Water							
Sampled: 10/05/06 11:35							
Conventional Chemistry Parameters by APHA/EPA Methods							
Phosphorus, Dissolved	EPA 365.2	AJ61804	10/18/06	10/19/06	1	ND mg/l	1.0
Total Nitrogen	SM4500-N	AJ61108	10/11/06	10/19/06	"	3.5 "	1.0
Ammonia as N	SM4500NH3C	AJ60916	10/09/06	10/12/06	"	0.66 "	0.20
Phosphorus, Total	EPA 365.2	AJ61803	10/18/06	10/19/06	2	0.54 "	0.20
Total Dissolved Solids	EPA 160.1	AJ61229	10/12/06	10/15/06	1	63 "	10
Total Kjeldahl Nitrogen	EPA 351.3	AJ61610	10/17/06	10/17/06	"	3.2 "	1.0
Total Suspended Solids	EPA 160.2	AJ61115	10/11/06	10/13/06	"	130 "	1.0

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Bruce Gove

Bruce Gove
Laboratory Director

10/19/2006



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CHEMICAL EXAMINATION REPORT

Santa Rosa, City of
69 Stony Circle
Santa Rosa, CA 95401
Attn: Steve Brady

Report Date: 10/19/06 13:52
Project No: Stormwater Runoff - 2006
Project ID: Outfall Sampling

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
A610226	10/05/2006 14:55	SRCITY	

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
48" Outfall to Piner Ck SW 293 (A610226-02)			Sample Type: Water		Sampled: 10/05/06 11:35		
Anions by EPA Method 300.0							
Nitrate as N	EPA 300.0	AJ60607	10/06/06	10/06/06	1	0.28 mg/l	0.20
Nitrite as N	"	"	"	"	"	ND "	0.20
Microbiological Parameters by APHA Standard Methods							
Fecal Streptococcus - Hi Dilution	SM9230	AJ60939	10/05/06	10/08/06	1	400000 MPN/100 ml	2.0 T-2
Total Coliforms	SM9221	"	"	"	"	2800000 "	2.0 T-2
E. Coli	SM9223	"	"	"	"	84600 "	1.0
Fecal Coliforms	SM9221	"	"	"	"	500000 "	2.0 T-2

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Laboratory Director

10/19/2006



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CHEMICAL EXAMINATION REPORT

Page 2 of 4

Santa Rosa, City of
69 Stony Circle
Santa Rosa, CA 95401
Attn: Steve Brady

Report Date: 04/11/07 09:03
Project No: SW#307/117480
Project ID: Stormwater Runoff - 2007

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
07C0870	03/26/2007 16:30	SRCITY	

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
54" Outfall to Colgan Ck @ Hearn Ave. (07C0870-01)			Sample Type: Water		Sampled: 03/26/07 13:05		
Conventional Chemistry Parameters by APHA/EPA Methods							
Phosphorus, Dissolved	EPA 365.2	AD70606	04/09/07	04/09/07	1	ND mg/l	1.0
Total Nitrogen	SM4500-N	AC72710	03/27/07	04/10/07	"	1.5 "	1.0
Ammonia as N	SM4500NH3C	AC72814	03/28/07	04/04/07	"	0.70 "	0.20
Phosphorus, Total	EPA 365.2	AD70219	04/02/07	04/04/07	"	0.17 "	0.10
Total Dissolved Solids	EPA 160.1	AC72813	03/28/07	04/02/07	"	51 "	10
Total Kjeldahl Nitrogen	EPA 351.3	AD70207	04/02/07	04/05/07	"	1.1 "	1.0
Total Suspended Solids	EPA 160.2	AC72914	03/29/07	04/02/07	"	30 "	1.0
Anions by EPA Method 300.0							
Nitrate as N	EPA 300.0	AC72716	03/27/07	03/27/07	1	0.33 mg/l	0.20
Nitrite as N	"	"	"	"	"	ND "	0.20
48" Outfall to Piner Ck @ Creekfield Dr. (07C0870-02)			Sample Type: Water		Sampled: 03/26/07 14:20		
Conventional Chemistry Parameters by APHA/EPA Methods							
Phosphorus, Dissolved	EPA 365.2	AD70606	04/09/07	04/09/07	1	ND mg/l	1.0
Total Nitrogen	SM4500-N	AC72710	03/27/07	04/10/07	"	3.5 "	1.0
Ammonia as N	SM4500NH3C	AC72814	03/28/07	04/04/07	"	0.40 "	0.20
Phosphorus, Total	EPA 365.2	AD70219	04/02/07	04/04/07	"	0.26 "	0.10
Total Dissolved Solids	EPA 160.1	AC72813	03/28/07	04/02/07	"	120 "	10
Total Kjeldahl Nitrogen	EPA 351.3	AD70207	04/02/07	04/05/07	"	2.2 "	1.0
Total Suspended Solids	EPA 160.2	AC72914	03/29/07	04/02/07	"	9.5 "	1.0

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Bruce L. Gove
Laboratory Director

4/11/2007



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CHEMICAL EXAMINATION REPORT

Page 3 of 4

Santa Rosa, City of
69 Stony Circle
Santa Rosa, CA 95401
Attn: Steve Brady

Report Date: 04/11/07 09:03
Project No: SW#307/117480
Project ID: Stormwater Runoff - 2007

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
07C0870	03/26/2007 16:30	SRCITY	

Alpha Analytical Laboratories, Inc.

METHOD	BATCH	PREPARED	ANALYZED	DILUTION	RESULT	PQL	NOTE
48" Outfall to Piner Ct @ Creekfield Dr. (07C0870-02) Sample Type: Water Sampled: 03/26/07 14:20							
Anions by EPA Method 300.0							
Nitrate as N	EPA 300.0	AC72716	03/27/07	03/27/07	1	1.3 mg/l	0.20
Nitrite as N	"	"	"	"	"	ND "	0.20

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Bruce L. Gove
Laboratory Director

4/11/2007



alpha

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CHEMICAL EXAMINATION REPORT

Page 4 of 4

Santa Rosa, City of
69 Stony Circle
Santa Rosa, CA 95401
Attn: Steve Brady

Report Date: 04/11/07 09:03
Project No: SW#307/117480
Project ID: Stormwater Runoff - 2007

Order Number	Receipt Date/Time	Client Code	Client PO/Reference
07C0870	03/26/2007 16:30	SRCITY	

Notes and Definitions

QM-03 The spike recovery was high for this analyte. The batch was accepted based on a non-detect for the analyte.

- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- PQL Practical Quantitation Limit

**COLGAN CREEK SPECIAL STUDY BIOASSAY SURVEY
RESULTS**

Appendix V.D

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Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482
707-468-0401

Client: Santa Rosa, City of
Lab # A610227-01

Spl ID: Colgan Ck. Upstream of 90 Bend/Bellvue Water

Bioassay Control Water Percent Survival-Trou
Hardness - Start: 99.0 mg/l End: 97.0 mg/l
Alkalinity - Start: 62.0 mg/l End: 69.0 mg/l
Conductivity - Start: 330 umhos/cm
Conductivity - End: 355 umhos/cm
Species: Onchorhynchus mykiss - Rainbow Trout
Avg. Weight: 0.130 g Avg. Length: 20.0 mm
Aeration: 100 Bubbles/Min. through 1mm Bore pipe
If yes - then all tanks will be aerated YES

Tank Volume: 5 Liters per Tank
Number Fish per Tank: 10 Number of Tanks: 2
Acclimation Temp: 12.0 deg.C
Hatch Date/Species Age: 9/18/06 18 days old
Residual chlorine detected: YES If yes - then
Control A with sodium thiosulfate will be used

Date/Time Sampled: 10/05/06 9:54
Hardness - Start: 133 Mid: 133 End: 134 mg/l
Alkalinity - Start: 82 Mid: 87 End: 89 mg/l
Conductivity - Start: 401 umhos/cm
Conductivity - End: 402 umhos/cm

Date: 10/6 10/7
Year: 2006
Time: 15:30 17:30

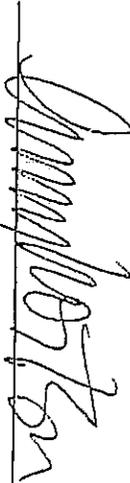
Date: 10/8 10/9
Time: 16:00 16:00

Date: 10/10
Time: 16:30

Renewal of Effluent@48hours

	INITIAL				24 HOURS				** 48 HOURS **				72 HOURS				96 HOURS				TOTAL
	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	
Control A	9.0	12.5	7.70	9.0	12.3	7.75	0	9.9	12.3	7.30	0	9.8	12.9	7.80	0	8.7	12.7	7.90	0	0	
Control B	9.1	12.5	7.70	9.0	12.3	7.70	0	9.4	12.3	7.20	0	9.9	12.9	7.80	0	9.0	12.7	7.90	0	0	
Sample A	5.3/6.7	12.4	7.10	8.4	12.6	7.30	0	4.5	12.6	7.50	0	8.8	12.8	7.60	0	8.4	12.8	7.80	0	0	
Sample B	3.6/6.6	12.4	7.10	8.4	12.6	7.30	0	5.8	12.6	7.60	0	8.3	12.8	7.60	0	8.0	12.8	7.80	1	1	

Analyst: CEF AJK
Remarks: 3 Drops of thiosulfate added to each test tank & Control "A". DO low- aeration increased before initiating test.
Results: 100% Survival Sample A 90% Survival Sample B
100% Survival Control A 100% Survival Control B
Method: EPA600/4-90/027 Percent Survival of 100% Effluent
Date: 10/05/2006

Supervisor: Julia R. Schnitzler
Laboratory Director: 

Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482

707-468-0401

Client: Santa Rosa, City of

Lab # A610227-02

Spl ID: Colgan Ck. Upstream Hearn Ave. Water

Date/Time Sampled: 10/05/06 10:15

Hardness - Start: 92 Mid: 94 End: 101 mg/l

Alkalinity - Start: 64 Mid: 66 End: 84 mg/l

Conductivity - Start: 285 umhos/cm

Conductivity - End: 284 umhos/cm

Bioassay Control Water Percent Survival-Trou

Hardness - Start: 99.0 mg/l End: 97.0 mg/l

Alkalinity - Start: 62.0 mg/l End: 69.0 mg/l

Conductivity - Start: 330 umhos/cm

Conductivity - End: 355 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout

Avg. Weight: 0.130 g Avg. Length: 20.0 mm

Aeration: 100 Bubbles/Min. through 1mm Bore pipe

if yes - then all tanks will be aerated ***

Date: 10/6 10/7

Year: 2006 15:30 17:30

Time: 15:30 17:30

Renewal of Effluent@48hours

	INITIAL				24 HOURS				** 48 HOURS **				72 HOURS				96 HOURS				TOTAL
	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	
Control A	9.0	12.5	7.70	0	9.0	12.3	7.75	0	9.9	12.3	7.30	0	9.8	12.9	7.80	0	8.7	12.7	7.90	0	0
Control B	9.1	12.5	7.70	0	9.0	12.3	7.70	0	9.4	12.3	7.20	0	9.9	12.9	7.80	0	9.0	12.7	7.90	0	0
Sample A	3.3 / 7.9	12.3	7.10	0	9.2	12.5	7.30	0	5.4	12.5	7.50	0	9.6	12.6	7.60	1	8.5	12.7	7.80	0	1
Sample B	4.6 / 6.5	12.3	7.10	0	9.6	12.6	7.20	0	5.6	12.5	7.60	0	9.2	12.6	7.60	3	7.8	12.7	7.60	0	3

Analyst: CEF

AJK

CEF

CEF

CEF

Remarks: 3 Drops of thiosulfate added to each test tank & Control "A". DO low- aeration increased before initiating test.

Results: 90% Survival Sample A 70% Survival Sample B

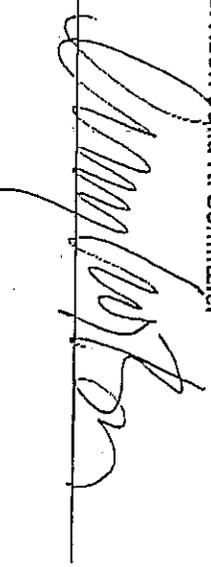
Results: 100% Survival Control A 100% Survival Control B

Method: EPA600/4-90/027 Percent Survival of 100% Effluent

Date: 10/02/06

Laboratory Director:

Supervisor: Jylia R. Schrittzler



Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482
707-468-0401

Client: Santa Rosa, City of
Lab # A610227-03

SP1 ID: Colgan Crk. Downstream Bedford Street Water

Date/Time Sampled: 10/05/06 10:35

Hardness - Start: 51 Mid: 53 End: 58 mg/l

Alkalinity - Start: 52 Mid: 61 End: 50 mg/l

Conductivity - Start: 161 umhos/cm

Conductivity - End: 164 umhos/cm

Bioassay Control Water Percent Survival-Trou

Hardness - Start: 99.0 mg/l End: 97.0 mg/l

Alkalinity - Start: 62.0 mg/l End: 69.0 mg/l

Conductivity - Start: 330 umhos/cm

Conductivity - End: 355 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout

Avg. Weight: 0.130 g Avg. Length: 20.0 mm

Aeration: 100 Bubbles/Min. through 1mm Bore pipet

If yes - then all tanks will be treated *** YES

Residual chlorine detected: YES If yes - then Control A with sodium thiosulfate will be used ****

Hatch Date/Species Age: 9/18/06 18 days old

Date: 10/6 10/7 10/8 10/9 10/10

Year: 2006 15:30 17:30 16:00 16:00 16:30

Renewal of Effluent@48hours

	INITIAL			24 HOURS			** 48 HOURS **			72 HOURS			96 HOURS			TOTAL				
	DO mg/l	deg C	pH	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M		DO mg/l	deg C	pH	#M
Control A	9.0	12.5	7.70	9.0	12.3	7.75	0	9.9	12.3	7.30	0	9.8	12.9	7.80	0	8.7	12.7	7.90	0	0
Control B	9.1	12.5	7.70	9.0	12.3	7.70	0	9.4	12.3	7.20	0	9.9	12.9	7.80	0	9.0	12.7	7.90	0	0
Sample A	5.6 / 7.9	12.2	7.20	9.8	12.4	7.40	0	6.6	12.3	7.30	0	9.6	12.5	7.60	0	9.0	12.4	7.70	0	0
Sample B	7.0 / 8.9	12.2	7.30	10.0	12.6	7.30	0	5.9	12.3	7.30	0	9.8	12.5	7.70	0	8.9	12.4	7.80	0	0

Analyst: CEF AJK

Remarks: 3 Drops of thiosulfate added to each test tank & Control "A". DO low- aeration increased before initiating test.

Results: 100% Survival Sample A 100% Survival Sample B
100% Survival Control A 100% Survival Control B

Supervisor: Julia R. Schmitzler

Method: EPA600/4-90/027 Percent Survival of 100% Effluent

Date: 10/10/2006

Laboratory Director:



Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482
707-468-0401

Client: Santa Rosa, City of
Lab # A6102227-04

Spl ID: Colgan Crk. Upstream ~~Media~~ ~~Water~~ ~~Water~~

Date/Time Sampled: 10/05/06 10:54

Hardness - Start: 128 Mid: 129 End: 128 mg/l

Alkalinity - Start: 116 Mid: 120 End: 121 mg/l

Conductivity - Start: 317 umhos/cm

Conductivity - End: 313 umhos/cm

Number of Tanks: 2

Acclimation Temp: 12.0 deg.C

Hatch Date/Species Age: 9/11/06 25 days old

Residual chlorine detected: YES

Control A with sodium thiosulfate will be used ****

Bioassay Control Water Percent Survival-Trou

Hardness - Start: 99.0 mg/l End: 97.0 mg/l

Alkalinity - Start: 62.0 mg/l End: 69.0 mg/l

Conductivity - Start: 330 umhos/cm

Conductivity - End: 355 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout

Avg. Weight: 0.130 g Avg. Length: 20.0 mm

Aeration: 100 Bubbles/Min. through 1mm Bore pipet

if yes - then all tanks will be aerated **** YES

Date: 10/6 10/7

Year: 2006 15:30 17:30

Time: 15:30 17:30

Date: 10/6 10/7

Year: 2006 15:30 17:30

Time: 15:30 17:30

*Renewal of Effluent@48hours**

	INITIAL				24 HOURS				** 48 HOURS **				72 HOURS				96 HOURS				TOTAL
	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	
Control A	9.0	12.5	7.70	0	9.0	12.3	7.75	0	9.9	12.3	7.30	0	9.8	12.9	7.80	0	8.7	12.7	7.90	0	0
Control B	9.1	12.5	7.70	0	9.0	12.3	7.70	0	9.4	12.3	7.20	0	9.9	12.9	7.80	0	9.0	12.7	7.90	0	0
Sample A	3.2 / 6.5	12.1	7.30	0	8.5	12.3	7.40	0	5.5	12.1	7.40	1	8.8	12.5	7.70	0	8.1	12.2	7.90	0	1
Sample B	4.1 / 8.0	12.1	7.30	0	9.2	12.2	7.40	0	5.0	12.1	7.40	0	8.7	12.5	7.70	0	8.0	12.2	7.90	0	0

Analyst: CEF

ALK

CEF

ALK

CEF

CEF

Remarks: 3 Drops of thiosulfate added to each test tank & Control "A". DO low-aeration increased before initiating test.

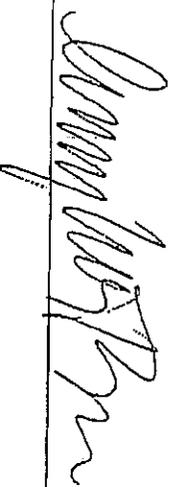
Results: 90% Survival Sample A 100% Survival Sample B

Results: 100% Survival Control A 100% Survival Control B

Method: EPA600/4-90/027 Percent Survival of 100% Effluent

Date: 10/10/2006

Laboratory Director:

Supervisor: Julia R. Schnitzler


Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482
707-468-0401

Client: Santa Rosa, City of

Lab # 07C0852-01

Spl ID: S.W. Sample #309 Water

Date/Time Sampled: 3/26/07 13:25

Hardness - Start: 130 Mid: 128 End: 129 mg/l

Alkalinity - Start: 108 Mid: 108 End: 108 mg/l

Conductivity - Start: 660 umhos/cm

Conductivity - End: 660 umhos/cm

208 Mason Street, Ukiah, CA 95482

707-468-0401

Tank Volume: 5 Liters per Tank

Number Fish per Tank: 10 Number of Tanks: 2

Acclimation Temp: 12.0 deg C

Hatch Date/Species Age: 3/05/07 22 days old

Residual chlorine detected: YES If yes - then

Control A with sodium thiosulfate will be used ****

Bioassay Control Water Percent Survival-Trou

Hardness - Start: 85.0 mg/l Ent: 85.0 mg/l

Alkalinity - Start: 58.0 mg/l Ent: 58.0 mg/l

Conductivity - Start: 280 umhos/cm

Conductivity - End: 278 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout

Avg. Weight: 0.197 g Avg. Length: 26.5 mm

Aeration: 100 Bubbles/Min. through 1mm Bore pipe

If yes - then all tanks will be aerated **** YES

Date: 3/27 3/28

Year: 2007 15:00 17:00

Time: 15:00 17:00

Renewal of Effluent@48hours

	INITIAL				24 HOURS				** 48 HOURS **				72 HOURS				96 HOURS				TOTAL
	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	
Control A	8.8	12.4	7.90	8.4	12.1	7.80	0	8.2	12.3	7.90	0	8.0	12.3	7.70	0	7.6	12.3	7.60	0	0	
Control B	8.8	12.4	7.90	8.6	12.1	7.80	0	8.4	12.3	7.90	0	8.3	12.3	7.70	0	8.0	12.3	7.60	0	0	
Sample A	7.2	13.0	7.80	8.5	12.2	7.90	0	8.0	12.4	7.70	0	8.1	12.3	7.90	0	7.9	12.3	7.90	0	0	
Sample B	6.5	13.0	7.80	8.5	12.2	7.90	0	7.9	12.4	7.80	0	7.8	12.3	7.80	0	7.6	12.3	7.80	0	0	

Analyst: CEF

CEF

CEF

CEF

CEF

Remarks:

100% Survival Sample A 100% Survival Sample B

100% Survival Control A 100% Survival Control B

Method: IFAB00/4-90/027 Percent Survival of 100% Effluent

Date: 3/31/2007

Laboratory Director:

Theresa Pava 4-6-07

Supervisor: Julia R. Schnitzler

Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482

707-468-0401

Client: Santa Rosa, City of

Lab # 07C0853-01

Spl ID: S.W. Sample #310 Water

Date/Time Sampled: 3/26/07 0:00

Hardness - Start: 105 Mid: 104 End: 104 mg/l

Alkalinity - Start: 77 Mid: 76 End: 77 mg/l

Conductivity - Start: 742 umhos/cm

Conductivity - End: 534 umhos/cm

310 assay Control Water Percent Survival-Trou

Hardness - Start: 85.0 mg/l End: 85.0 mg/l

Alkalinity - Start: 58.0 mg/l End: 58.0 mg/l

Conductivity - Start: 280 umhos/cm

Conductivity - End: 278 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout

Avg. Weight: 0.197 g Avg. Length: 26.5 mm

Aeration: 100 Bubbles/Min. through 1mm Bore pipe

If yes - then all tanks will be aerated *** YES

Tank Volume: 5 Liters per Tank

Number Fish per Tank: 10 Number of Tanks: 2

Acclimation Temp: 12.0 deg. C

Hatch Date/Species Age: 3/05/07 22 days old

Residual chlorine detected: YES If yes - then

Control A with sodium thiosulfate will be used ***

Date: 3/27 3/28 3/29 3/31

Year: 2007

Time: 17:30 17:00 17:00 16:30 15:30

Renewal of Effluent@48hours

	INITIAL						24 HOURS						** 48 HOURS **						72 HOURS						96 HOURS						TOTAL
	DO mg/l	deg C	pH	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	No. Dead			
Control A	8.8	12.4	7.90	8.4	12.1	7.80	0	8.2	12.3	7.90	0	8.0	12.3	7.70	0	7.6	12.3	7.60	0	8.0	12.3	7.60	0	8.0	12.3	7.60	0	0			
Control B	8.8	12.4	7.90	8.6	12.1	7.80	0	8.3	12.3	7.90	0	8.3	12.3	7.70	0	8.0	12.3	7.60	0	8.4	12.3	7.80	0	8.2	12.3	7.70	0	0			
Sample A	8.5	13.0	7.30	7.2	12.3	7.60	0	6.7	12.5	7.40	0	8.2	12.3	7.70	0	8.4	12.3	7.80	0	8.2	12.3	7.70	0	8.2	12.3	7.70	0	0			
Sample B	8.8	13.0	7.30	6.8	12.3	7.60	0	6.7	12.5	7.40	0	8.0	12.3	7.70	0	8.2	12.3	7.70	0	8.2	12.3	7.70	0	8.2	12.3	7.70	0	0			

Analyst: CEF

CEF

CEF

CEF

Remarks:

Results: 100% Survival Sample A 100% Survival Sample B

Results: 100% Survival Control A 100% Survival Control B

Method: EPA600/4-90/027 Percent Survival of 100% Effluent

Date: 3/31/2007

Laboratory Director:

Theresa Pave 4-6-07

Supervisor: Julia R. Schnitzler

Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482

707-468-0401

Client: Santa Rosa, City of

Lab # 07C0854-01

Spl ID: S.W. Sample #311 Water

Date/Time Sampled: 3/26/07 12:40

Hardness - Start: 56 Mid: 55 End: 55 mg/l

Alkalinity - Start: 61 Mid: 62 End: 62 mg/l

Conductivity - Start: 675 umhos/cm

Conductivity - End: 495 umhos/cm

Hardness - Start: 85.0 mg/l End: 85.0 mg/l
 Alkalinity - Start: 58.0 mg/l End: 58.0 mg/l
 Conductivity - Start: 280 umhos/cm
 Conductivity - End: 278 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout
 Avg. Weight: 0.197 g Avg. Length: 26.5 mm
 Aeration: 100 Bubbles/Min. through 1mm Bore pipet

if yes - then all tanks will be aerated ***
 YES

Date: 3/27 3/28
 Year: 2007
 Time: 15:30 17:00

Renewal of Effluent@48hours

3/29 3/30
 17:00 16:30

3/31 15:30

	INITIAL			24 HOURS			**48 HOURS**			72 HOURS			96 HOURS			TOTAL No. Dead			
	DO mg/l	deg C	pH	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M				
Control A	8.8	12.4	7.90	8.4	12.1	7.80	0	8.2	12.3	7.90	0	8.0	12.3	7.70	0	7.6	12.3	7.60	0
Control B	8.8	12.4	7.90	8.6	12.1	7.80	0	8.4	12.3	7.90	0	8.3	12.3	7.70	0	8.0	12.3	7.60	0
Sample A	6.5	12.6	7.50	8.1	12.2	7.50	0	8.3	12.5	7.50	0	8.8	12.3	7.70	0	8.7	12.2	7.70	0
Sample B	6.4	12.6	7.50	8.2	12.2	7.50	0	7.8	12.5	7.40	0	9.0	12.3	7.70	0	9.1	12.2	7.80	0

Analyst: CEF

CEF

CEF

CEF

Remarks:
 Results: 100% Survival Sample A 100% Survival Sample B
 Results: 100% Survival Control A 100% Survival Control B
 Method: IEPA600/4-90/027 Percent Survival of 100% Effluent

Date: 3/31/2007

Laboratory Director:

Julia R. Schnitzler 4-6-07

Supervisor: Julia R. Schnitzler

Alpha

Analytical Laboratories, Inc.

208 Mason Street, Ukiah, CA 95482

707-468-0401

Client: Santa Rosa, City of

Lab # 07C0855-01

Spill ID: S.W. Sample #312

Date/Time Sampled: 3/26/07

Hardness - Start: 157 Mid: 156 End: 155 mg/l

Conductivity - Start: 336 Mid: 336 End: 336 mg/l

Alkalinity - Start: 153 Mid: 152 End: 152 mg/l

Conductivity - End: 371 umhos/cm

Bioassay Control Water Percent Survival-Trou

Hardness - Start: 85.0 mg/l End: 85.0 mg/l

Alkalinity - Start: 58.0 mg/l End: 58.0 mg/l

Conductivity - Start: 280 umhos/cm

Conductivity - End: 278 umhos/cm

Species: Oncorhynchus mykiss - Rainbow Trout

Avg. Weight: 0.197 g Avg. Length: 26.5 mm

Aeration: 100 Bubbles/Min. through 1mm Bore pipet

If Yes - then all tanks will be aerated ***

Date: 3/27 3/28

Year: 2007

Time: 17:30 17:00

Tank Volume: 5 Liters per Tank

Number Fish per Tank: 10 Number of Tanks: 2

Acclimation Temp: 12.0 deg.C

Hatch Date/Species Age: 3/05/07 22 days old

Residual Chlorine detected: NO If Yes, then:

Control: A with sodium thiosulfate will be used ***

Renewal of Effluent@48hours

INITIAL	24 HOURS						48 HOURS **						72 HOURS						96 HOURS						TOTAL
	DO mg/l	deg C	pH	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	DO mg/l	deg C	pH	#M	No. Dead	
Control A	8.8	12.4	7.90	8.4	12.1	7.80	0	8.2	12.3	7.90	0	8.0	12.3	7.70	0	7.6	12.3	7.60	0	0	0	0	0	0	
Control B	8.8	12.4	7.90	8.6	12.1	7.80	0	8.4	12.3	7.90	0	8.3	12.3	7.70	0	8.0	12.3	7.60	0	0	0	0	0	0	
Sample A	7.7	12.4	7.90	9.4	11.9	8.10	0	8.5	12.3	8.00	0	8.8	12.2	8.10	0	8.9	12.2	8.10	0	0	0	0	0	0	
Sample B	7.6	12.4	7.90	9.5	11.9	8.20	0	8.7	12.3	8.00	0	9.4	12.2	8.30	0	9.5	12.2	8.30	0	0	0	0	0	0	

Analyst: CEF

Remarks: CEF

Results : 100% Survival Sample A 100% Survival Sample B

Results : 100% Survival Control A 100% Survival Control B

Method : EPA800/4-9D/027 Percent Survival of 100% Effluent

Date: 3/31/2007

Supervisor: Julia R. Schnitzler

Laboratory Director:

Theresa Jones 4-6-07