



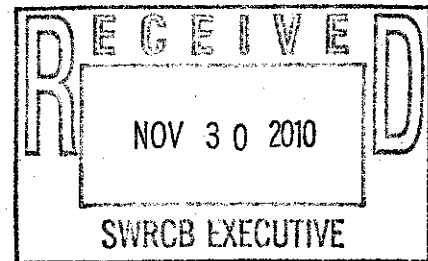
Public Comment
Effective Assessment Doc
Deadline: 11/30/10 by 12 noon



November 30, 2010

Via electronic mail

Chair Charles R. Hoppin and Members of the Board
State Water Resources Control Board
1101 I Street, 24th Floor
Sacramento, CA 95814
commentletters@waterboard.ca.gov



Re: *Comments on Draft Guidance for Assessing the Effectiveness of Municipal Storm Water Programs and Permits ("Draft Effectiveness Assessment Document")*

Dear Chair Hoppin and Members of the Board:

We write on behalf of the Natural Resources Defense Council ("NRDC") and Santa Monica Baykeeper (collectively, "Environmental Groups"). We have reviewed the Draft Effectiveness Assessment Document ("Assessment Document") and appreciate the opportunity to submit the following comments. We are pleased by the State Water Resources Control Board's ("State Board's") decision to encourage use of "quantifiable measures for evaluating the effectiveness of municipal storm water programs," and that the Document will cover assessment of "Improvements in the quality of receiving water in accordance with water quality standards." (Assessment Document, at 2.) However, the Assessment Document is unjustifiably focused on evaluation of programmatic element implementation, which has proven a poor indication of whether water quality is being adequately protected. Further, the Assessment Document is overly complicated overall, and fails to provide sufficient or specific guidance to the Regional Boards or regulated parties. The Assessment Document should be simplified to allow for an easy and transparent evaluation of the effectiveness of MS4 permits and programs, and should focus attention on evaluation of compliance with water quality standards and monitoring of outfalls and receiving waters to ensure water quality standards are being met.

The Guidance Should Focus on Compliance with Water Quality Standards

The most meaningful measure of the effectiveness of MS4 permits and programs is compliance with water quality standards. As the Assessment Document properly notes in its description of outcomes related to Receiving Water Conditions, the "overriding goal of storm water management programs is to protect the water bodies receiving discharges from MS4s. Changes to receiving water and environmental quality may be expressed through . . . compliance with water quality standards, protection of biological integrity, and beneficial use attainment."

(Assessment Document, at 6.) This is consistent with Congress' stated goal of the Clean Water Act, "to restore and maintain the chemical, physical and biological integrity of the Nation's waters," by eliminating the discharge of pollutants so that these waters are fishable and swimmable. 33 U.S.C. § 1251. Water quality standards are the only objective measure by which the Regional Boards, MS4 permittees, and the State of California can assure progress towards achieving the stated Congressional goal.

As the Draft Assessment Document notes, "a standard provision applicable to most MS4 permittees is a prohibition against discharges that cause or contribute to exceedances of water quality standards." (Draft Assessment Document, at 16.) Given this clear permit requirement, the principal means for evaluating the effectiveness of MS4 NPDES Permits should naturally be compliance with water quality standards. Yet, while evaluation of discharge quality from MS4s and receiving water conditions are incorporated into the guidance, the Draft Assessment Document focuses too greatly on the evaluation of programmatic elements and their implementation. The accomplishment of programmatic elements such as inspections and public outreach and education is undeniably important, but these elements are not, in themselves, reliable, transparent and definitive measures of the success and effectiveness of an MS4 Permit in improving water quality. Indeed, while the Draft Guidance recognizes that "Water Boards generally presume that the effective implementation of these programs will result in improved water quality. . . . Water Board staff often evaluate program implementation activities, which do not always result in measureable water quality outcomes." (Draft Assessment Document, at 3 (emphasis added).)

Annual reports from MS4 operators throughout the state clearly demonstrate the inadequacy of using programmatic elements to evaluate permittees' success in achieving compliance with water quality standards, or to evaluate MS4 program success overall. For example, the annual reports for Los Angeles County MS4 permittees contain detailed information on the number of restaurant inspections conducted, public outreach and education activities completed, and other program elements undertaken.¹ But as monitoring data collected under the Los Angeles MS4 Permit demonstrates, violations of water quality standards continue in spite of purported compliance with the Permit's programmatic requirements.² This pattern is repeated for MS4 permits throughout California.³ Successful program implementation unmistakably does not translate to achievement of compliance with water quality standards and does not bring MS4 permittees or the state's waters closer to achieving the Clean Water Act

¹ See generally, Los Angeles County Municipal Storm Water Permit (Order 01-182) Individual Annual Report Form.

² See, Appendix B of the Los Angeles County Annual Stormwater Monitoring Report for the years 2008-09 and 2009-10.

³ See, e.g., Ventura Countywide Stormwater Quality Management Program, Annual Report for Permit Year 9, Reporting Year 15 (October 2009), at 9-15, stating that "Elevated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events, and at [two of the] Mass Emission stations . . . during one or more dry weather events."

goals of eliminating the discharge of pollutants so that waters are fishable and swimmable. While, again, it is important to ensure MS4 programmatic elements are properly implemented, the focus on assessment of MS4 permits must shift away from simply counting inspections and qualitative outreach efforts, to assuring the elimination of violations of water quality standards. To this extent, permittees' programmatic actions should properly be evaluated and adjusted based on the permittees' success in achieving the goal of compliance with water quality standards.

Stormwater Monitoring Programs are Critical for Meaningful Assessment of the Effectiveness of MS4 Permits and Programs

The Clean Water Act and its implementing regulations explicitly require monitoring for NPDES permits. *See* 33 U.S.C. § 1318(a); 40 C.F.R. §§ 122.48, 122.41. Federal regulations direct that: "All permits shall specify. . . [r]equired monitoring including type, intervals, and frequency." 40 C.F.R. §§ 122.48; 122.41(j). As U.S. EPA recently stated, "NPDES permits must specify monitoring requirements necessary to determine compliance with effluent limitations."⁴ Monitoring is an indispensable program component, as it is critical to a determination of whether water quality standards are being met or whether pollutant loadings from the MS4 are being reduced.

The Draft Assessment Document does recognize that monitoring programs, including outfall monitoring, mass emission monitoring, receiving water monitoring, bioassessment monitoring, toxicity monitoring, and beach water quality monitoring are necessary elements of MS4 program effectiveness evaluation. However, given the importance of monitoring to any evaluation of MS4 program effectiveness, we suggest that the State Board should emphasize the monitoring element section of the Assessment Document. In this respect, we support the comments of Heal the Bay regarding the need for additional detail regarding receiving water and MS4 outfall monitoring.⁵ Given that SB72 (Kuehl) mandates minimum monitoring requirements for each MS4, the State Board should take this opportunity to provide greater guidance regarding such minimum requirements, as well as recommendations concerning additional monitoring sufficient to assess the MS4 programs' effectiveness. The monitoring standards suggested by Heal the Bay in their November 19 letter should be taken to provide the minimum requirements of any program, with additional monitoring required as necessary to ensure water quality standards are met by the MS4 and for given receiving waters. In addition, we suggest that outfall monitoring should be required for each permittee, rather than for each MS4, and that outfall monitoring of representative areas that contain land uses that contribute greatest to pollutant

⁴ U.S. EPA, November 12, 2010, Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Waste Load Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs," at 4 (citing Clean Water Act section 402(a)(2); 40 C.F.R. 122.44(i)).

⁵ Letter from Heal the Bay to Chair Charles R. Hoppin and Board Members, November 19, 2010, re: Comment Letter – draft framework for assessing the effectiveness of the Phase I Municipal Separate Storm Sewer System (MS4s) program ("Effectiveness Assessment Document"), at 2-3.

loads (e.g., industry, transportation and commerce), should be required for each permittee. Taken as a whole, greater mass emissions monitoring, MS4 outfall monitoring, receiving water monitoring, and beach water quality monitoring is called for than is currently mandated under MS4 programs, to ensure stormwater discharges from MS4s are not causing or contributing to violations of water quality standards.

Organization of the Draft Assessment Document

As a final comment, we note that the Draft Assessment Document, while identified as a "guidance" document for Regional Boards and regulated parties, is confusing as to its intended use. The Assessment Document provides little more than general descriptions of practices that could be undertaken and samples of permit language, without context or actual guidance for its intended audience. The Assessment Document would benefit significantly from the addition of more specific direction to the Regional Boards, which are plagued by a lack of information or data of practical use regarding the effectiveness of the MS4 programs they oversee. The State Board should take this opportunity to ensure that Regional Boards, and permitted entities, are provided sufficient guidance to meaningfully assess the effectiveness of their MS4 programs. Proper assessment of these programs is to a real extent necessary, to ensure that water quality standards are met in MS4s throughout the state, and that our state's aquatic resources are protected.

Thank you for your consideration of these comments. Please do not hesitate to contact us if you have any questions.

Sincerely,



Noah Garrison
Natural Resources Defense Council



Liz Crosson
Santa Monica Baykeeper

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Individual Annual Report Form
Attachment U-4**

This form summarizes the requirements in Order No. 01-182. Each Permittee must complete this form in its entirety, except for those requirements applicable only to the Principal Permittee. Only report activities that were performed during the previous fiscal year. Upon completion, this form shall be submitted to the Principal Permittee, by the date specified by the Principal Permittee, for inclusion in the unified Annual Storm Water Program Report. Attachments should be included where necessary to provide sufficient information on program implementation.

The goals of this Report are to: 1) concisely document implementation of the Storm Water Quality Management Program (SQMP) during the past fiscal year; 2) evaluate program results for continuous improvement; 3) to determine compliance with Order 01-182; and 4) to share this information with other Permittees, municipal decision makers, and the public.

!	YOU MUST FILL OUT ALL THE INFORMATION REQUESTED <i>Do not leave any of the sections blank.</i>
N/A	If the question does not apply to your municipality, please indicate N/A in the space provided and provide a brief explanation
U	If the information requested is currently unavailable, please indicate U in the space provided and give a brief explanation.

This Report Form consists of the following sections:

SECTION	PAGE
I. Program Management	2-4
II. Receiving Water Limitations	5
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IV. Special Provisions	8
IV.A. Public Information and Participation Program	8-14
IV.B. Industrial/Commercial Facilities Program	15-17
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VII. Certification	39

Reporting Year 2009 - 2010

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I. Program Management

A. Permittee Name: LOS ANGELES COUNTY FLOOD CONTROL DISTRICT
AND COUNTY OF LOS ANGELES

B. Permittee Program Supervisor: Frank Wu
 Title: Senior Civil Engineer
 Address: 900 South Fremont Avenue
 City: Alhambra Zip Code: 91803
 Phone: (626) 458-4358 Fax: (626) 458-3534

C. In the space below, briefly describe how the storm water program is coordinated within your agency's departments and divisions. Include a description of any problems with coordination between departments. To facilitate this, complete the Table 1.

The Watershed Management Division (WMD) of the Los Angeles County Department of Public Works (LACDPW) coordinates the implementation of the programs mandated by the Municipal Stormwater Permit throughout the unincorporated areas of Los Angeles County. WMD also represents the Los Angeles County Flood Control District (LACFCD) in carrying out the duties of the Principal Permittee. Each Division within the LACDPW designates a representative to communicate with WMD to ensure full program implementation. Each County Department also designates a stormwater coordinator to interface with the LACDPW. For purposes of this Annual Report, the LACFCD and the County of Los Angeles will be referred to jointly as “County.”

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TABLE 1 - Program Management

Storm Water Management Activity	Division/Department	# of Individuals Responsible for Implementing
1. Outreach & Education	LACDPW Building and Safety, Flood Maintenance, Geotechnical and Materials Engineering, Survey/Mapping, and Operational Services Divisions, and Public Relations Group + Applicable County Departments	65
2. Industrial/Commercial Inspections	LACDPW Building and Safety, and Environmental Programs Divisions	129
3. Construction Permits/Inspections	LACDPW Architectural Engineering, Construction, and Building and Safety Divisions + Applicable County Departments	131
4. IC/ID Inspections	LACDPW Road Maintenance, Environmental Programs, Flood Maintenance, and Construction Divisions, + Applicable County Departments	152
5. Street sweeping	LACDPW Aviation, Operational Services, and Road Maintenance Divisions + Applicable County Departments	52 + contractors
6. Catch Basin Cleaning	LACDPW Aviation, Flood Maintenance, Construction, and Operational Services Divisions + Applicable County Departments	67 + contractors
7. Spill Response	LACDPW Aviation, Flood Maintenance, Information Technology, and Road Maintenance Divisions + Applicable County Departments	120 + contractors
8. Development Planning (project/SUSMP review and approval)	LACDPW Building and Safety, Environmental Programs, and Land Development Divisions	22
9. Trash Collection	LACDPW Aviation, Operational Services, Programs Development, and Road Maintenance Divisions + Applicable County Departments	142 + contractors

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D. Staff and Training

Attach a summary of staff training over the last fiscal year. This shall include the staff name, department, type of training, and date of training.

See Attachment I-D1

E. Budget Summary

1. Does your municipality have a storm water utility? Yes No

If no, describe the funding source(s) used to implement the requirements of Order No. 01-182.

The County's Stormwater Program is funded by several sources, including but not limited to the County of Los Angeles General Fund, Flood Control Benefit Assessment, Gasoline Tax, Solid Waste Fund, Prop C and Prop A Local Return Funds.

All cities and County unincorporated areas face critical water quality challenges whose solution will severely strain existing revenue sources. To meet these challenges, a Flood Control District-wide Water Quality Funding Initiative is being explored at the direction of the LACFCD's Board of Supervisors, which if approved by voters, would implement a property-based storm drainage fee for clean water that can be leveraged to obtain Federal and State funding.

2. Are the existing financial resources sufficient to accomplish all required activities? Yes No

3. Complete Table 2 to the extent that accurate information is available (indicate U in the spaces where the information is unavailable), and report any supplemental dedicated budgets for the same categories on the lines below the table.

4. List any additional state/federally funded projects related to storm water.
-

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- **The County managed Used Motor Oil Block and Opportunity Grants (13th and 14th Cycle Block Grants; and 8th Cycle Opportunity Grant) funded by the California Department of Resources Recycling and Recovery (CalRecycle), formerly the Integrated Waste Management Board, and supplemented by LACDPW to promote used motor oil and oil filter recycling.**
- **Hermosa Strand Infiltration Trench Project. Phase I of the project included the installation of a low-flow diversion from the LACFCD's Hermosa Beach Pier storm drain to divert dry-weather urban runoff through a pretreatment unit into an engineered infiltration trench. The LACFCD provided design services and construction documents as in-kind services. The project was built by the City of Hermosa Beach which received a Clean Beach Initiative Grant from the State Water Resources Control Board.**
- **Tujunga Wash Greenway and Stream Restoration Phase II. The project will construct a naturalized stream with native habitat along a 3/4-mile reach of the wash from Vanowen Street to Sherman Way in the City of Los Angeles. The proposed restoration would see to mimic a small tributary in this region by diverting urban runoff through a naturalized stream course along the bank of the Tujunga Wash. The project will provide water quality enhancements, ground water recharge, native and riparian vegetation, pedestrian paths, and educational signage. The U.S. Army Corps of Engineers (USACE) is financing \$3.98 million through Stimulus funding while the LACFCD is financing the remaining \$1 million. Design of the project is scheduled to be completed by December 2010 and construction is anticipated to start in spring 2011.**
- **Arroyo Seco Feasibility Study being conducted by the USACE at the request of the LACFCD. The study will lay the framework for future restoration efforts that would focus on restoration of the natural hydrologic functioning of the watershed, management of water resources and water quality improvement, habitat restoration, and improved recreational opportunities and open space. The total project cost is \$2.7 million over the duration of the study, with 50% funded by local sources and 50% funded by Federal appropriations.**
- **The Sun Valley Feasibility Study focuses on a highly urban watershed tributary to the Los Angeles River located approximately 14 miles northwest of downtown Los Angeles. The community in the watershed has experienced severe, chronic flooding for well over 40 years. The area also suffers from poor water quality and a lack of recreational opportunities, aesthetics, and wildlife habitat. The USACE is conducting the Study with the LACFCD being the lead local sponsor. The study will focus on environmental restoration, water quality improvement, flood mitigation, and other related issues within the watershed. The total project cost is approximately \$2.5 million over 3 years, with 50% of the funding coming from local sources and 50% from the federal level.**

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TABLE 2

Program Element	Expenditures in Previous Fiscal Year	Estimated Amount Needed to implement Order 01-182
1. Program management	192,952	282,310
a. Administrative costs	2,098,206	2,182,497
b. Capital costs	3,000	30,000
2. Public Information and Participation	7,562	7,562
a. Public Outreach/Education	1,366,390	5,006,709
b. Employee Training	172,516	182,845
c. Corporate Outreach	0	0
d. Business Assistance	0	0
3. Industrial/Commercial inspection/ site visit activities	447,334	612,139
4. Development Planning	164,074	195,333
5. Development Construction	198,661	204,944
a. Construction inspections	11,000	12,000
6. Public Agency Activities	133,742	488,742
a. Maintenance of structural and treatment control BMPs	1,159,322	8,299,580
b. Municipal street sweeping	9,393,962	10,029,497
c. Catch basin cleaning	2,035,671	2,178,818
d. Trash collection/recycling	9,294,440	9,674,890
e. Capital costs	2,218,159	2,425,000
f. Other	40,525,756	44,348,536
7. IC/ID Program	371,031	400,000
a. Operations and Maintenance	3,772,444	4,134,787
b. Capitol Costs	0	10,000
8. Monitoring	3,785,232	3,974,638
9. Other*	19,664,709	21,292,379
10. TOTAL	97,016,164	115,973,206

* Includes expenditures for litigation related to the Permit, TMDL projects, and other projects with water quality benefits.

List any supplemental dedicated budgets for the above categories:

--

List any activities that have been contracted out to consultants/other agencies:

- | |
|--|
| <ul style="list-style-type: none"> • Design and inspection of projects and environmental and geotechnical services; • Environmental education programs for middle schools and high schools, used motor oil and oil filter recycling program, and the Coastal Cleanup Day; • Portions of the municipal street sweeping, trash collection and illicit discharge programs; • Removal of loose trash from streets and bus stop receptacles; • Cleaning of trash free channel inverts, catch basins and clearing of channel right-of-ways (ROWS); • Los Angeles River trash and debris collection; • Flood facilities sweeping, vacuum & jetting services; • Emergency and non-emergency cleanup of hazardous materials; • The Marie Canyon Disinfection Project; • Pump pulling and machine repair for maintenance of Low Flow Diversions. • Contracted to build a new sewer connection at the Page Museum from the lake pit to the sewer (All stormwater is discharged to the lake). |
|--|

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II. Receiving Water Limitations (Part 2)

- A. Are you aware, or have you been notified, of any discharges from your MS4 that cause or contribute to a condition of nuisance or to the violation of any applicable water quality standards? Yes No*
- B. Has the Regional Board notified you that discharges from your MS4 are causing or contributing to an exceedance of water quality standards? Yes No
- C. If you answered Yes to either of the above questions, you must attach a Receiving Water Limitations (RWL) Compliance Report. The Report must include the following:
1. A description of the pollutants that are in exceedance and an analysis of possible sources;
 2. A plan to comply with the RWL (Permit, Part 2);
 3. Changes to the SQMP to eliminate water quality exceedances;
 4. Enhanced monitoring to demonstrate compliance; and
 5. Results of implementation.

***A United States District Court concluded in a March 2, 2010, order that the Ocean Plan's prohibition against discharges of "waste" into an Area of Special Biological Significance (ASBS) is a water quality standard that is incorporated into the Permit and discharges from the MS4 into ASBS No. 24 violate this prohibition. These conclusions are not final as the order is part of a lawsuit that is still ongoing and subject to appeal. Further, this court order is not a determination by the County or the Regional Board that discharges are causing or contributing to an exceedance of an applicable water quality standard. Therefore, no RWL Compliance Report is required to address these discharges.**

In addition, the County does not agree with the court's conclusions. The County has been informed by Regional Board staff that the ASBS requirement was not intended to be part of the Permit, and the Regional Board has never treated the ASBS requirement as part of the Permit. Further, the County does not believe that any discharge from the MS4 has violated the Ocean Plan's prohibition. Nevertheless, because the County has been notified of the court's opinion that discharges from the MS4 violate an applicable water quality standard, the County is voluntarily submitting a RWL Compliance Report addressing these discharges. In doing so, the County is not waiving any right to dispute the court's order and is not conceding that a RWL Compliance Report is required.

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III. SQMP Implementation (Part 3)

A. Has your agency implemented the SQMP and any additional controls necessary to reduce the discharges of pollutants in storm water to the maximum extent practicable? Yes No

B. If your agency has implemented additional or different controls than described in the countywide SQMP, has your agency developed a local SQMP that reflects the conditions in its jurisdiction and specifies activities being implemented under the appropriate elements described in the countywide SQMP? Yes No

N/A. The County developed the six programs prescribed by the SQMP. It is the responsibility of individual Permittees and/or the Watershed Management Committees (WMC) to develop a local SQMP.

C. Describe the status of developing a local SQMP in the box below.

N/A

D. If applicable, describe an additional BMP, in addition to those in the countywide SQMP that your city has implemented to reduce pollutants in storm water to the maximum extent practicable.

End of Pipe Nets, Continuous Deflective Separation (CDS) units, Catch Basin Basket Inserts, and Catch Basin Clean screens were installed at various locations. In addition, metal shakers and portable equipment washers were placed within the project sites to eliminate potential dirt, dust, and debris from trucks and equipment from leaving construction sites. Absorbent socks are placed around exploration drilling activities. Plastic tarps are placed over metal drums. During construction activities, excess concrete in wheelbarrows is discarded in trays.

The County has continued to implement its Low Impact Development (LID) Standards Manual (LID Manual) that was released in January 2009 to incorporate sustainable practices to improve runoff water quality, recharge groundwater, and reduce hydromodification. These practices are consistent with the LID Ordinance adopted by the Los Angeles County Board of Supervisors in November 2008. The LID Manual describes sustainable practices that developers can design that will protect surface and groundwater quality, maintain the integrity of ecosystems, and preserve the physical integrity of receiving waters by managing stormwater runoff. The LID Manual was developed to set design requirements for new development and redevelopment. Developers must

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incorporate design features to match the undeveloped runoff volume of the site for a 3/4" rainfall event. If the developed site yields a greater volume of runoff compared to the undeveloped site, the excess runoff must be infiltrated, captured and reused, or evapotranspirated at maximum extent technically feasible by using BMPs. Any remaining excess volume shall be treated and released.

E. Watershed Management Committees (WMCs)

1. Which WMC are you in?

The County is represented in all of them.

2. Who is your designated representative to the WMC?

- **Janet Rodriguez - Ballona Creek & Urban Santa Monica Bay WMC**
- **Janet Rodriguez - Dominguez Channel/Los Angeles Harbor WMC**
- **Janet Rodriguez - Malibu Creek & Rural Santa Monica Bay WMC**
- **Ruby Wang - Los Angeles River WMC**
- **Ruby Wang - San Gabriel River WMC**
- **Frank Wu - Santa Clara River WMC**

3. How many WMC meetings did you participate in last year?

The County was represented in all quarterly and some optional monthly meetings.

4. Describe specific improvements to your storm water management program as a result of WMC meetings.

WMC and Executive Advisory Committee (EAC) meetings resulted in achievement of their first and foremost objective, that of facilitating cooperation and exchange of relevant information and experiences among the permittees, which has led to a general improvement of the County's stormwater program.

5. Attach any comments or suggestions regarding your WMC.

None at this time.

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F. Storm Water Ordinance

1. Have you adopted a storm water and urban runoff ordinance to enforce all requirements of Order 01-182? Yes No

If not, describe the status of adopting such an ordinance.

N/A

2. If yes, have you already submitted a copy of the ordinance to the Regional Board? Yes No
If not, please attach a copy to this Report.

3. Were any amendments made to your storm water ordinance during the last fiscal year? Yes No

If yes, attach a copy of amendments to this Report.

The Los Angeles County Code (Title 12) was amended with the Low-Impact Development Ordinance adopted by the Board of Supervisors in November 2008.

G. Discharge Prohibitions

1. List any non-storm water discharges you feel should be further regulated:

None at this time.

2. List any non-storm water discharges you feel should be exempt, and provide an explanation for each:

None at this time.

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IV. Special Provisions (Part 4)

A. Public Information and Participation (Part 4.B)

In addition to answering the following questions, attach a summary of all storm water education activities that your agency conducted or participated in last year.

See Attachment IV-A

1. No Dumping Message

a) How many storm drain inlets does your agency own?

80,806 Catch basin openings

b) How many storm drain inlets were marked with a no dumping message in the last fiscal year?

31,037 Catch basin openings

c) What is the total number of storm drain inlets that are legibly marked with a no dumping message?

80,806 (ALL) Catch basin openings

If this number is less than the number in question 1.b, describe why all inlets have not been marked, the process used to implement this requirement, and the expected completion date.

N/A

d) How many public access points to creeks, channels, and other water bodies within your jurisdiction have been posted with no dumping signage in the past year?

The County is in full compliance with this requirement. All Flood Control facilities with public access points are posted with “No Dumping” signs.

Describe your agency's status of implementing this requirement by the date required in Order No. 01-182.

The County is in full compliance with this requirement. All public access points are posted with “No Dumping” signs. Flood Maintenance Division (FMD) personnel note any missing or defaced signs during routine inspections and repost signs as necessary.

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2. Reporting Hotline

- a) Has your agency established its own hotline for reporting and for general storm water management information? Yes No
- b) If so, what is the number? **1(888) CLEAN LA (1-888-253-2652)**
- c) Is this information listed in the government pages of the telephone book? Yes No
- d) If no, is your agency coordinated with the countywide hotline? **N/A**
Yes No
- e) Do you keep record of the number of calls received and how they were responded to? Yes No
- f) How many calls were received in the last fiscal year? **47,300**
- g) Describe the process used to respond to hotline calls.

Illegal dumping calls are routed to LACDPW Dispatch operators who log the call and forward the information to the appropriate co-permittee operations coordinator, or if the call's origin is within the jurisdiction of the County, a work order is generated and sent to appropriate County staff. LACDPW Public Relations Group staff provides live responses to callers in English and Spanish. Pre-recorded messages are available in English or Spanish delivering information on Stormwater, HHW, E-Waste, Used Motor Oil, Water Conservation, and Smart Gardening programs. The hotline received approximately 47,300 calls with approximately 12,300 calls answered by staff operators.

- h) Have you provided the Principal Permittee with your current reporting contact information? **N/A**
Yes No
- i) Have you compiled a list of the general public reporting contacts for all Permittees and posted it on the www.888CleanLA.com web site (*Principal Permittee only*)? Yes No
If not, when is this scheduled to occur? **N/A**

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3. Outreach and Education

- a) Describe the strategy developed to provide outreach and bilingual materials to target ethnic communities. Include an explanation of why each community was chosen as a target, how program effectiveness will be determined, and status of implementation. (*Principal Permittee only*)

Program messages and outreach materials are developed for ethnic communities and other target audiences based on qualitative research data. During this reporting period, the media mix targeted the General Public, Spanish and several Asian language speakers with Public Service Announcements (PSAs) aired through television, newspaper and/or radio media outlets.

Through a used oil opportunity grant, the County continued to broadcast two 30-second television Public Service Announcements (PSAs) in *Korean and Vietnamese on KSCI TV, MBC America, and Television Korea 24 (TVK24)*. Radio PSAs were aired on *Saigon Radio and KALI FM 106.3*. In addition, a newspaper ad was published in *Serey Pheap Weekly, Angkor Borei News, Viet Bao Daily News, Korea Daily, and Korea Times* newspapers that provided information to residents on why they should recycle used motor oil, what should be done with used motor oil, how to keep used motor oil clean for recycling and how to recycle used oil filters.

The media campaign targeted the Korean, Vietnamese, and Cambodian residents of Los Angeles County. The ongoing media campaign was an effort to communicate and motivate residents to recycle used motor oil and used oil filters and take them to a certified collection center or a County Household Hazardous Waste/Electronic Waste collection event. Through the campaign, the County created awareness among the targeted audiences about the harmful effects of improper disposal of used motor oil and used oil filters in the environment.

The duration of the media campaign and the grant term was from September 2008 through September 2009. The following information was provided from various media outlets providing in-language used motor oil and used oil filter recycling messages during our media campaign: *Angkor Borei News* - 436,800 readership; *Saigon Radio* - 2,400,000 gross impressions; *MBC America* - 29,916,120 gross impressions; *TVK24* - 3,258,541 gross impressions; *Serey Pheap Weekly* - 384,000 readership; *View Dong Daily* - 648,000 readership; and *LA 18 (Korean/Vietnamese)* -

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298,885,560 gross impressions.

Through the Used Oil 13th Cycle Block Grant funding, we continued the media campaign for the English, Spanish, and Chinese communities with PSAs promoting the recycling of used motor oil and used oil filters. We continued to use the existing PSAs developed the previous year. The media campaign consisted of the various ethnic media markets in radio, television, and print such as *KFWB, KPWR, KSCA, KAZN, Whittier Daily News, Mexican American Sun, La Opinion, El Clasificado, World Journal, SingTao Daily, and China Press*. This media campaign achieved approximately 240,488,624 media impressions with an added-value of more than 202,834,070 impressions. Additional non-paid media was received from various media outlets, which garnered 128,771,350 impressions. This included three Spanish interviews conducted during the news segments on the television stations *KMEX, KFTR* and *KEWW* radio station.

Continued efforts with Community Based Organizations (CBOs) and local businesses supporting the program by distributing event flyers, posting information on web banners, newsletters, etc. The CBO outreach efforts reached approximately 262,372 residents.

Five used motor oil collection events were conducted in the following cities/unincorporated areas: Santa Clarita, San Fernando, Rowland Heights, East Los Angeles, and Florence/Firestone. Approximately 1,753 gallons of used motor oil and 411 used oil filters were collected from approximately 515 DIYers. Eight filter exchange events were conducted at various Kragen/Autozone stores in the following cities/unincorporated areas: Lomita, San Gabriel (hosted two events), La Crescenta, Altadena, Hacienda Heights, Rowland Heights, and Florence/Firestone. Approximately 726 gallons of used motor oil and 472 used oil filters were collected from approximately 380 DIYers. Participants who recycled their used motor oil and used oil filters received free used motor oil and used oil filter containers, shop towels, oil funnels, and a new oil filter in exchange for their old filters. In addition, used oil filter pickups were conducted at 43 participating Kragen stores. A total of 34,250 used oil filters were collected through the used oil filter pickup program.

The County continued to conduct intercept surveys in English, Spanish, and Chinese at the collection events. Most of the Do-It-Yourselfers (DIYers) who completed the intercept survey heard about the collection events through

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media. Paid media campaigns were the most effective (72%) in attracting attendees to this event. The most effective medium was print (44%) followed by radio (19%) and television (9%).

Two community events were attended in order to expand outreach efforts about the County's used motor oil and used oil filter recycling program. Staff participated in the Lunar New Year Festival on February 20, 2010, and the Fiesta Broadway events in downtown Los Angeles on April 25, 2010. Approximately 700 residents stopped by the information booths to receive information on proper disposal of used motor oil and used oil filters. Residents were provided with a household hazardous waste/electronic waste schedule and a tip sheet on used motor oil and used oil filter recycling.

A post-wave analysis was conducted in the three target audience segments (General, Hispanic, and Chinese). The results from the post-wave were compared to last year's results in order to measure trends and changes in awareness levels. In terms of general awareness about proper disposal of used motor oil, awareness increased for the General Market (from 32% to 84%), Hispanics (from 52% to 76%), and Chinese (from 75% to 80%), demonstrating continuing and ongoing growth of the campaign's awareness. Recycling of used motor oil at certified collection centers increased overall, for the General Market (from 75% to 91%), Hispanics (from 83% to 89%), and Chinese (from 64% to 75%). (Attachment IV-A3a)

b) Did the Principal Permittee organize quarterly Public Outreach Strategy meetings that you were aware of? Yes No

How many Public Outreach Strategy meetings did your agency participate in last year? **Hosted 4 quarterly meetings**

Explain why your agency did not attend any or all of the organized meetings.

N/A

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Identify specific improvements to your storm water education program as a result of these meetings:

The LACFCD featured guest speakers at the quarterly meetings to provide information on City of Beverly Hill's public education program and Countywide educational programs, including the HHW/E-Waste Collection, Smart Gardening, Used Motor Oil and Oil Filter Recycling, and K-12 Environmental Education programs. Additionally, Heal the Bay provided a presentation about the 2009 Coastal Cleanup Day event and how the co-permittee cities could support this event. Through these meetings, we increased the efficiency of co-permittee operations by informing co-permittees of program offerings and professionally produced collateral materials that are available from LACFCD for immediate circulation in their jurisdiction.

List suggestions to increase the usefulness of quarterly meetings:

None.

If quarterly Public Outreach Strategy meetings were not organized, explain why not and when this requirement will be implemented (*Principal Permittee only*).

N/A

- c) Approximately how many impressions were made last year on the general public about storm water quality via print, local TV, local radio, or other media? **470 million**

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- d) Describe efforts your agency made to educate local schools on storm water pollution.

The County provides resources and programs for in-school stormwater education to students enrolled in grades K-12 through classroom lesson plans, assembly presentations, technical assistance workshops, special events, and special projects.

Generation Earth's professional development and technical assistance programs enrolled 339 educators, teaching more than 28,025 students at 201 schools, potentially impacting 318,630 students. The Generation Earth program provided the tools to create an environmental service-learning program to promote and sustain environmental protection and pollution prevention desired behaviors. Generation Earth staff attended 10 community events, reaching approximately 1,500 adults/students.

The County participated in the Los Angeles County Environmental Education Fair (LAEEF) event coordinated by the L.A. County Office of Education and other participating agencies and stakeholders (Attachment IV-A3d1). Approximately 1,800 participants attended the event. The County hosted an exhibit area distributing information on school education and stormwater pollution programs. Also, the County drafted a press release to promote the event and coordinated the placement of recycling bins at the event to encourage beverage container recycling by attendees.

- e) Did you provide all schools within each school district in Los Angeles County with materials necessary to educate a minimum of 50 percent of all school children (K-12) every 2 years on storm water pollution (Principal Permittee only)?

Yes No

If not, explain why.

N/A

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- f) Describe the strategy developed to measure the effectiveness of in-school educational programs, including assessing students' knowledge of storm water pollution problems and solutions before and after educational efforts (*Principal Permittee only*).

The LACFCD followed the strategy that was submitted to the Regional Board in May 2002. The strategy consists of two key components:

- 1. Teacher evaluation of program effectiveness and applicability of program curriculum and classroom activities through the use of surveys, interviews, focus groups, etc.**
- 2. Pre- and post-program assessment through the use of surveys and interviews of students' knowledge and understanding of stormwater and urban runoff pollution, how their actions impact pollution, and what they can do to help.**

No assessment was conducted during this reporting period.

For Permit Years 2-5, attach an assessment of the effectiveness of in-school storm water education programs.

See Attachment IV-A3f1

- g) What is the behavioral change target that was developed based on sociological data and other studies (*Principal Permittee only*)?

Below are the numerical behavioral change targets approved by the Regional Board in May 2002. The numerical targets reflect an anticipated reduction in polluting behaviors.

- Dumping motor oil into storm drains to 2% from 6%.**
- Littering to 10% from 13%.**
- Hosing leaves and dirt into the street to 9% from 12%.**
- Dumping directly into the storm drains to 2% from 5%.**
- Dropping cigarette butts on the ground to 12% from 16%.**
- Leaving dog droppings on the ground to 1% from 4%.**
- Rinsing out paintbrushes into the street to 2% from 6%.**
- Emptying a car ashtray into the street to 1% from 3%.**

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If no target has been developed, explain why and describe the status of developing a target.

N/A

What is the status of meeting the target by the end of Year 5?

The County continued implementing public education campaigns designed to mitigate stormwater pollution in the County of Los Angeles and improve inland and coastal communities.

To evaluate the effectiveness of the campaign, we conducted a baseline study in 1997, and conducted Countywide segmentation studies in 2001 and 2005, followed by annual surveys. The most recent survey was conducted in 2008, and survey findings were reported in the FY 08-09 reporting period.

The next survey will be conducted when the next Countywide stormwater public education program contract is approved by the County Board of Supervisors.

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4. Pollutant-Specific Outreach

- a) Attach a description of each watershed-specific outreach program that your agency developed (*Principal Permittee only*). All pollutants listed in Table 1 (Section B.1.d.) must be included.

See Attachment IV-A4a.

- b) Did your agency cooperate with the Principal Permittee to develop specific outreach programs to target pollutants in your area? N/A
Yes No
- c) Did your agency help distribute pollutant-specific materials in your city? N/A
Yes No
- d) Describe how your agency has made outreach material available to the general public, schools, community groups, contractors and developers, etc...

LACFCD provided campaign collateral to co-permittees that targeted specific polluting behaviors (Attachment IV-A4d). LACFCD provided assistance to 23 co-permittee cities by modifying campaign materials free-of-charge to facilitate the circulation of program messages within their jurisdictions. Also, LACFCD enhanced outreach offerings by translating and circulating several tip cards in Spanish for the first time. In addition, LACFCD provided campaign collateral for various community and outreach events coordinated by other LACDPW divisions and outside agencies.

Stormwater pollution prevention materials were also circulated to secondary school students, school administrators, and parents through the County's Generation Earth program. Additionally, COUNTY distributed collateral materials by offering special events and participating in 183 community events and conferences.

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5. Businesses Program

- a) Briefly describe the Corporate Outreach Program that has been developed to target gas stations and restaurant chains (Principal Permittee only).

LACFCD held a Best Management Practices (BMP) workshop for restaurant managers and employees on May 5, 2010, in Alhambra, CA. Four restaurant staff participated in the workshop. Attendance was low due to the Cinco de Mayo holiday and schedule conflicts of managers being away from the restaurant during work hours.

The workshop presentation focused on four key areas of implementing a BMP plan:

- **Spill prevention, control and clean up**
- **Waste disposal and handling**
- **Building and grounds maintenance**
- **Employee training**

The presentation included an overview of BMPs, role-playing and an interactive watershed model demonstration. The workshop participants received BMP collateral materials including a mop bucket and BMP posters in English and Spanish.

- b) How many corporate managers did your agency (Principal Permittee only) reach last year? **700**

- c) What is the total number of corporations to be reached through this program (Principal Permittee only)? **130**

- d) Is your agency meeting the requirement of reaching all gas station and restaurant corporations once every two years (*Principal Permittee only*)? Yes No

If not, describe measures that will be taken to fully implement this requirement.

N/A

- e) Has your agency developed and/or implemented a Business Assistance Program? Yes No

If so, briefly describe your agency's program, including the number of businesses assisted, the type of assistance, and an assessment of the program's effectiveness.

N/A

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6. Did you encourage local radio stations and newspapers to use public service announcements? Yes No

How many media outlets were contacted?

All L.A. County media outlets were contacted through media wire services and/or direct contact.

Which newspapers or radio stations ran them?

PSAs and other earned media placements were aggressively pursued as a tactic of the LACDPW's Stormwater PIPP. During the reporting period, LACDPW stormwater/urban runoff messages appeared in the following media: *Santa Monica Daily Press, Thousand Oaks Acorn website, West Ranch Beacon website, and KTLA-TV and website.* The County achieved approximately 7 million impressions as a result of our media relations efforts.

Who was the audience?

The audience included members of the general public and residents identified by the County's 1997 Segmentation study as Fix-It-Foul-Ups, Neat Neighbors, and Rubbish Rebels. Each of these groups were segmented according to their self-reporting polluting behaviors such as improper disposal of trash, motor oil, cigarette butts, and pet waste.

7. Did you supplement the County's media purchase by funding additional media buys? **N/A** Yes No

Estimated dollar value/in-kind contribution: **N/A**

Type of media purchased: **N/A**

Frequency of the buys: **N/A**

- Did another agency help with the purchase? Yes No

8. Did you work with local business, the County, or other Permittees to place non-traditional advertising? Yes No

If so, describe the type of advertising.

LACDPW partnered with the L.A. Dodgers during the 2009 Major League Baseball Season to broadcast pollution prevention messages to County residents. A general litter PSA was broadcast at 65 regular season L.A. Dodgers home games on the LED board.

9. Did you establish local community partnerships to distribute educational storm water pollution prevention material? Yes No

Describe the materials that were distributed:

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LACDPW provided \$35,000 to Heal the Bay to coordinate the 2009 Coastal Cleanup Day event in the County of Los Angeles held on September 19, 2009. More than 14,000 volunteers cleaned beaches, rivers, and creeks throughout the County, netting an estimated 300,400 pounds of trash. Pollution prevention PSAs were circulated by Heal the Bay to promote the event and draw attention to the stormwater pollution issue. Flyers promoting used motor oil and used oil filter events were circulated at local businesses, libraries, churches, and community organizations to promote the events through the CBO outreach component of the Used Motor Oil and Used Oil Filter Recycling program.

Who were the key partners?

Heal the Bay, CBO partners for the Used Motor Oil and Oil Filter Recycling program.

Who was the audience (businesses, schools, etc.)?

The audience included K-12 students, families, DIYers, and members of the general public.

10. Did you participate in or publicize workshops or community events to discuss storm water pollution? Yes No
 How many events did you attend? **183**
11. Does your agency have a website that provides storm water pollution prevention information? Yes No
 If so, what is the address? **www.888CleanLA.com**
12. Has awareness increased in your community regarding storm water pollution? Yes No
13. Do you feel that behaviors have changed? Yes No

Explain the basis for your answers. Include a description of any evaluation methods that are used to determine the effectiveness of your agency's outreach.

An increase in awareness and knowledge about the causes of pollution and positive behavior change occurred among County residents. Awareness and behavior change were achieved in the Latino and Chinese communities verified by a self-reported increase in awareness and usage of used motor oil Certified Collection Centers.

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14. How would you modify the storm water public education program to improve it on the City or County level?

- **Coordinate restaurant and RGO BMP workshops at the corporate manager level by requesting approval to offer the workshop in conjunction with regularly scheduled monthly or quarterly manager meetings.**
- **Continue to update existing collateral materials and create and circulate new collateral materials.**
- **Continue to garner campaign contributions from co-permittees toward the County's annual paid media campaign to leverage our public outreach efforts.**
- **Continue to develop creative (materials, imagery, and collateral, such as brochures, pamphlets, flyers, and other ancillary materials used to support an educational outreach campaign) for a direct mail campaign, which can also be made available to the 84 co-permittee cities and the Chief Executive Office for a residential unincorporated areas campaign.**

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B. Industrial/Commercial Facilities Program

1. Critical Source Inventory Database

Did you (individually or jointly) update the Database for Critical Sources Inventory?

Yes

No

Comments
/Explanation
/Conclusion:

Environmental Programs Division (EPD) of the LACDPW performs updates to the Hazardous Materials System (HMS) database for Critical Sources Inventory on an ongoing basis. We add new businesses to HMS and ‘close’ files of those sites where there are no critical source business operations. We obtain information from various internet databases, including Los Angeles County Public Health, Los Angeles County Treasurer & Tax Collector, LACDPW’s Building & Safety Division, our Industrial Water Pretreatment Program and Hazardous Materials Underground Storage Tank Program, the Los Angeles County Certified Unified Program Agencies (CUPA), Google, MSN, and our inspectors in field offices at different locations.

As a part of the HMS permitting database, we also invoice the businesses for the annual certificate fees. After each inspection, our inspection staff will update the database as to the ownership, current business operations and the results of the inspection.

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2. Inspection Program

Provide the reporting data as suggested in the following tables.

Category	Initial Number of Facilities at the start of cycle proposed for inspection by categories (after the initial year, the updated number based on the new data)	Number of facilities inspected in the current reporting year	% Completed at the time of this report for present cycle (from the initial value, and from the updated value after first cycle)	Total number since permit adoption
Landfills	4	1	25	12
TSDf	0	0	0	0
Auto*	758	411	54	3709
RGO	144	129	90	808
Restaurants	1073	775	72	3625
Tier 1	511	144	28	1671
Tier 2	539	306	56	2090
Mandatory	0	0	0	16
Comments/Explanation/Conclusion:		*Includes auto dealer, auto repair and auto body facilities within County jurisdiction		

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3. BMPs Implementation

Provide the reporting data as suggested in the following table.

Category	Number of facilities inspected by category in this reporting year	Number of facilities identified as adequately implementing BMPs as specified in this reporting year	% adequately implementing out of total in this reporting year	Number of facilities required to implement or upgrade in this reporting year	Number of facilities inspected by category in this reporting cycle	Number of facilities identified as adequately implementing BMPs as specified in this reporting cycle	% adequately implementing out of total in this reporting cycle	Number of facilities required to implement or upgrade in this reporting cycle	Total Number during this permit adequately implementing	Total Number during this permit required to implement or upgrade
Landfills	1	0	0	1	1	0	0	1	10	2
TSDf	0	0	0	0	0	0	0	0	0	0
Auto	411	341	83	70	411	341	83	70	2129	1576
RGO	129	102	79	27	129	102	79	27	533	275
Restaurant	775	625	81	150	775	625	81	150	2960	662
Tier 1	144	113	78	31	144	113	78	31	1088	580
Tier 2	306	256	84	50	306	256	84	50	1441	641
Mandatory	0	0	0	0	0	0	0	0	0	2

Comments
/Explanation
/Conclusion:

***Includes auto dealer, auto repair and auto body facilities within County jurisdiction**

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4. Enforcement Activities

Provide the reporting data as suggested in the following tables. (*Current reporting year and Current reporting cycle is 2009-2010 Fiscal year)

Enforcement Actions by categories (e.g. Warning letter, NOV, referral to D.A., etc.)	Number of facilities issued enforcement actions in the current reporting year	Number of facilities issued enforcement actions in the current reporting cycle	Number of facilities (re)inspected due to enforcement actions in current reporting year	Number of facilities (re)inspected due to enforcement actions in current reporting cycle	Number of facilities brought into compliance in the current reporting year	Number of facilities brought into compliance in current reporting cycle	Total number of enforcement actions since permit adoption (by category)
Information Notice	17	17	17	17	17	17	49
Notice of Non-Compliance	13	13	13	13	13	13	17
Notice of Violation	11	11	11	11	11	11	47
Referral	0	0	0	0	0	0	60
Other	0	0	0	0	0	0	27

Facilities by category	Number of Warning letters	Number of NOVs	Number of Referral	Number of Other
Landfills	0	0	0	
Auto	6	3	0	
RGO	5	1	0	
Restaurants	15	5	0	
Tier 1	0	1	0	
Tier 2	4	1	0	
Mandatory	0	0	0	

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Comments
/Explanation
/Conclusion:

5. Program Implementation Effectiveness Assessment

Please give a brief assessment of the implementation of the program in removing pollutants from the storm water discharges. Please provide an explanation. Suggested improvements or adjustments based on the knowledge gained through this reporting period activities must be reflected in a change in the SQMP, if warranted.

Highly Effective

Somewhat Effective

Non-effective

Comments
/Explanation
/Conclusion:

The effectiveness of the inspection program is dependent on cooperation and compliance of each industrial/commercial facility.

6. You must also submit a quarterly electronic submittal of your Industrial/Commercial Facilities Program activities.

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C. Development Planning Program (Part 4.D)

1. Does your agency have a process to minimize impacts from storm water and urban runoff on the biological integrity of natural drainage systems and water bodies in accordance with requirements under CEQA, Section 404 of the CWA, local ordinances, and other legal authorities? Yes No

Attach examples showing how storm water quality impacts were addressed in environmental documents for projects over the past year.

See Attachment IV-C1

2. Does your agency have procedures to include the following requirements in all priority development and redevelopment projects:
- a) Maximize the percentage of permeable surfaces to allow more percolation of storm water into the ground? Yes No
 - b) Minimize the quantity of storm water directed to impermeable surfaces and the MS4? Yes No
 - c) Minimize pollution emanating from parking lots through the use of appropriate treatment control BMPs and good housekeeping practices? Yes No
 - d) Provide for appropriate permanent measures to reduce storm water pollutant loads from the development site? Yes No

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3. List the types and numbers of BMPs that your agency required for priority projects to meet the requirements described above.

- **CDC Gross Pollutant Separators**
- **Fossil Filter Catch Basin Inserts**
- **Ocean Pro Catch Basin Inserts and Filters**
- **G2 Construction, Inc. Catch Basin Inserts**
- **KriStar Catch Basin Inserts**
- **KriStar Trench Drain Inserts**
- **Site Design and Landscaping Planning**
- **Roof Runoff Controls**
- **Treatment Structures**
- **Infiltration Systems**
- **Efficient Irrigation**
- **Storm Drain Signage**
- **Fueling Areas**
- **Trash Storage Areas**
- **Vortex Separators**
- **Drain Inserts**
- **Water Clarifiers in parking lots**
- **Water Retention Basins designed into landscape**
- **Use of previous materials such as decomposed granite**
- **Implementation of LID principles in design**

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4. Describe the status of the development or implementation of peak flow controls in Natural Drainage Systems.

Compliance with the interim Peak Flow policy is required of new discretionary projects and is incorporated in drainage concept and hydrology plan checking.

Interim standards for peak flow were prepared and submitted to the Regional Board on January 31, 2005, following overall completion of the peak flow study. Results of the Peak Flow Study were also previously submitted to the Regional Board.

Research and discussion continues periodically to develop more effective and accurate ways to implement peak flow controls.

Additionally, the County continued to implement its Low Impact Development Standards Manual (LID Manual) developed in January 2009 to incorporate sustainable practices to improve runoff water quality, recharge groundwater, and reduce hydromodification in accordance with the LID Ordinance adopted by the Los Angeles County Board of Supervisors in November 2008. The LID Manual describes sustainable practices that developers can use to protect surface and groundwater quality, maintain the integrity of ecosystems, and preserve the physical integrity of receiving waters by managing stormwater runoff. The LID Manual was developed to set design requirements for new development and redevelopment. Developers must incorporate LID design features to match the undeveloped runoff volume of the site for a 3/4" rainfall event. If the developed site yields a greater volume of runoff compared to the undeveloped site, the excess runoff must be infiltrated, captured and reused, or evapotranspirated at maximum extent technically feasible. Any remaining excess volume shall be treated and released.

5. Has your agency amended codes and/or ordinances to give legal effect to the SUSMP changes required in the Permit?

Yes No

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6. Describe the process your agency uses to include SUSMP design standards in new development and redevelopment project approvals.

Subdivision projects coordinated through the Department of Regional Planning must go through a tentative map review process. During that process, the LACDPW's Land Development Division (LDD) reviews the project for grading, street, and drainage feasibility. If changes to drainage/hydrology are proposed as part of the project, a drainage concept must be submitted and approved by LDD. As part of the drainage concept review, LDD will determine if the project falls into a category of development and/or redevelopment requiring SUSMP. If it does, the drainage concept must meet the criteria established in the SUSMP Manual (available to the public at www.lawtersheds.org) prior to approval. If storm drain improvements are a condition of the parcel or tract map, the storm drain improvement plans for the subdivision are also reviewed by LDD. Prior to approval, the plans must comply with the approved drainage concept/SUSMP. Storm drain bonds are typically posted for the improvement, and are not released until inspection by LACDPW's Construction Division (CON) confirms that what was built matches what was approved on the plans. Likewise, LDD reviews the grading and street improvement plans to ensure that the project meets SUSMP requirements, where applicable, prior to approval.

In addition, the Technical Review Committee (TRC) was established by the LACDPW in 2002 to evaluate new products and technologies including water quality BMPs. Products that are successful in completing the evaluation process can be used in our projects and in developments transferred to LACFCD for operation and maintenance. The evaluation process is meant to ensure that all stormwater BMPs directly connected to County facilities meet standards for safety, design, performance, water quality, operation and maintenance. In February 2010, the TRC completed the evaluation of 2 proprietary bioretention tree well products and 5 automatic retractable (ARS) catch basin trash screens. By the end of the fiscal year, 1 ARS, gross pollutants separator, 1 bioretention tree well, and 1 hydrodynamic separator were also under review. The TRC also maintains an informational BMP website (www.BMPLA.org) containing a database of many proprietary and non-proprietary BMPs. The website assists BMP users looking for different types of BMPs.

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In November 2009, the County adopted a set of design and safety standards for rain barrels and cisterns that could be used for rainwater harvesting associated with LID compliance for development and redevelopment in unincorporated County area. The County invited 20 vendors nationwide to submit a list of products that met the standard. The list of pre-approved products is used by developers and County plan checkers to expedite the SUSMP/LID approval process.

7. How many of each of the following projects did your agency review and condition to meet SUSMP requirements last year?

- | | |
|---|----|
| a) Residential | 29 |
| b) Commercial | 49 |
| c) Industrial | 5 |
| d) Automotive Service Facilities | 0 |
| e) Retail Gasoline Outlets | 0 |
| f) Restaurants | 4 |
| g) Parking Lots | 12 |
| h) Projects located in or directly adjacent to or discharging directly to an environmentally sensitive area | 1 |
| i) Total number of permits issued to priority projects | 64 |

8. What is the percentage of total development projects that were conditioned to meet SUSMP requirements? 80%

9. How has your agency prepared to reduce the SUSMP threshold for industrial/commercial facilities to 1 acre from 100,000 square feet in 2003?

All of our review sheets indicate the reduced threshold. Every project that applies for a building permit will be subject to the reduced threshold of 1 acre.

10. After 2003, how many additional projects per year will require/did require implementation of SUSMP requirements as a result of the lower threshold?

This data is not tracked

11. Does your agency participate in an approved regional or sub-regional storm water mitigation program to substitute in part or wholly SUSMP requirements for new development?

Yes No

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12. Has your agency modified its planning procedures for preparing and reviewing CEQA documents to consider potential storm water quality impacts and provide for appropriate mitigation? Yes No
If no, provide an explanation and an expected date of completion.

N/A

13. Did your agency update any of the following General Plan elements in the past year?
- a) Land Use Yes No
 - b) Housing Yes No
 - c) Conservation Yes No
 - d) Open Space Yes No

If yes, please describe how watershed and storm water quality and quantity management considerations were included.

The existing Countywide General Plan was adopted in 1980 and is currently in the process of being updated. Adoption of the new General Plan by the Los Angeles County's Board of Supervisors is tentatively planned for end of 2012. All of the aforementioned elements have been revised within the Update.

14. How many targeted staff were trained last year? **350**
15. How many targeted staff are trained annually? **About 350 – 400**
16. What percentage of total staff are trained annually? **90 %**
17. Has your agency developed and made available development planning guidelines? Yes No
18. If no, what is the expected date that guidelines will be developed and available to developers? **N/A**

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19. What is the status of completion of the technical manual for siting and design of BMPs for the development community?

The Best Management Practices Technical Manual was submitted to the Regional Board by February 2, 2004, in accordance with Part 4.D.14 of the Permit. Subsequently in March 2009 the County adopted the Stormwater Best Management Practice Design and Maintenance Manual which has been incorporated into our project review process to further assist in the selection and locating of BMP/Water Quality devices. Also, we continue to implement the LID Manual and Guidance for new and redevelopment projects.

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D. Development Construction Program

1. Describe your agency's program to control runoff from construction activity at all construction sites within its jurisdiction.

All applicants are required to prepare a Wet Weather Erosion Control Plan and a Local Storm Water Pollution Prevention Plan (SWPPP) based on the guidelines described in the Construction BMP Handbook. BMP notes are added on all storm drain, road, sewer, and grading plans and the owner/engineer is required to sign a statement of understanding. Erosion Control Plans, Local SWPPP, and SWPPP are required prior to grading plan approval. Approved copies are kept at construction sites.

2. Does your agency require the preparation, submittal, and implementation of a Local Storm Water Pollution Prevention Plan (Local SWPPP) prior to the issuance of a grading permit for all sites that meet one or all of the following criteria?

- a) Will result in soil disturbance of one acre or greater Yes No
- b) Is within, directly adjacent to, or is discharging directly to an environmentally sensitive area Yes No
- c) Is located in a hillside area Yes No

3. Attach one example of a local SWPPP

See Attachment IV-D3

4. Describe the process your agency uses to require proof of filing a Notice of Intent for coverage under the State General Construction Activity Storm Water permit and a certification that a SWPPP has been prepared prior to issuing a grading permit?

The County requires the following information to be submitted prior to all grading plan approvals:

1. A copy of the filed NOI
2. The issued WDID number
3. The Local SWPPP

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- 5. How many building/grading permits were issued to sites requiring Local SWPPPs last year? **37**
- 6. How many building/grading permits were issued to sites requiring coverage under the General Construction Activities Storm Water Permit last year? **31**
- 7. How many building/grading permits were issued to construction site less than one acre in size last year? **2,700**
- 8. How many construction sites were inspected during the last wet season? **2,700**
- 9. Complete the table below.

Type of Violation	# of Violations	% of Total Inspections	# of Follow-up Inspections	# of Enforcement Actions
Off-site discharge of sediment	73	0.5%	82	5
Off-site discharge of other pollutants	12	0.1%	12	2
No or inadequate SWPPP	39	0.4%	39	3
Inadequate BMP/SWPPP implementation	77	0.5%	85	5

- 10. Describe the process for taking enforcement actions against construction site violations, including the types of actions that are taken.

Enforcement of violations is performed in the following order: Warnings, Stop-Work Notices, Office Meetings, Recording of Notices of Violation, Referrals to the Regional Board, and Fines or Nonpayment of general contractor's invoices until compliance is met.

- 11. Describe the system that your agency uses to track the issuance of grading permits.

The County uses a computer database to track all single lot (non-tract) projects, which are categorized according to disturbed/graded area in acres.

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E. Public Agency Activities (Part 4.F)

1. Sewage System Maintenance, Overflow, and Spill Prevention (only applicable to agencies that own and/or operate a sanitary sewer system)

- a) Has your agency developed and implemented a response plan for sanitary sewer overflows that includes the requirements in Order 01-182? Yes No
- b) How many sanitary sewer overflows occurred within your jurisdiction? **98**
- c) How many did your agency respond to? **98**
- d) Did your agency investigate all complaints received? Yes No
- e) How many complaints were received? **1,175**
- f) Upon notification, did your agency immediately respond to overflows by containment? Yes No
- g) Did your agency notify appropriate sewer and public health agencies when a sewer overflowed to the MS4? Yes No
- h) Did your agency implement a program to prevent sewage spills or leaks from sewage facilities from entering the MS4? Yes No

If so, describe the program:

Sand bags and adsorbent circular tubes/socks are used to contain sewage spills. Hydro – Vactor trucks are used to pick-up and return the liquid to the sewer collection system.

- i) Did your agency implement a program to identify, repair, and remediate sanitary sewer blockages, exfiltration, overflow, and wet weather overflows from sanitary sewers to the MS4? Yes No

If so, describe the program:

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The Consolidated Sewer Maintenance District (CSMD) serves the unincorporated area of the County and 40 cities. A "Preventive Maintenance" program consisting of regular inspection and periodic maintenance of the sewer system and appurtenance are summarized below.

The CSMD visually inspects all sewer manholes approximately every six months. Sewer inspection typically involves examining the pipe at a manhole to observe flow conditions. Flow is checked for depth (which should be less than $\frac{1}{2}$ pipe diameter), smoothness, and restrictions for stoppages. Abnormal flow conditions are scheduled for cleaning to restore normal flow.

LACDPW operates a 24-hour, toll-free emergency Hotline (1-800-675-HELP) for use by County staff, cities and the public in reporting incidents. Calls received are immediately dispatched to the appropriate LACDPW personnel for investigation and resolution. During weekday working hours, calls are dispatched to the CSMD yard that is closest to the reported incident. For evening, weekends and holidays, the CSMD designates a maintenance crew to be available or "on-call", to respond to incidents. All complaints are investigated and immediate appropriate actions are taken.

Materials impeding flow in the pipe are noted and recurring problems are placed on periodic maintenance schedule to prevent a reoccurrence. Sewer pipes not fixed by cleaning or periodic maintenance are typically video-inspected using a closed circuit television camera to determine the source (i.e., structural failure, illegal discharge, inflow/infiltration, etc.). Based on the results of the video inspection, future action to remedy the situation may be taken. This could include replacement or rehabilitation of the segment of pipe.

The objectives of the "Preventive Maintenance" program is to protect the health and welfare of the community by insuring the continuous uninterrupted operation of the public sewer system; and to protect the storm drain system and receiving waters from the impact of sewage overflow.

Condition Assessment Program

The primary objectives of this program are to perform closed-circuit television (CCTV) inspections and structurally rate approximately 500 miles of sewer infrastructure each year.

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The televising will be prioritized to focus on those sewers with the most potential for repair needs. Maintenance history, past overflow records, sewer locations, and age will be some of the factors used to prioritize the televising schedule.

LACDPW has selected a digital video pipeline inspection system. This system allows for the most consistent and thorough collection of data. Under this system, a CCTV van crew gathers video and data for each pipe segment to identify any deficiencies and engineers review the tapes and video logs to determine if the sewer facilities should be repaired or replaced immediately, or scheduled for future improvements.

In 1987, the County Board of Supervisors established the Accumulative Capital Outlay Fund (ACO) to finance the repair or replacement of structurally deficient collection sewer system for the CSMD. Under this program 119 miles of identified deteriorated sewer lines and 14 pump stations have been rehabilitated. Sewer facilities identified through the CSMD's Condition Assessment Program will also be prioritized and included in the list of projects to be financed with ACO.

Reference: Sewer System Management Plan for the Consolidated and Marina Sewer Maintenance Districts for all Supervisorial Districts adopted by the Board on May 6, 2008.

2. Public Construction Activities Management

a) What percentage of public construction sites 5 acres or greater in size did your agency obtain coverage under the State of California General Construction Activities Storm Water Discharge Permit? **100%**

b) Give an explanation for any sites greater than 5 acres that were not covered:

N/A

c) What is the total number of active public construction sites? **204**
 How many were 5 acres or greater in size? **49**

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- d) (After March, 2003) Did your agency obtain coverage under the State of California General Construction Activities Storm Water Discharge Permit coverage for public construction sites for sites one acre or greater? Yes No

3. Vehicle Maintenance/Material Storage Facilities/Corporation Yards Management

- a) Did your agency implement pollution prevention plans for each public vehicle maintenance facility, material storage facility, and corporation yard? Yes No

N/A

- b) Briefly describe how your agency implements the following, and any additional, BMPs to minimize pollutant discharges in storm water:

(1) Good housekeeping practices

All sites regularly maintain storm drain inlets and grounds to keep them debris-free.

Parking lots at County maintenance yards are inspected twice a month and swept at least once a month.

A parking lot sediment trap has been installed and maintained in some of the yards.

The County emphasizes extensive education and training of field staff through routine tailgate meetings where good housekeeping practices are discussed. In addition, inspections of maintenance yards are also conducted on a regular basis, above and beyond the permit requirements, and LACDPW's WMD staff annually inspects over 276 County facilities as part of its Clean Yards Program.

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Outdoor material, and all aggregate concrete bunkers are covered with tarps or have canopies.

Berms have been constructed and fire hoses filled with sand have been placed at the edges to prevent sediment displacement due to runoff.

Material storage is done indoors in some instances.

All hazardous waste storage areas are equipped with proper containments and all areas are routinely monitored according to existing policies on material storage.

Hazardous waste is collected regularly by a licensed contractor.

The County conducts extensive training on proper storage and disposal of waste materials indoors and outdoors.

(3) Vehicle leaks and spill control

Maintenance facilities such as those for auto fueling and repairs are equipped with spill kits to ensure prompt cleanup of leaks and spills. In addition all wastes are properly labeled and separated.

Furthermore, drip pans, absorbent pads and kitty litter (powdered clay) are used under leaky vehicles until repair is completed. Liquid spills are prevented by secondary containment. The maintenance facilities added spill pans underneath permanent parking stalls for maintenance trucks.

The County emphasizes keeping an education and spill response plan in place throughout the different County facilities.

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(4) Illicit discharge control

Sand bags or other containment devices are placed around catch basin inlets at storage facilities to prevent illicit discharges. LACFCD responds to all reports of illicit discharges to the stormdrain system. LACFCD contains the spill, calls a licensed vendor for clean up.

The County provides extensive training and instructions on prevention of and response to illicit discharges.

- c) Are all Permittee owned and/or operated vehicle/equipment wash areas self-contained, covered, equipped with a clarifier, and properly connected to the sanitary sewer? Yes No

If not, what is the status of implementing this requirement?

Major maintenance yards have self-contained, covered vehicle/equipment wash areas equipped with clarifiers that are connected to the sanitary sewer. For yards located in areas without a sewer system such as Malibu, crews capture and pump wash water into a holding tank and contact a vendor for proper disposal. Other maintenance yards take their vehicles to a local car wash or to a main yard with a properly equipped wash area.

Each County of Los Angeles-owned airport is equipped with a Sanitation District approved wash facility for aircraft that is connected to a clarifier and sanitary sewer controlled by a rainwater diversion switch.

- d) How many Permittee owned and/or operated vehicle/equipment wash areas are scheduled to be redeveloped to include the BMPs listed above? **2**

4. Landscape and Recreational Facilities Management

- a) Has your agency developed a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers? Yes No

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Briefly describe this protocol:

The County follows all Federal, State and local laws pertaining to the purchase, storage and use of pesticides and herbicides. The County of Los Angeles's Agricultural Commissioner/Weights and Measures (ACWM) provides training and certifies pertinent County personnel in pesticide application. In some cases, the ACWM is contracted by some County of Los Angeles Departments for pesticide and herbicide application. In other instances, outside licensed vendors or landscaping contractors are retained. They are required to follow all applicable laws, regulations, and protocols as described in their contracts.

In the case of waste water treatment plants, operators use an EPA approved pesticide/germicide.

- b) How does your agency ensure that there is no application of pesticides or fertilizers immediately before, during, or immediately after a rain event or when water is flowing off the area to be applied?

The County maintenance supervisors oversee the timing of these applications, and their field staff is adequately trained during the annual storm water pollution prevention tailgate meetings on the proper use and storage of pesticides, herbicides and fertilizers. The County schedules these activities well in advance, inclusive of spot spraying, and applications are only scheduled during dry weather. In addition, weather forecasts are considered before any application. The County enforces these existing policies with its contractors to ensure that herbicides are sprayed in a proper manner. In addition, these requirements are included in County construction documents, plans, and specifications.

- c) Are any banned pesticides, herbicides, fungicides, or rodenticides stored or applied in your agency's jurisdiction that you know of? Yes No

If so, list them:

N/A

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- d) What percentage of your agency's staff that apply pesticides are certified by the California Department of Food and Agriculture, or are under the direct supervision of a certified pesticide applicator? **100%**

- e) Describe procedures your agency has implemented to encourage retention and planting of native vegetation and to reduce water, fertilizer, and pesticide needs:

The County typically incorporates drought resistant plants in landscaping projects. In most cases mulch is used to retain moisture and prevent weed growth. The County developed a Master Tree list to aid in the selection of native vegetation or other species that are drought resistant or are known to thrive in particular climate zones. In certain areas, the County practices xeriscaping, and uses artificial turf wherever sod needs to be replaced. The Landscape Contractor is monitored by Facilities Management Staff.

Finally, all the County's capital projects include in their construction plans and specifications the implementation of Ordinances for Green Building, Low Impact Development and Drought-Tolerant Landscaping.

5. Storm Drain Operation and Management

- a) Did your agency designate catch basin inlets within its jurisdiction as Priority A; Priority B; and Priority C? Yes No

- b) How many of each designation exist in your jurisdiction?

Priority A:	1,077
Priority B:	1,327
Priority C:	88,806

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c) Is your city subject to a trash TMDL? Yes No

d) If yes, describe the activities and/or implementation measures that your agency conducted pursuant to the TMDL and any other trash reduction efforts that occurred.

The County has implemented the following efforts in their routine maintenance operations.

- “Trash Free” Channel Contracts for cleaning channel inverts of trash and debris.
- Contracts for Channel Clearing ROW to remove trash and debris.
- LA River Trash and Debris Collection Contract to remove trash and debris at the Southern Sector of the River.
- Catch Basin Cleanout Contracts to clean all catch basins.
- Installation of trash receptacles at bus stations.
- Installation of catch basin screens to prevent trash from getting into the inlets.
- Installation of retrofit catch basins, 766 total, to make the catch basins TMDL compliant.
- Los Angeles River Watershed Unincorporated Communities Trash TMDL compliance Project Phase 4 on July 8, 2010 – Installed 1,767 Connector Pipe Screens (CPS) and 589 Automatic Retractable Screens (ARS) on catch basins.
- Ballona Creek Watershed Unincorporated Communities Trash TMDL Compliance Project Phase 2 on December 1, 2009 – Installed 101 CPS.
- Malibu Creek Trash TMDL full compliance Catch Basin Retrofit Project was completed in December 2009. This project consisted of installing 192 CPS and 176 ARS on 176 catch basins
- Sweeping activities

In addition, as part of the requirements of the Legg Lake Trash TMDL that became effective in March 2008, the County of Los Angeles submitted a Trash Monitoring and Reporting Program (TMRP) to the Regional Board, who conditionally approved it on March 25, 2009. On September 25, 2009, the County of Los Angeles began monitoring its Minimum Frequency Assessment and Collection/Best Management Practice Program. The County of Los Angeles is continuing to implement trash-reduction maintenance routines per the TMRP including initiating a public outreach trash reduction campaign, which could be adapted to address trash TMDLs at other County of Los Angeles lakes. The County of Los Angeles submitted its first Legg Lake Trash TMDL Annual

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Monitoring Report to the Regional Board on March 4, 2010.

Furthermore, the following reports have been submitted to the Regional Board:

The Los Angeles River Watershed Trash TMDL Implementation Year 2 Report was submitted on August 15, 2009.

The Ballona Creek Watershed Trash TMDL Monitoring and Annual Report for Implementation Year 6 was submitted on August 15, 2009.

The Malibu Creek Watershed Trash Monitoring and Reporting Plan was submitted to the Regional Board on April 30, 2010.

Finally, the County of Los Angeles has planned and implemented the following improvements at County of Los Angeles lakes in order to reduce trash levels:

- **Trash filter fences;**
- **Increased number of trash cans;**
- **Scheduled lake edge trash pickup;**
- **Lake surface pickup;**
- **Visual trash monitoring stations; and**
- **Separate trash collection bins for lake trash.**

e)	How many times were all Priority A basins cleaned last year?	4
f)	How many times were all Priority B basins cleaned last year?	2
g)	How many times were all Priority C basins cleaned last year?	1
h)	How much total waste was collected in tons from catch basin clean-outs last year?	843 ton

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i) Attach a record of all catch basins in your jurisdiction. This shall identify each basin as City or County owned, and Priority A, B, or C. For all basins that are owned and operated by your agency, include dates that each was cleaned out over the past year.

Records for catch basin maintenance are too voluminous to attach to this report; they can be provided separately upon request.

j) Did your agency place and maintain trash receptacles at all transit stops within its jurisdiction. Yes No

k) How many new trash receptacles were installed last year? **1**

l) Did your agency place special conditions for events that generated substantial quantities of trash and litter including provisions that:

(1) Provide for the proper management of trash and litter generated from the event? Yes No

(2) Arrange for temporary screens to be placed on catch basins? Yes No

(3) Or for catch basins in that area to be cleaned out subsequent to the event and prior to any rain? Yes No

m) Did your agency inspect the legibility of the catch basin stencil or labels? Yes No
What percentage of stencils were legible? **over 90%**

n) Were illegible stencils recorded and re-stenciled or re-labeled within 180 days of inspection? Yes No

o) Did your agency visually monitor Permittee-owned open channel storm drains and other drainage structures for debris at least annually and identify and prioritize problem areas of illicit discharge for regular inspection? Yes No
Is the prioritization attached?

Records are too voluminous to attach to this report; they can be provided separately upon request. Yes No

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- p) Did your agency review its maintenance activities to assure that appropriate storm water BMPs are being utilized to protect water quality? Yes No

What changes have been made?

No significant changes were made during this reporting period. The County continues to review all standard maintenance procedures and use of BMPs to assure that they are being utilized appropriately as part of an overall iterative and adaptive strategy to improve urban and storm runoff quality. New or improved BMPs are evaluated and may be implemented as a pilot study.

- q) Did your agency remove trash and debris from open channel storm drains a minimum of once per year before the storm season? Yes No

- r) How did your agency minimize the discharge of contaminants during MS4 maintenance and clean outs?

The County utilizes manual labor wherever possible during cleanouts prior to the use of heavy machinery. In addition, the County followed all appropriate measures recommended in the California BMP Handbook to minimize contaminants which if any, are removed immediately from the cleanout area.

- s) Where is removed material disposed of?

The removed material is brought to a drying bed when the material is wet, then transported to an authorized disposal facility center or legal dump sites.

6. Streets and Roads Maintenance

- a) Did your agency designate streets and/or street segments within its jurisdiction as one of the following:

- (1) Priority A – streets and/or street segments that are designated as consistently generating the highest volumes of trash and/or litter?

All streets with curbs are swept weekly (except during rain storms). This frequency is more than the permit requires; thus classifying those road segments as Priority A.

Yes No

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- (2) Priority B - streets and/or street segments that are designated as consistently generating moderate volumes of trash and/or litter?
N/A Yes No
- (3) Priority C – streets and/or street segments that are designated as generating low volumes of trash and/or litter?

All streets without curbs are swept on an as-needed basis, but not less than once per year, which classifies these segments as Priority C. Yes No
- b) Did your agency perform all street sweeping in compliance with the permit and according to the following schedule:
 - (1) Priority A – These streets and/or street segments shall be swept at least two times per month?
Weekly, except during rainstorms. Yes No
 - (2) Priority B - Each Permittee shall ensure that each streets and/or street segments is cleaned at least once per month? **N/A** Yes No
 - (3) Priority C – These streets and/or street segments shall be cleaned as necessary but in no case less than once per year?
On as-needed basis, but not less than once a year. Yes No
- c) Did your agency require that saw cutting wastes be recovered and disposed of properly and that in no case shall waste be left on a roadway or allowed to enter the storm drain? Yes No
- d) Did your agency require that concrete and other street and road maintenance materials and wastes be managed to prevent pollutant discharges? Yes No

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- e) Did your agency require that the washout of concrete trucks and chutes only occur in designated areas and never into storm drains, open ditches, streets, or catch basins leading to the storm drain system? Yes No
- f) Did your agency train its employees in targeted positions (whose interactions, jobs, and activities affect storm water quality) regarding the requirements of the storm water management program to:
- (1) Promote a clear understanding of the potential for maintenance activities to pollute storm water? and Yes No
- (2) Identify and select appropriate BMPs? Yes No

7. Parking Facilities Management

- a) Did your agency ensure that Permittee-owned parking lots be kept clear of debris and excessive oil buildup and cleaned no less than 2 times per month and/or inspected no less than 2 times per month to determine if cleaning is necessary.
Some parking lots are swept as frequently as once per week. Yes No
- b) Were any Permittee-owned parking lots cleaned less than once a month? Yes No
How many? **N/A**

8. Public Industrial Activities Management

- a) Did your agency, for all municipal activity considered an industrial activity under USEPA Phase I storm water regulations, obtain separate coverage under the State of California General Industrial Activities Storm Water Discharge Permit no later than December 31, 2001? Yes No
- b) Does your agency serve a population of less than 100,000 people? Yes No

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9. Emergency Procedures

- a) In case of real emergencies, did your agency repair essential public services and infrastructure in a manner to minimize environmental damage? Yes No
- b) Were BMPs implemented to the extent that measures did not compromise public health and safety? Yes No

10. Feasibility Study

- a) Did your agency cooperate with the County Sanitation Districts of Los Angeles County to prepare a study which investigates the possible diversion of dry weather flows or the use of alternative treatment control BMPs? Yes No
- b) Did your agency review its individual prioritized list and create a watershed based priority list of drains for potential diversion and submit a listing of priority diversions to the Regional Board Executive Officer? Yes No

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F. Illicit Connections and Illicit Discharges (IC/ID) Elimination Program (Part 4.G)

1. Attach a copy of your agency's IC/ID Elimination Implementation Program (Part 4.G.1.a.).

The County's IC/ID Elimination Program Manual can be downloaded at www.lawatersheds.org

2. Attach a map of your storm drain system showing all permitted connections (if available), and the locations of all illicit connections and discharges that occurred last year (Part 4.G.1.b). If your agency has not completed this requirement, describe the status of the development of a baseline map, including an expected completion date.

Permitted and suspected illicit connections are stored in the Maintenance Management System (MMS) (database) and spreadsheets. This list is over 500 pages and can be retrieved upon request, but is too large to include in this report.

3. Describe your enforcement procedures for eliminating illicit discharges and terminating illicit connections.

Illicit Connections:

- Step 1) LACDPW's Construction Division (CON) receives reports of suspected connections (Gray Sheets) from LACDPW's Flood Maintenance Division (FMD).**
- Step 2) The Gray Sheets are entered or documented in the MMS, and unique equipment (ID) numbers are assigned.**
- Step 3) CON inspectors are assigned the Gray Sheets for investigation.**
- Step 4) Investigate (attempt to identify the source of the drain) and confirm the responsible party for the illicit connection.**
- Step 5) Inform the owner of the property as to the existence of an illicit connection and request a meeting to discuss it.**
- Step 6) Inform the responsible party that they are required to terminate the illicit connection or face fines.**
- Step 7) Follow-up inspection within 10 days to enforce and/or ensure that the responsible party is complying with the requirements.**
- Step 8) If the illicit connection is not capped within 10 days, write a Notice of Violation (NOV) letter requesting resolution and describing in detail the consequences.**
- Step 9) If no action by property owner, the second letter is sent in 30 days of follow-up inspection, and the third in 60 days of the follow-up inspection.**
- Step 10) If no action by property owner after the third letter, the County Counsel is notified to pursue in litigation.**

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Step 11) The inspector documents and records inspection details and the resolution of the investigation in electronic development and permit tracking system (E-DAPTS)

Illicit Discharges:

The field staff responds immediately, barricades the area, and contains any reported spills or discharges. The field staff then calls a vendor for immediate clean up and files a Hazardous Material Release Response (HMRR) report. If a responsible party of the spill is identified, he/she will be billed for the cleanup. Situations requiring formal enforcement (e.g., warning letter, NOV, referral to District Attorney, etc.) are referred to LACDPW's Environmental Program Division (EPD).

EPD follows the enforcement procedures for eliminating illicit discharges outlined in Section 9 in the implementation manual Volume V for Illicit Connections and Discharges.

4. Describe your record keeping system to document all illicit connections and discharges.

For Illicit Connections:

A report (gray sheet) is submitted to CON for each suspected illicit connection. The illicit connections are entered into the MMS and unique equipment numbers are assigned. The data in MMS interfaces with E-DAPTS, which allows the CON inspectors to access the equipment number and other pertinent information to perform investigation. Once the investigation is complete, E-DAPTS interfaces with MMS with the details of the investigation and resolution.

For Illicit Discharges:

After responding and cleaning up of spills/discharges, the field staff will document the discharge and gather any relevant information on a HMRR. The information is entered into the MMS.

Illicit discharge complaints and referrals to EPD are initially documented in the HMS database program, and an inspection/investigation is created. If the discharge is determined not to be in our jurisdiction, we will refer the complaint to the appropriate agency. If an illicit discharge is discovered during the inspection/investigation and the discharge ceases with no further follow up actions required, the complaint is closed out. If the discharge requires further follow-up action(s) by EPD, a follow up will be done. A violation will be created and/or a Notice will be issued.

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- 5. What is the total length of open channel that your agency owns and operates? **485 miles**
- 6. What length was screened last year for illicit connections? **410 miles**
- 7. What is the total length of closed storm drain that your agency owns and operates? **2,455 miles**
- 8. What length was screened last year for illicit connections? **1150 miles**
- 9. Describe the method used to screen your storm drains.

FMD personnel (Underground Crew) inspects both underground storm drains as well as open channels. Each time the crews locate an illicit connection they report it by taking a photograph and filling out a report (gray sheet) that describes its location, size, type of pipe, and other valuable information. This information is then forwarded to CON for further investigation.

The FMD Underground Crews have a set of routines scheduled on a 1, 3, and 6 year cycle: 1 year cycle for drains with high probability of illegal connection, 3 year cycle for drains within industrial and commercial areas where illicit connection is most likely, and 6 year cycles for residential areas where illegal connection is least likely.

LACDPW's Road Maintenance Division (RMD) performs visual inspections as part of its annual drainage inspection program. Typically the inspections are limited to the drainage inlets and outlets. These inspections are typically performed prior to the start of storm / rainy season (late summer / early fall).

- 10. Provide the reporting data for illicit connections as suggested in the following table (you may submit a spreadsheet from your database that contains the information).

Year	Total # reported/ identified	Total # investigated	# that conveyed exempt discharges or NPDES permitted	# that conveyed illicit discharges that were terminated	# that were removed	# that resulted in enforcement action	# that resulted in <i>other</i> actions
01/02	494	494	398	24	24	0	0
02/03	1563	1410	85	53	70	112	42
03/04	1375	1247	89	81	64	12	56
04/05	1352	1203	523	40	98	15	18
05/06	1079	934	819	49	35	10	21
06/07	581	501	423	21	20	1	36

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07/08	776	678	426	22	13	0	219
08/09	536	347	262	20	22	0	48
09/10	410	355	219	30	37	0	68

11. Explain any other actions that occurred in the last year.

On occasion, CON will close and return the file to FMD to take action, such as constructing a bulk head (brick seal), removing the connection, or for additional information required to perform the investigation.

12. What is the average time it takes your agency to initiate an illicit connection investigation after it is reported?

21 days

a) Were all identified connections terminated within 180 days?

Yes No

b) If not, explain why.

N/A

13. Provide the reporting data for illicit discharges as suggested in the following table (you may submit a spreadsheet from you database that contains this information).

Year	Total # reported	Total # that were discontinued/ cleaned up voluntarily through enforcement and the source was identified	# that were cleaned up but the source could not be identified	# that resulted in no evidence of discharge	# that were determined to be conditionally exempt	# that were exempt or in compliance and the source identified	# that resulted in enforcement action
01/02	513	104	68	5	3	3	1
02/03	704	137	204	0	1	1	1
03/04	276	146	31	44	4	0	0
04/05	280	136	111	59	2	2	6
05/06	269	153	96	37	0	0	11
06/07	260	162	81	16	0	0	9
07/08	442	138	297	14	0	0	11
08/09	223	109	95	40	1	5	1
09/10	118	58	31	29	0	0	0

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14. What is the average response time after an illicit discharge is reported?

2 hours to less than one business day

a) Did any response times exceed 72 hours?

Yes No

b) If yes, explain why.

N/A

15. Describe your agency's spill response procedures.

Spill response procedures are described in the illicit connections/illicit discharge program manual dated June 2002, which can be downloaded at www.lawatersheds.org; and the Illicit Discharge Response Procedure Manual and Training Code 15 of the Tailgate Codes and Topics, both available upon request.

County staff responds to any spills immediately after being notified. The staff's role is to assess and contain the spill. Our staff will ensure that the area in question is secured, cleaned, and all unauthorized people are kept away. A vendor from an approved list is called in to do the actual cleanup. Our staff will document the spill and gather any relevant information on HMRR. This information is then entered into a database for tracking.

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16. What would you do differently to improve your agency's IC/ID Elimination Program?

Identifying the responsible party for an illicit connection can be very difficult. The use of GPS systems, laser distance finders, and compasses would be helpful in narrowing down where the connection originates. A small tracking device that can be sent through the connection to the point of origination would also be an ideal tool. Providing such investigative equipment can enhance the Inspectors' effectiveness in identifying the illicit drains and eliminating illicit discharges.

Instituting training sessions in a joint environment with FMD and CON that integrate knowledge of current software applications (e-DAPTS, and MMS data entry system(s)) with current procedures on field reporting, documentation, etc. This sharing of knowledge and deeper integration of procedures and technologies can be beneficial to encourage innovative thinking of ways to enhance the program and the processes, such as maximizing any untapped capabilities of existing software to further improve the effectiveness and efficiency of the program.

Increasing the number of personnel (inspectors and clerical staff) would be beneficial in meeting the sometimes challenging deadlines required for the program. The implementation of such improvements will be greatly limited by funding constraints, which are even more severe with the current economic situation.

17. Attach a list of all permitted connections to your storm sewer system.

The list is over 500 pages and can be retrieved upon request, but is too large to include in this report.

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V. Monitoring

Briefly describe any storm water monitoring activities that are not required by Order No. 01-182 that your municipality conducted, participated in, or received funding to conduct in the past fiscal year. These activities should correspond with the dollar amount you listed in Table 2.

LACFCD MONITORING ACTIVITIES

- Marie Canyon Water Quality Improvement Project - LACFCD conducted BMP effectiveness monitoring for the Marie Canyon Water Quality Improvement Project. Samples taken at the inlet of the project and at the outlet demonstrate the BMP is very effective in reducing bacteria levels.
- Dominguez Gap Wetlands Project (partial Prop. 13 CALFED Funded Project) - As required by the State Grant, monitoring has been conducted by LACFCD on a quarterly basis and will continue through 2012. Water quality monitoring will continue to determine the efficiency of the wetlands at removing pollutants.
- Los Angeles River Watershed-wide Monitoring Program - The LACFCD continued to contribute to this program, designed to answer basic questions about the health of the watershed, such as is it safe to swim in popular recreational areas, and is the fish safe to eat. Bioassessments focused on macro-invertebrates, IBI score, and bio-diversity of the channel/stream. pH, temperature, DO data review and analysis is pending.
- San Gabriel River Watershed-wide Monitoring Program - Similar to the program mentioned above, the LACFCD continued to contribute to this program, designed to answer basic questions about the health of the watershed, such as is it safe to swim in popular recreational areas, and is the fish safe to eat. Bioassessments focused on macro-invertebrates, IBI score, and bio-diversity of the channel/stream. pH, temperature, DO data review and analysis is pending.
- Sun Valley Park Drain and Infiltration Project – The LACFCD conducted storm sampling within the Sun Valley Park Project to determine the efficiency of the BMP at removing pollutants from the Sun Valley drainage area of the Los Angeles River Watershed.
- LACFCD Low Flow Diversion Projects – The LACFCD collected samples of the urban runoff that is diverted by the 19 LACFCD operated low flow diversions into the sanitary sewer system. Monitoring will help determine future management actions, such as prioritizing and optimizing operations. The LACFCD created a low-flow diversion task force made up of key staff from several divisions to recommend management actions to optimize operations.
- Walteria Lake Monitoring – Monitoring has been conducted in Walteria Lake by the LACFCD on a monthly basis to test for nutrients. Monitoring locations are in the inlets to Walteria Lake. Review and analysis of data is pending.
- Parkside Drain (Riverside Drive), Burbank - Special investigation to measure metals and other substances within Parkside Drain.

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COUNTY OF LOS ANGELES TMDL MONITORING PROGRAMS

The County of Los Angeles participates with other agencies in the following TMDL Coordinated Monitoring Programs.

- Marina del Rey Mothers' Beach and Back Basins Bacteria TMDL
- Marina del Rey Toxics TMDL CMP
- Ballona Creek Metals and Estuary Toxic Pollutants TMDLs
- Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL
- Malibu Creek Bacteria TMDL
- Los Angeles River and Tributaries Metals TMDL
- Santa Monica Bay Beaches Dry- and Wet-Weather Bacteria TMDLs

VI. Assessment of Program Effectiveness

- A. Attach a summary of the effectiveness of your storm water management program. This summary should include, at a minimum, the following:
1. An assessment of your agency's compliance with permit requirements, based on your responses to the questions in this form;

The County believes it is in full compliance with the requirements of Order 01-182.

Please refer to Attachments IV-A3f4 and VI-A1 for program assessments of the PIPP.

2. Descriptions of any evaluation methods that your agency uses to determine the effectiveness of your storm water management program;

Illicit Connection and Illicit Discharge Elimination Program

Program effectiveness can be evaluated using quantitative methods such as the year to year comparison of the number of illicit connections and illicit discharges reported/investigated/resolved (see Part IV, Items F10 and 13). Data revealed a general downward trending in the number of illicit connections from to year. The data for illicit discharges tended to fluctuate from year to year, making it more challenging to determine effectiveness.

Illicit connection data can fluctuate from year to year, depending on the predominant land use of the drainage area serviced by the particular storm drains being inspected in a particular year. For example, the number of illicit connections may increase if the associated land use is High Density Single Family Residential. However, an illicit connection from a Heavy Industrial land use occurs much less frequently, but is likely to have a greater impact on water quality.

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An increase in reported illicit discharges can be a result of a robust reporting program or actual increase in the number of incidents. A decrease can be due to either an actual change in behavior or a less effective reporting program. With extensive outreach, advertising and branding of the 888-CLEANLA hotline and website, the County believes any decrease in illicit discharges is more likely the result of change in polluting behaviors through the efforts of management and staff in implementing the stormwater program (reporting, investigation, and resolution; public education and outreach; etc.), rather than a decrease in reporting.

Measuring program effectiveness can be challenging in choosing meaningful metrics, properly evaluating the data, making assumptions and drawing conclusions, taking into account other factors that may affect the results. In light of some of the known weaknesses of choosing certain measures, the County should explore the use of other metrics to measure program effectiveness.

Public Information and Participation Program

Program effectiveness is evaluated using quantitative and qualitative methods such as pre and post-program polling, tracking of hotline call levels, tracking of calls to the hotline, hits on the www.888CleanLA.com website, monitoring the amount of household hazardous waste and used motor oil collected, trash measurement data, and anecdotal information gathered from program participants. We continue to conduct our environmental education programs to raise public awareness of stormwater pollution and to lead to behavioral change (See Attachments IV-A3f4).

3. A summary of the strengths and weaknesses of your agency's storm water management program;

Strengths

Meeting all Permit requirements is the primary strength of the County's stormwater management program. A committed staff willing to learn and "do the right thing" is a key component to success.

Public Information and Participation Program

(See Attachment IV-A. for more information)

Proactive outreach to the County's and cities' elected officials continues to reinforce the importance of stormwater issues.

The primary strength of LACFCD's PIPP continues to be the expertise of our staff to provide and coordinate information and

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technical assistance to our stakeholders in a cost-effective and proficient manner and our program assessment tools.

The program is enhanced due to the support and knowledge available to us through members of the NPDES Advisory Committee, a well-maintained network of stakeholders throughout the County's six major watersheds, agencies such as Caltrans, and non-profit organizations. The commitment of these groups and corporate partnerships helped us extend the circulation of program messages to target audiences and the general public. For example, the partnership between LACDPW and Kragen stores offered Do-It-Yourselfers a convenient and eco-friendly option to recycle used oil filters at 43 stores located throughout the County.

We developed and implemented a creative multimedia campaign that included traditional public outreach components such as radio, television, Internet marketing, and print PSAs. Our campaign messages reached our target audiences and achieved positive behavior change by reported levels of increased awareness and usage of used motor oil Certified Collection Centers among Latinos and Chinese as a result of our outreach efforts.

Additionally, the student program assessment results of the Generation Earth Program reveal that 97% of participants could accurately identify two components of service learning; 99.6% of participants could state what their first step would be toward an environmental service learning project and how the Generation Earth program could support their efforts; 98.7% of participants could accurately identify key items that can be reduced, reused, or recycled at their school; 100% of participants could name two actions that can prevent water pollution; 98.3% of participants could accurately describe a watershed and urban runoff; and 98.3% of participants could accurately explain what a rain garden is and how it can improve water quality.

The campaign continues to encourage and sustain a reduction in littering behaviors such as general littering and dropping a cigarette butt on the ground. During this reporting period, we did not conduct a resident survey while we are between active contract periods. We will resume conducting resident surveys when the next contract period is approved by the County of Los Angeles Board of Supervisors.

Weaknesses

Illicit Connection and Illicit Discharge Elimination Program

It continues to be challenging for the LACFCD to organize such requirements as integrating illicit connection and discharge maps

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and compiling the unified annual report when the LACFCD has no authority over the co-permittees.

Public Information and Participation Program

(See Attachment IV-A for more information)

Despite their success, the PIPP and other programs continue to be affected by limited funding availability. Although Permit requirements are being met, additional funding will enable us to conduct a more successful program, such as implementing a more comprehensive countywide campaign through consistent media flighting to address all of the types of littering addressed in the numerical behavior change targets approved by the Regional Board in May 2002.

During this reporting period, the funding for the Environmental Defenders and Generation Earth programs was significantly decreased due to an emergency budget crisis experienced by the County of Los Angeles Solid Waste Fund. The impact of these budget cuts resulted in a delay to finalize the Environmental Defenders program annual contract budget and proceed with the evaluation process and a decrease in the number of students and teachers reached through the Generation Earth program because some program offerings had to be either scaled back or eliminated.

Co-permittees continue to contribute to the Countywide media campaign on a voluntary basis (total \$84,000), based on the population of their City, that is not commensurate with the number of program messages their residents receive through LACFCD's mass media campaigns.

The Los Angeles media market continues to be a highly competitive and expensive media market. The arrival of new residents to the County each year and the cultural diversity of the target audiences continues to provide two additional ongoing challenges to reach these residents and increase awareness about stormwater pollution to achieve the desired behavior change among these target audiences.

4. A list of specific program highlights and accomplishments;
 - Installed a low-flow diversion from the LACFCD's Hermosa Beach Pier Avenue storm drain to divert dry-weather urban runoff through a pretreatment unit into an engineered infiltration trench, as part of the Hermosa Strand Infiltration Trench Project - Phase I. The LACFCD provided design services and construction documents as in-kind services. The project was built by the City

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of Hermosa Beach which received a Clean Beach Initiative Grant from the State Water Resources Control Board.

- **Operates and maintains 17 low-flow diversions in Santa Monica Bay that divert dry weather flow into the sanitary sewer system. The LACFCD collected samples of the urban runoff that is diverted by the 17 low flow diversions in Santa Monica Bay into the sanitary sewer system. Monitoring will help determine future management actions, such as prioritizing and optimizing operations. The LACFCD created a low-flow diversion task force made up of key staff from several divisions to recommend management actions to optimize operations.**
- **Conducted BMP effectiveness monitoring for the Marie Canyon Water Quality Improvement Project. Samples taken at the inlet of the project and at the outlet demonstrates the BMP is very effective in reducing bacteria levels.**
- **Continued efforts with Southern California Coastal Water Research Project in conducting a bacteria source investigation study in the Ramirez Canyon and Escondido Canyons of Malibu. The investigation did not reveal any anthropogenic point sources. The Spring 2010 iteration of the bacteria study was contingent upon beach water quality exceedances from the Ramirez Canyon watershed. Due to the lack of water quality exceedances, additional source investigation testing was not warranted.**
- **Contributed \$475,000 towards the Malibu Surfrider Beach Epidemiological study led by Southern California Coastal Water Research Project. The study is designed to evaluate the risk of swimming-related illnesses at nonpoint source polluted beaches, whether these illnesses are correlated to traditional fecal bacteria indicators, and whether there are alternative assessment tools that are more predictive of health risk. The study is ongoing and is expected to be completed Spring 2011.**
- **Conducted Dry-weather monitoring to determine flow rates in the Park Mesa Drain, and incorporated the results of the investigation into a Project Concept Report. The purpose of this study was to assess and improve the effectiveness of the Parker Mesa Drain Low Flow Diversion. Analysis of the data collected showed that over-irrigation is a potentially significant source of dry weather flows in the area. Instrumentation to better measure flow rates will be installed by early 2011.**
- **Currently finalizing design plans for construction of a rubber dam in Santa Monica Canyon Channel to increase capacity of an existing low-flow diversion. Construction will be overseen by the**

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LACFCD. The County of Los Angeles is funding the design and construction of this project as an in-kind service to the City of Los Angeles, who will own, operate, and maintain the rubber dam under an agreement with the LACFCD. Construction is expected to occur in summer 2011.

- Currently designing a multiuse enhancement project in Oxford Retention Basin to improve water quality, remove potentially contaminated sediment, provide recreational opportunities, and create wildlife habitat. The project is scheduled for construction in 2013.
- Conducted a study in Oxford Retention Basin to determine existing contaminate levels and assess available options for water quality improvements and sediment disposal. The final report is pending.
- Collected samples of the urban runoff that is diverted by the 2 LACFCD operated low flow diversions in Marina del Rey into the sanitary sewer system. Monitoring will help determine future management actions, such as prioritizing and optimizing operations.
- Initiated the ambient monitoring program in accordance with the Marina del Rey Toxics TMDL CMP in August 2010.
- Preparing a multi-pollutant Implementation Plan for the Marina del Rey Harbor to address dry and wet weather water quality improvements for bacteria, metals, toxics, chlordane and total Polychlorinated biphenyls (PCBs). This document is scheduled for completion in March 2011.
- Completed and brought on line the Marina del Rey low flow diversion (Project No. 3872) in March 2010
- Completed Phase 4 of the Los Angeles River Watershed Unincorporated Communities Trash TMDL Compliance Project on July 8, 2010 – Installed 1,767 Connector Pipe Screens (CPS) and 589 Automatic Retractable Screens (ARS) on catch basins. The CPS devices installed by this project are certified by the Regional Board as full capture devices and prevent trash greater than 5 mm in size from entering the catch basin.
- Completed Phase 2 of the Ballona Creek Watershed Unincorporated Communities Trash TMDL Compliance Project on December 1, 2009 – Installed 101 CPS. The CPS devices installed by this project are certified by the Regional Board as full capture devices and prevent trash greater than 5 mm in size from entering the catch basin.

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- **Completed the Malibu Creek Trash TMDL full compliance Catch Basin Retrofit Project in December 2009 – Installed 192 CPS and 176 ARS on 176 catch basins.**
- **Completed the design plans for the Lake-Alameda Landscaped Access Path. The project is located in the City of Burbank and will provide native landscaping with a pedestrian path along the Burbank-Western Channel.**
- **Continued working on the Strathern Wetlands Park project. On March 16, 2010, the County of Los Angeles Board of Supervisors approved the settlement with Los Angeles By-Products Company, transferring ownership of the Strathern Pit property to the LACFCD. The project proposes to capture stormwater runoff in detention ponds, convey the water through constructed wetlands, and pump the treated flows to the adjacent Sun Valley Park for infiltration into existing infiltration basins. The project will also enhance native vegetation, create recreational trails, and incorporate educational signage.**
- **Continued the development of a Watershed Management Modeling System (WMMS) that would ultimately be used to identify cost-effective pollution reduction projects to address urban runoff and stormwater quality. WMMS covers all watersheds included in the permit and provides an effective tool for long term TMDL implementation and overall watershed management. The United States Environmental Protection Agency is partnering in the development of WMMS.**
- **Continued to implement the LID Manual released in January 2009 by the County of Los Angeles to incorporate sustainable practices that improve runoff water quality, recharge groundwater, and reduce hydromodification in support of the LID Ordinance adopted by the Board of Supervisors in November 2008. The LID manual describes sustainable practices that developers can design that will protect surface and groundwater quality, maintain the integrity of ecosystems, and preserve the physical integrity of receiving waters by managing stormwater runoff. This manual was developed to set design requirements for development and redevelopment. Developers must incorporate design features to match the predevelopment runoff volume of the site for a 3/4" rainfall event. If the developed site yields a greater volume of runoff compared to the pre-developed site, the excess runoff must be infiltrated, captured and reused, treated and released or evapotranspired by using BMPs identified in the LID manual. The developers also must adhere to the design specifications and maintenance criteria for the BMPs**

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that are listed in the LID manual and the BMP maintenance manual.

- **Please refer to Attachment IV-A for a list of program highlights and accomplishments for PIPP.**
 - **Continued updating the watershed-based critical source inventory database to the specifications and requirements stated in the Permit.**
 - **Reviewed and conditioned all construction and development projects to meet all requirements set forth in the Permit including SUSMP and SWPPP when applicable.**
 - **Continued to implement the Clean Yards Program by auditing all LACDPW facilities for stormwater BMP implementation.**
 - **Maintained a rigorous transit stop trash receptacles program, along with other trash reduction management measures in an effort to reduce trash pollution.**
 - **Eliminated and/or resolved all known illicit connections and illicit discharges in a timely manner.**
5. A description of water quality improvements or degradation in your watershed over the past fiscal year;
- **Refer to the Los Angeles County 2009-2010 Stormwater Monitoring Report published August 12, 2010, <http://ladpw.org/wmd/NPDES/2009-10tc.cfm>, for NPDES Municipal Permit required monitoring results.**
6. Interagency coordination between cities to improve the storm water management program;
- **Interagency coordination between the County and the cities is facilitated through the EAC and WMC meetings. This has been effective in broadening communication between Permittees. Additionally, coordination of the PIPP is enhanced by quarterly meetings hosted by the LACFCD.**
 - **Interagency coordination of the County's environmental hotline, 1-888-CLEAN-LA, afforded turnkey coordination of responses to illicit discharge complaints and directed calls such as illicit discharge complaints to a representative in the appropriate jurisdiction so corrective action can be taken.**

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- **The LACFCD provided co-permittees with stormwater collateral and technical support in the development of public outreach campaigns for city residents, as well as in support of various watershed management groups.**

7. Future plans to improve your agency's storm water management program; and

- **The LACFCD is implementing telemetry upgrades to improve the NPDES Monitoring Program. Two Mass Emissions Stations, Malibu Creek and San Gabriel River were upgraded with cellular telemetry communications systems to provide for more efficient water quality monitoring. As a result of this upgrade, the stations are monitored remotely by the LACFCD staff to evaluate instantaneous water level, flow rates, and autosampler status (sample volumes, pump intervals/rates, sample bottle replacement). The remaining four Mass Emissions Stations in Ballona Creek, Coyote Creek, Los Angeles River, and Dominguez Channel are scheduled for telemetry upgrades in January/February.**

8. Suggestions to improve the effectiveness of your program or the County model programs.

See Attachment VI-A1

B. On a scale of 1 to 10 (10 being full implementation of requirements by their deadlines), rate your municipality's level of compliance with Order No. 01-182.

10- The County of Los Angeles has implemented all permit requirements.

C. List any suggestions your agency has for improving program reporting and assessment.

None at this time, although the County looks forward to discussing this issue with Regional Board staff and co-permittees as part of the process of developing the next permit.

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VII. Certification Statement

"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 a fine and imprisonment for knowing violations.

Executed on the ____ day of _____, 20____,

at _____.

Printed Name _____ Title _____

(Signature) _____

Signature by duly authorized representative

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Ballona Creek @ Sawtelle S01 2009-10Event13 10/13/2009	Ballona Creek @ Sawtelle S01 2009-10Event15 12/07/2009	Ballona Creek @ Sawtelle S01 2009-10Event16 12/11/2009	Ballona Creek @ Sawtelle S01 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	14,000**	30,000**	240,000**	500,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	240,000	300,000	240,000	240,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	900,000	300,000	240,000	300,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	300,000	240,000	300,000	900,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	0.009	0.005	0.03*
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	9.14	9.5	11.5	10.3
Conventionals	Oil and Grease	mg/L	EPA1664A	<1.44	5.3	>1.44&<5	<1.44
Conventionals	pH	pH units	SM4500H B	6.67	6.42*	6.8	7.03
General	Alkalinity as CaCO3	mg/L	SM2320B	83	55	41	55
General	Ammonia	mg/L	SM4500-NH3 F	2.5	2.53	0.283	0.543
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	39.2	54.9	8.34	11.9
General	Chemical Oxygen Demand	mg/L	SM5220D	131	140	41.2	30.3
General	Chloride	mg/L	SM4110B	29.9	22.9	10.3	13.3
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.58	0.61	0.17	0.1
General	Fluoride	mg/L	SM4110B	0.329	0.625	0.161	0.179
General	Hardness as CaCO3	mg/L	SM2340C	1260	130	50	60
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.2	5.86	1.16	1.68
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.95	0.84	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	2.07	2.09	0.234	0.449
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	3.03	1.31	2.54	2.98
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	0.7	<0.03	0.572	0.673
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.2	1.17*	<0.01	0.0477
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.75	1.09	0.25	0.2
General	Specific Conductance	umhos/cm	SM2510B	380	298	149	140
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	35.7	28.7	13.7	15.9
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	240	202	96	94
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	39.5	22.1	6.43	11.5
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	>1.5&<5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	1500	543	273	180
General	Turbidity	NTU	SM2130B	4.44	28.9	16.7	14.1
General	Volatile Suspended Solids	mg/L	SM2540E	390	132	96	55
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Ballona Creek @ Sawtelle S01 2009-10Event13 10/13/2009	Ballona Creek @ Sawtelle S01 2009-10Event15 12/07/2009	Ballona Creek @ Sawtelle S01 2009-10Event16 12/11/2009	Ballona Creek @ Sawtelle S01 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	117	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	4.61	2.41	1.45	1.71
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.12	1.86	1.12	1.18
Metals	Dissolved Barium	ug/L	EPA200.8	39.8	36.9	19.3	20.7
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.97	1.79	0.971	1.02
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	19.6	10.7	8.77*	10.2*
Metals	Dissolved Iron	ug/L	EPA200.8	327	371	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	2.33	2.73	1.31	1.06
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	10.9	6.35	1.93	2.51
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	<0.5
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	80.4	40.5	56	58.5
Metals	Aluminum	ug/L	EPA200.8	386	12000	3340	2020
Metals	Antimony	ug/L	EPA200.8	4.78	5.24	3.27	3.37
Metals	Arsenic	ug/L	EPA200.8	2.55	6.26	2.18	2.43
Metals	Barium	ug/L	EPA200.8	40.1	341	80.7	73.1
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	3.15	0.487	0.397
Metals	Chromium	ug/L	EPA200.8	2.06	23.6	9.08	7.89
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	27.5	221	47.5	45.5
Metals	Iron	ug/L	EPA200.8	391	17100	6250	3730
Metals	Lead	ug/L	EPA200.8	2.65	81.3	33.5	28.5
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	11.2	29.4	8.59	7.83
Metals	Selenium	ug/L	EPA200.8	1.54	1.47	<0.5	1.91
Metals	Silver	ug/L	EPA200.8	<0.1	3.6	0.308	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	119	710	290	260
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Ballona Creek @ Sawtelle S01 2009-10Event13 10/13/2009	Ballona Creek @ Sawtelle S01 2009-10Event15 12/07/2009	Ballona Creek @ Sawtelle S01 2009-10Event16 12/11/2009	Ballona Creek @ Sawtelle S01 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-l)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	8.27
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	>3.33&<10	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	0.462
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.366

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as >MDL& <RL

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Malibu Creek @ Piuma	Malibu Creek @ Piuma	Malibu Creek @ Piuma	Malibu Creek @ Piuma
				S02 2009-10Event13 10/13/2009	S02 2009-10Event15 12/07/2009	S02 2009-10Event16 12/11/2009	S02 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	90,000*	20	50,000*	130
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	90,000	300	300,000	1,300
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	160,000	300	300,000	1,300
Bacteria	Total Coliform	MPN/100mL	SM9221B	240,000	300	240,000	1,300
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	<0.005	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	9.75	9.09	11.8	11.7
Conventionals	Oil and Grease	mg/L	EPA1664A	<1.44	<1.44	>1.44&<5	<1.44
Conventionals	pH	pH units	SM4500H B	7.18	8.09	7.7	7.99
General	Alkalinity as CaCO3	mg/L	SM2320B	220	220	179	165
General	Ammonia	mg/L	SM4500-NH3 F	0.303	0.133	<0.1	0.336
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	6.69	7.49	4.01	4.61
General	Chemical Oxygen Demand	mg/L	SM5220D	62.1	79.8	83.3	46.5
General	Chloride	mg/L	SM4110B	179	172	99.8	125
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.21	0.08	0.28	0.33
General	Fluoride	mg/L	SM4110B	0.255	0.509	0.344	0.345
General	Hardness as CaCO3	mg/L	SM2340C	990	920	600	570
General	Kjeldahl-N	mg/L	SM4500-NHorg C	1.64	0.8	0.892	1.66
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	<0.01	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.25	0.11	<0.1	0.278
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	4.21	10.1	7.14	7.04
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	0.951	2.27	1.61	1.59
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.5	0.49	0.41	0.34
General	Specific Conductance	umhos/cm	SM2510B	3100	1930	1320	1320
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	800*	700*	360	448
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	1790	1350	922	912
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	12	12.5	8.16	9.78
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	106	121	96	350
General	Turbidity	NTU	SM2130B	2.79	8.44	11.4	29.6
General	Volatile Suspended Solids	mg/L	SM2540E	23	22	19	38
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Malibu Creek @ Piuma	Malibu Creek @ Piuma	Malibu Creek @ Piuma	Malibu Creek @ Piuma
				S02 2009-10Event13 10/13/2009	S02 2009-10Event15 12/07/2009	S02 2009-10Event16 12/11/2009	S02 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	155	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	0.794	0.52	0.558	0.541
Metals	Dissolved Arsenic	ug/L	EPA200.8	3.52	2.18	1.8	1.98
Metals	Dissolved Barium	ug/L	EPA200.8	41.4	37.6	22.7	26.5
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	0.302	<0.1	<0.1	0.368
Metals	Dissolved Chromium	ug/L	EPA200.8	1.49	1.58	0.757	1.72
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	4.88	2.79	2.77	2.96
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.777	<0.2	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	15.5	9.55	8.08	8.08
Metals	Dissolved Selenium	ug/L	EPA200.8	12.5	6.1	3.85	4.99
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	23.7	18.7	36.5	19.3
Metals	Aluminum	ug/L	EPA200.8	1780	2750	1750	4030
Metals	Antimony	ug/L	EPA200.8	1.05	1.27	0.781	1.15
Metals	Arsenic	ug/L	EPA200.8	3.54	3.49	2.26	4.11
Metals	Barium	ug/L	EPA200.8	70.5	83.1	44.3	99.3
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	1.57	1.25	0.825	2.82
Metals	Chromium	ug/L	EPA200.8	3.38	4.13	7.75	10.7
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	14.7	22.7	13.6	16.3
Metals	Iron	ug/L	EPA200.8	2620	3870	4840	9180
Metals	Lead	ug/L	EPA200.8	2.64	11.7	2.47	6.32
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	21.9	16.8	18.6	21.5
Metals	Selenium	ug/L	EPA200.8	15.1*	6.94*	4.01	6.55*
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	57.4	85	41.8	71
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Malibu Creek @ Piuma	Malibu Creek @ Piuma	Malibu Creek @ Piuma	Malibu Creek @ Piuma
				S02 2009-10Event13 10/13/2009	S02 2009-10Event15 12/07/2009	S02 2009-10Event16 12/11/2009	S02 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-l)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	>3.33&<10	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are re

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Los Angeles River @ Wardlow S10 2009-10Event13 10/13/2009	Los Angeles River @ Wardlow S10 2009-10Event15 12/07/2009	Los Angeles River @ Wardlow S10 2009-10Event16 12/11/2009	Los Angeles River @ Wardlow S10 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	900,000*	230	300,000*	24,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	2,400,000	1,300	900,000	280,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	2,400,000	1,300	900,000	280,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	3,000,000	50,000	900,000	5,000,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	0.06*	0.007	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	7.73	9.13	10.7	8.03
Conventionals	Oil and Grease	mg/L	EPA1664A	<1.44	>1.44&<5	>1.44&<5	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.45	6.41*	6.66	7.34
General	Alkalinity as CaCO3	mg/L	SM2320B	69	34	41	69
General	Ammonia	mg/L	SM4500-NH3 F	1.91	0.79	0.364	0.446
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	19.3	24.7	9.01	9.61
General	Chemical Oxygen Demand	mg/L	SM5220D	76.4	79.9	154	29.3
General	Chloride	mg/L	SM4110B	22	11.3	7.38	11.4
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.42	0.33	0.24	0.22
General	Fluoride	mg/L	SM4110B	0.247	0.276	0.104	0.164
General	Hardness as CaCO3	mg/L	SM2340C	90	60	50	50
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.1	1.86	1.07	2
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.7	0.51	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.58	0.653	0.301	0.369
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	2.38	4.62	2.39	3.34
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	0.5	1.04	0.54	0.754
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	1.13	0.93	0.77	0.23
General	Specific Conductance	umhos/cm	SM2510B	286	153	129	1310
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	29.9	14.9	12.1	16
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	188	106	88	86
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	24.5	18.7	6.21	9.7
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	>1.5&<5	>1.5&<5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	892	446	172	440
General	Turbidity	NTU	SM2130B	5.57	33.4	28.9	36.8
General	Volatile Suspended Solids	mg/L	SM2540E	138	79	70	76
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Los Angeles River @ Wardlow S10 2009-10Event13 10/13/2009	Los Angeles River @ Wardlow S10 2009-10Event15 12/07/2009	Los Angeles River @ Wardlow S10 2009-10Event16 12/11/2009	Los Angeles River @ Wardlow S10 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	142	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	2.63	1.67	1.28	1.15
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.98	1.42	1.03	1.51
Metals	Dissolved Barium	ug/L	EPA200.8	27	22.7	18.2	22.2
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.71	1.21	0.894	0.876
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	15.6*	9.45*	6.41	6.06
Metals	Dissolved Iron	ug/L	EPA200.8	219	156	127	131
Metals	Dissolved Lead	ug/L	EPA200.8	2.63	2.8	1.45	1.97
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	7.85	4	2.13	>0.5&<1
Metals	Dissolved Selenium	ug/L	EPA200.8	1.23	<0.5	<0.5	1.7
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	63.2	58.8	58.3	44.5
Metals	Aluminum	ug/L	EPA200.8	136	13500	7350	7650
Metals	Antimony	ug/L	EPA200.8	2.7	5.16	2.58	2.96
Metals	Arsenic	ug/L	EPA200.8	2.01	3.92	2.66	3.26
Metals	Barium	ug/L	EPA200.8	30.6	196	109	150
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	1.41	0.666	1.02
Metals	Chromium	ug/L	EPA200.8	2.25	17.7	9.78	14.3
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	21.5	82.4	47.7	49.2
Metals	Iron	ug/L	EPA200.8	307	15800	10100	11400
Metals	Lead	ug/L	EPA200.8	3.12	97.6	40.8	53.4
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.77	20.5	11.2	13.3
Metals	Selenium	ug/L	EPA200.8	1.39	<0.5	<0.5	1.7
Metals	Silver	ug/L	EPA200.8	<0.1	0.422	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	64.4	492	185	290
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Los Angeles River @ Wardlow S10 2009-10Event13 10/13/2009	Los Angeles River @ Wardlow S10 2009-10Event15 12/07/2009	Los Angeles River @ Wardlow S10 2009-10Event16 12/11/2009	Los Angeles River @ Wardlow S10 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-l)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	8.86
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	0.503
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.413

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are re

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Coyote Creek @ Spring S13 2009-10Event13 10/13/2009	Coyote Creek @ Spring S13 2009-10Event15 12/07/2009	Coyote Creek @ Spring S13 2009-10Event16 12/11/2009	Coyote Creek @ Spring S13 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	1,600,000**	3,000**	50,000**	90,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	900,000	230	240,000	240,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	900,000	230	240,000	300,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	5,000,000	9,000	240,000	160,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.03*	0.02	0.005	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	6.41	7.92	11.1	10
Conventionals	Oil and Grease	mg/L	EPA1664A	<1.44	<1.44	>1.44&<5	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.52	7.33	6.96	7.35
General	Alkalinity as CaCO3	mg/L	SM2320B	55	55	55	41
General	Ammonia	mg/L	SM4500-NH3 F	0.835	0.719	0.318	0.378
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	30.3	17	9.62	5.38
General	Chemical Oxygen Demand	mg/L	SM5220D	64.1	60.7	286	28.9
General	Chloride	mg/L	SM4110B	22.5	10.2	15.4	10.1
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.28	0.26	0.12	0.11
General	Fluoride	mg/L	SM4110B	0.179	0.251	0.184	0.237
General	Hardness as CaCO3	mg/L	SM2340C	110	60	70	40
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.24	2.1	1.28	2.12
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.63	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.69	0.594	0.263	0.312
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	3.72	4.17	3.8	2.95
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	0.8	0.941	0.857	0.665
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.09	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.78	0.38	0.27	0.13
General	Specific Conductance	umhos/cm	SM2510B	264	138	208	105
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	35.7	13.4	24	14
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	182	94	126	70
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	18	15.5	8.75	7.17
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	503	184	132	440
General	Turbidity	NTU	SM2130B	6.8	17.1	13.5	18.2
General	Volatile Suspended Solids	mg/L	SM2540E	112	49	35	138
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Coyote Creek @ Spring S13 2009-10Event13 10/13/2009	Coyote Creek @ Spring S13 2009-10Event15 12/07/2009	Coyote Creek @ Spring S13 2009-10Event16 12/11/2009	Coyote Creek @ Spring S13 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	2.08	1.16	1.73	0.798
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.74	1.22	1.27	1.39
Metals	Dissolved Barium	ug/L	EPA200.8	27.8	17.5	20.2	17.6
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	0.879	0.964	0.791	0.807
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	10.8	9.09*	8.6	4.37
Metals	Dissolved Iron	ug/L	EPA200.8	166	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.951	1.29	0.623	0.86
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	6.8	4.02	3.03	1.61
Metals	Dissolved Selenium	ug/L	EPA200.8	1.14	<0.5	<0.5	1.69
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	61.8	65.1	50.1	32.9
Metals	Aluminum	ug/L	EPA200.8	236	2140	1820	4480
Metals	Antimony	ug/L	EPA200.8	2.13	3.27	3.07	2.56
Metals	Arsenic	ug/L	EPA200.8	1.81	2.8	2.13	2.97
Metals	Barium	ug/L	EPA200.8	31.9	78.7	59.5	105
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	0.553	0.316	0.863
Metals	Chromium	ug/L	EPA200.8	1.44	6.56	5.07	9.96
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	21.6	49.6	35.7	38.2
Metals	Iron	ug/L	EPA200.8	240	3400	3640	6930
Metals	Lead	ug/L	EPA200.8	2.2	20.8	15.8	31.1
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	7.59	9.63	8.86	10.6
Metals	Selenium	ug/L	EPA200.8	1.22	<0.5	<0.5	1.74
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	62.6	257	175	258
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Coyote Creek @ Spring S13 2009-10Event13 10/13/2009	Coyote Creek @ Spring S13 2009-10Event15 12/07/2009	Coyote Creek @ Spring S13 2009-10Event16 12/11/2009	Coyote Creek @ Spring S13 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-l)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	7.38
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	0.622
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.467

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are re

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	San Gabriel River @ SGR Parkway S14 2009-10Event13 10/13/2009	San Gabriel River @ SGR Parkway S14 2009-10Event15 12/07/009	San Gabriel River @ SGR Parkway S14 2009-10Event16 12/11/2009	San Gabriel River @ SGR Parkway S14 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	5,000,000**	300	90,000**	2,200**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	1,600,000	500	160,000	130,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	1,600,000	500	160,000	240,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	24,000,000	5,000	1,600,000	240,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.03*	<0.005	0.008	0.02
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	8.41	11.1	11.1	9.9
Conventionals	Oil and Grease	mg/L	EPA1664A	<1.44	<1.44	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	7.25	7.2	7.13	7.71
General	Alkalinity as CaCO3	mg/L	SM2320B	96	83	41	69
General	Ammonia	mg/L	SM4500-NH3 F	1.89	0.138	<0.1	0.807
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	32.9	15.6	7.52	12.8
General	Chemical Oxygen Demand	mg/L	SM5220D	72.1	64.8	196	36.4
General	Chloride	mg/L	SM4110B	53.4	46.7	22.8	47.7
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.39	0.29	0.07	0.15
General	Fluoride	mg/L	SM4110B	0.274	0.347	0.129	0.243
General	Hardness as CaCO3	mg/L	SM2340C	160	140	80	30
General	Kjeldahl-N	mg/L	SM4500-NHorg C	5.3	0.96	0.718	1.76
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.58	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.56	0.114	<0.1	0.667
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	13.6	12.4	4.8	8.18
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	3.1	2.79	1.08	1.85
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.09	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.86	0.31	0.2	0.22
General	Specific Conductance	umhos/cm	SM2510B	508	493	230	393
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	67.1	62.3	32.7	59.4
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	350	314	154	266
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	20.2	11.7	5.78	5.6
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	252	57	117	400
General	Turbidity	NTU	SM2130B	6.66	11.6	16.7	197
General	Volatile Suspended Solids	mg/L	SM2540E	51	12	17	46
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	San Gabriel River @ SGR Parkway S14 2009-10Event13 10/13/2009	San Gabriel River @ SGR Parkway S14 2009-10Event15 12/07/009	San Gabriel River @ SGR Parkway S14 2009-10Event16 12/11/2009	San Gabriel River @ SGR Parkway S14 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	446	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	1.8	1.08	0.713	0.671
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.78	1.51	<0.2	1.71
Metals	Dissolved Barium	ug/L	EPA200.8	31.5	48.5	20.5	30.5
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.74	2	0.673	0.995
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	7.91	11.6	4.53	3.89
Metals	Dissolved Iron	ug/L	EPA200.8	133	513	<50	114
Metals	Dissolved Lead	ug/L	EPA200.8	1.39	6.61	0.722	1.03
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	6.14	>0.5&<1	2.96	2.42
Metals	Dissolved Selenium	ug/L	EPA200.8	1.77	<0.5	<0.5	1.94
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	33.1	85.5	28.3	44.6*
Metals	Aluminum	ug/L	EPA200.8	107	1140	2490	5530
Metals	Antimony	ug/L	EPA200.8	1.86	1.52	1.24	1.37
Metals	Arsenic	ug/L	EPA200.8	1.84	1.97	1.78	3.19
Metals	Barium	ug/L	EPA200.8	35.3	62.2	57.4	116
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	0.55
Metals	Chromium	ug/L	EPA200.8	2.23	3.19	5.45	12.4
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	12.7	21.3	20.8	24.7
Metals	Iron	ug/L	EPA200.8	201	1270	4690	9530
Metals	Lead	ug/L	EPA200.8	1.77	8.58	9.05	17.3
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	6.81	5.91	7.47	11.8
Metals	Selenium	ug/L	EPA200.8	2.02	1.29	<0.5	2.33
Metals	Silver	ug/L	EPA200.8	0.354	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	41.9	89.9	81.9	103
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	San Gabriel River @ SGR Parkway S14 2009-10Event13 10/13/2009	San Gabriel River @ SGR Parkway S14 2009-10Event15 12/07/009	San Gabriel River @ SGR Parkway S14 2009-10Event16 12/11/2009	San Gabriel River @ SGR Parkway S14 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzdine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-l)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	>3.33&<10	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are re

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Domiguez Channel @ Artesia S28 2009-10Event13 10/13/2009	Domiguez Channel @ Artesia S28 2009-10Event15 12/07/2009	Domiguez Channel @ Artesia S28 2009-10Event16 12/11/2009	Domiguez Channel @ Artesia S28 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	300,000**	30,000**	30,000**	24,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	900,000	300,000	50,000	90,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	900,000	300,000	50,000	90,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	900,000	240,000	50,000	24,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.01	0.016	<0.005	0.03*
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	7.03	9.09	12	10.1
Conventionals	Oil and Grease	mg/L	EPA1664A	<1.44	>1.44&<5	>1.44&<5	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.7	6.35*	6.46*	6.96
General	Alkalinity as CaCO3	mg/L	SM2320B	55	28	28	28
General	Ammonia	mg/L	SM4500-NH3 F	1.31	1.54	0.399	0.679
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	32.3	22.8	7.76	6.97
General	Chemical Oxygen Demand	mg/L	SM5220D	70.6	73.9	43.4	29.1
General	Chloride	mg/L	SM4110B	20.1	12.8	5.5	12.2
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.36	0.12	0.21	0.19
General	Fluoride	mg/L	SM4110B	0.218	0.318	<0.1	0.144
General	Hardness as CaCO3	mg/L	SM2340C	70	40	30	30
General	Kjeldahl-N	mg/L	SM4500-NHorg C	7.34	2.6	1.17	1.29
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.78	0.59	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.08	1.27	0.33	0.561
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	3.55	5.55	2.23	2.89
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	0.801	1.25	0.504	0.652
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.119	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.86	0.23	0.3	0.26
General	Specific Conductance	umhos/cm	SM2510B	202	142	81.2	102
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	17.4	13	6.25	9.85
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	140	98	52	60
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	20.5	22.1	6.75	5.9
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	>1.5&<5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	741	203	137	162
General	Turbidity	NTU	SM2130B	5.67	24.3	18	50.4
General	Volatile Suspended Solids	mg/L	SM2540E	189	64	46	47
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Domiguez Channel @ Artesia S28 2009-10Event13 10/13/2009	Domiguez Channel @ Artesia S28 2009-10Event15 12/07/2009	Domiguez Channel @ Artesia S28 2009-10Event16 12/11/2009	Domiguez Channel @ Artesia S28 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	4.36	2.76	1.71	1.6
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.27	1.48	1.53	1.67
Metals	Dissolved Barium	ug/L	EPA200.8	26.4	23.6	15.8	17.2
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.63	1.48	1.01	1.17
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	21.4*	18.8*	12.6*	11*
Metals	Dissolved Iron	ug/L	EPA200.8	202	142	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	2.39	1.64	1.19	1.31
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	7.65	4.51	2.13	1.83
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.66
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	104*	129*	98.2*	121*
Metals	Aluminum	ug/L	EPA200.8	120	3130	1400	1590
Metals	Antimony	ug/L	EPA200.8	4.41	5.87	3.44	3.29
Metals	Arsenic	ug/L	EPA200.8	2.42	2.61	2.27	2.37
Metals	Barium	ug/L	EPA200.8	29.4	95.2	50.6	59.3
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	0.779	0.373	0.391
Metals	Chromium	ug/L	EPA200.8	1.77	8.47	5.1	6.81
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	31	90.5	49.2	39.6
Metals	Iron	ug/L	EPA200.8	282	4180	2740	2180
Metals	Lead	ug/L	EPA200.8	2.46	32.1	18.5	18.6
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.19	11.1	6.14	6.14
Metals	Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.73
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	110	374	237	179
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Domiguez Channel @ Artesia S28 2009-10Event13 10/13/2009	Domiguez Channel @ Artesia S28 2009-10Event15 12/07/2009	Domiguez Channel @ Artesia S28 2009-10Event16 12/11/2009	Domiguez Channel @ Artesia S28 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-ij)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	>3.33&<10	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are re

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Santa Clara River S29 2009-10Event13 10/13/2009	Santa Clara River S29 2009-10Event15 12/07/2009	Santa Clara River S29 2009-10Event16 12/11/2009	Santa Clara River S29 2009-10Event19 01/17/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	160,000*	16,000*	24,000*	30,000*
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	300,000	90,000	160,000	240,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	300,000	90,000	160,000	240,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	240,000	30,000	90,000	240,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.009	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	9.19	9.14	9.65	10.4
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	<1.44	>1.44&<5	>1.44&<5
Conventionals	pH	pH units	SM4500H B	6.62	7.1	7.44	7.56
General	Alkalinity as CaCO3	mg/L	SM2320B	83	124	69	55
General	Ammonia	mg/L	SM4500-NH3 F	0.811	0.859	<0.1	0.182
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	11.9	12.9	4.86	7.48
General	Chemical Oxygen Demand	mg/L	SM5220D	63	78.7	65.2	28
General	Chloride	mg/L	SM4110B	34.9	42.2	34.7	26
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.32	0.06	0.18	0.11
General	Fluoride	mg/L	SM4110B	0.193	0.392	0.225	<0.1
General	Hardness as CaCO3	mg/L	SM2340C	135	230	150	100
General	Kjeldahl-N	mg/L	SM4500-NHorg C	5.18	1.12	0.818	1.76
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.48	>0.01&<0.5	>0.01&<0.5	0.07
General	NH3-N	mg/L	SM4500-NH3 F	0.67	0.71	<0.1	0.15
General	Nitrate (NO3)	mg/L	EPA300.1	4.69	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	NS	6.14	3.7	4.15
General	Nitrate-N	mg/L	EPA300.1	1.1	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	NS	1.39	0.834	0.937
General	Nitrite (NO2)	mg/L	EPA300.1	0.1	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	0.03	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	NS	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	1.16	0.43	0.27	0.27
General	Specific Conductance	umhos/cm	SM2510B	408	504	419	284
General	Sulfate	mg/L	EPA300.1	58	NS	NS	NS
General	Sulfate	mg/L	SM4110B	NS	68.5	81.8	38.9
General	Total Dissolved Phosphate	mg/L	AM4500-PE	0.32	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	282	342	292	196
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	15.5	11.6	6.82	6.43
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	1.16	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	700	31	413	727
General	Turbidity	NTU	SM2130B	7.84	9.9	53.4	26.3
General	Volatile Suspended Solids	mg/L	SM2540E	154	6	51	113
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis_Method	Santa Clara River S29 2009-10Event13 10/13/2009	Santa Clara River S29 2009-10Event15 12/07/2009	Santa Clara River S29 2009-10Event16 12/11/2009	Santa Clara River S29 2009-10Event19 01/17/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	134	<50	158	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	2.74	2.75	1.26	0.964
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.5	1.57	1.13	1.18
Metals	Dissolved Barium	ug/L	EPA200.8	31.7	27.8	30.8	20.9
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.31	1.13	0.818	1.11
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	8.15	8.77	4.39	3.89
Metals	Dissolved Iron	ug/L	EPA200.8	179	<50	256	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.591	<0.2	1.86	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	6.04	5.11	3.72	2.5
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	1.04	<0.5	<0.5
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	28.9	23.2	29.2	18.7
Metals	Aluminum	ug/L	EPA200.8	210	502	7740	10500
Metals	Antimony	ug/L	EPA200.8	2.88	3.43	2.04	1.46
Metals	Arsenic	ug/L	EPA200.8	1.81	1.93	3.37	3.62
Metals	Barium	ug/L	EPA200.8	34.2	48	140	151
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.475	0.549
Metals	Chromium	ug/L	EPA200.8	1.54	1.52	9.89	14.9
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	12.5	18.5	25.2	31.8
Metals	Iron	ug/L	EPA200.8	265	639	13900	17000
Metals	Lead	ug/L	EPA200.8	1.33	2.08	32.6	14.8
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	6.38	7.6	12.9	14.7
Metals	Selenium	ug/L	EPA200.8	1.02	1.06	<0.5	1.48
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	32.1	70.6	84.9	151
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.67	<0.67	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<3.33	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Santa Clara River S29 2009-10Event13 10/13/2009	Santa Clara River S29 2009-10Event15 12/07/2009	Santa Clara River S29 2009-10Event16 12/11/2009	Santa Clara River S29 2009-10Event19 01/17/2010
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)flouranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-l)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	>1.67&<5
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.072

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are re

QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Project No. 1232 TS19 2009-10Event13 10/13/2009	Project No. 1232 TS19 2009-10Event15 12/07/2009	Project No. 1232 TS19 2009-10Event16 12/11/2009	Project No. 1232 TS19 2009-10Event19 01/17/2010	Project No. 1232 TS19 2009-10Event21 02/05/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	240,000**	50,000**	300,000**	90,000**	900,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	900,000	900,000	500,000	900,000	2,400,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	900,000	900,000	500,000	1,600,000	2,400,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	300,000	300,000	3,000,000	1,600,000	2,400,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	0.0501	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.008	0.01	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	8.63	11.4	10.1	9.87	11.1
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	5.3	<1.44	<1.44	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.16	6.78	7.2	7.06	6.82
General	Alkalinity as CaCO3	mg/L	SM2320B	69	41	41	28	33
General	Ammonia	mg/L	SM4500-NH3 F	2.63	0.532	0.303	0.558	0.424
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	42.6	11.7	7.03	7.08	8.89
General	Chemical Oxygen Demand	mg/L	SM5220D	152	56.8	45.2	33.6	48.5
General	Chloride	mg/L	SM4110B	109	23.2	21.3	17.8	27.9
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.3	0.21	0.23	0.15	0.33
General	Fluoride	mg/L	SM4110B	0.129	0.317	0.188	0.15	0.209
General	Hardness as CaCO3	mg/L	SM2340C	210	90	70	50	90
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.36	1.44	1.71	1.76	0.976
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	1	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	2.17	0.44	0.25	0.461	0.35
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.41	3.71	4.17	3.85	4.76
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	<0.03	0.836	0.941	0.869	1.08
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.01	0.0353
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	1.16	0.54	0.34	0.21	0.37
General	Specific Conductance	umhos/cm	SM2510B	663	251	201	135	263
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	78.1	36.5	30.4	21.2	39.6
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	458	170	138	90	166
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	41	16.7	36.3	11.2	13.2
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	>1.5&<5	<1.5	<1.5	>1.5&<5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	690	101	37	210	58
General	Turbidity	NTU	SM2130B	11.6	14.8	7.18	28.7	10.1
General	Volatile Suspended Solids	mg/L	SM2540E	209	37	11	49	23
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Project No. 1232 TS19 2009-10Event13 10/13/2009	Project No. 1232 TS19 2009-10Event15 12/07/2009	Project No. 1232 TS19 2009-10Event16 12/11/2009	Project No. 1232 TS19 2009-10Event19 01/17/2010	Project No. 1232 TS19 2009-10Event21 02/05/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	109	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	4.02	1.63	1.76	1.25	2.04
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.84	1.73	1.82	1.7	2.42
Metals	Dissolved Barium	ug/L	EPA200.8	48.9	26.9	16.6	18.2	25.4
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	0.294	<0.1	<0.1	<0.1	0.639
Metals	Dissolved Chromium	ug/L	EPA200.8	2.3	2.14	1.52	1.22	1.91
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	17.2	14.3*	9.73*	7.78*	9.74
Metals	Dissolved Iron	ug/L	EPA200.8	297	115	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	2.99	1.15	0.647	1.16	0.769
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	15.4	4.26	3.28	2.24	3.26
Metals	Dissolved Selenium	ug/L	EPA200.8	1.93	<0.5	<0.5	1.45	<0.5
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	175	126*	124*	81.1*	112*
Metals	Aluminum	ug/L	EPA200.8	146	1020	348	3230	2830
Metals	Antimony	ug/L	EPA200.8	4.04	2.99	2.46	3.09	4.06
Metals	Arsenic	ug/L	EPA200.8	2.93	2.53	2.19	2.99	3.8
Metals	Barium	ug/L	EPA200.8	52.1	71.5	32.2	89.3	108
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	0.345	0.486	<0.1	0.665	0.818
Metals	Chromium	ug/L	EPA200.8	2.62	6.2	3.32	10.1	12.5
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	23.2	44.8	24.2	39	46.2
Metals	Iron	ug/L	EPA200.8	366	1440	725	4830	5000
Metals	Lead	ug/L	EPA200.8	3.66	15.4	6.72	31.7	33
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	16.2	8.97	5.14	9.21	9.79
Metals	Selenium	ug/L	EPA200.8	2.07	<0.5	<0.5	1.72	<0.5
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	186	255	137	312	314
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	QNS	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	QNS	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	QNS	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	QNS	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	NS	<0.67	QNS	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	<0.67	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	QNS	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	QNS	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2,4,6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2,4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2,4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2,4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33

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Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	10.5	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	PD669 TS20 2009-10Event13 10/13/2009	PD669 TS20 2009-10Event15 12/07/2009	PD669 TS20 2009-10Event16 12/11/2009	PD669 TS20 2009-10Event19 01/17/2010	PD669 TS20 2009-10Event21 02/05/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	90,000**	5,000**	300,000**	30,000**	50,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	240,000	160,000	350,000	240,000	90,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	240,000	160,000	350,000	240,000	90,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	300,000	160,000	900,000	240,000	5,000,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.01	<0.005	0.006	<0.005	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	8.49	11.1	10.6	10.6	12
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	>1.44&<5	<1.44	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	7.31	6.54	7.42	7.22	7.72
General	Alkalinity as CaCO3	mg/L	SM2320B	28	41	69	28	88
General	Ammonia	mg/L	SM4500-NH3 F	1.27	0.955	0.304	0.48	0.225
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	20.5	20	9.27	7.66	8.05
General	Chemical Oxygen Demand	mg/L	SM5220D	80.8	117	73.4	31.5	91.9
General	Chloride	mg/L	SM4110B	43.2	97.3	190	32.3	251
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.51	0.23	0.16	0.23	0.48
General	Fluoride	mg/L	SM4110B	0.22	0.376	0.22	0.137	0.307
General	Hardness as CaCO3	mg/L	SM2340C	90	160	280	50	370
General	Kjeldahl-N	mg/L	SM4500-NHorg C	3.92	2.1	1.95	1.88	1.52
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.81	0.549	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.05	0.789	0.251	0.397	0.186
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	6.22	8.84	5.11	3.34	9.22
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	1.4	2	1.15	0.753	2.08
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.04	<0.01	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.7	0.59	0.26	0.26	0.53
General	Specific Conductance	umhos/cm	SM2510B	396	862	1500	247	1910
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	72.9	162	389	50.9	544
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	274	588	1030	170	1330
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	22	21.8	16.5	5.43	18.7
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	488	201	157	413	30
General	Turbidity	NTU	SM2130B	6.14	16.1	10.8	93.6	12.2
General	Volatle Suspended Solids	mg/L	SM2540E	142	65	36	101	15
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	PD669 TS20 2009-10Event13 10/13/2009	PD669 TS20 2009-10Event15 12/07/2009	PD669 TS20 2009-10Event16 12/11/2009	PD669 TS20 2009-10Event19 01/17/2010	PD669 TS20 2009-10Event21 02/05/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	129	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	2.49	1.85	1.21	0.812	0.843
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.85	1.5	2.12	1.48	3.64
Metals	Dissolved Barium	ug/L	EPA200.8	20.6	25.1	23.6	17.1	25.7
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.76	0.934	1.25	0.717	1.26
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	15.7*	12.3	9.8	5.09	10.5
Metals	Dissolved Iron	ug/L	EPA200.8	190	104	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	1.51	0.845	<0.2	0.749	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	6.65	4.56	3.31	1.5	3.24
Metals	Dissolved Selenium	ug/L	EPA200.8	1.04	1.48	2.73	1.84	3.79
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	140*	132	44.3	62.7	47.3
Metals	Aluminum	ug/L	EPA200.8	449	2790	1480	5700	1710
Metals	Antimony	ug/L	EPA200.8	2.46	4.88	2.72	2.48	1.66
Metals	Arsenic	ug/L	EPA200.8	1.98	3.1	3.43	3.36	4.48
Metals	Barium	ug/L	EPA200.8	22.9	101	68.1	115	54
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	0.608	<0.1	0.448	0.263
Metals	Chromium	ug/L	EPA200.8	2.18	7.83	6.05	12.5	5.53
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	23	75.9	31.2	42.3	20.3
Metals	Iron	ug/L	EPA200.8	260	4420	5190	8690	2880
Metals	Lead	ug/L	EPA200.8	2.34	23.5	12.3	27.4	7.17
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	7.02	11.7	7.56	10.5	6.01
Metals	Selenium	ug/L	EPA200.8	1.16	2.02	3.02	1.88	4.17
Metals	Silver	ug/L	EPA200.8	<0.1	0.351	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	154	407	159	270	250
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	QNS	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	QNS	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	QNS	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	QNS	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	NS	<0.67	QNS	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	<0.67	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	QNS	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	QNS	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2,4,6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2,4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2,4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2,4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33

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Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	10.3	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	0.059	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74
				TS21 2009-10Event13 10/13/2009	TS21 2009-10Event15 12/07/2009	TS21 2009-10Event16 12/11/2009	TS21 2009-10Event19 01/17/2009	TS21 2009-10Event21 02/05/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	24,000**	140,000**	50,000**	900,000**	300,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	240,000	240,000	500,000	1,600,000	3,000,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	240,000	240,000	500,000	3,000,000	3,000,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	90,000	280,000	240,000	900,000	1,600,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.05	<0.005	<0.005	0.02	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	9.44	11.3	10.2	9.91	11.8
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	>1.44&<5	>1.44&<5	<1.44	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.41	6.47*	6.8	6.88	7.33
General	Alkalinity as CaCO3	mg/L	SM2320B	28	QNS	28	28	49.5
General	Ammonia	mg/L	SM4500-NH3 F	1.05	1.91	0.23	0.509	0.525
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	15.7	31.1	9.39	7	13.7
General	Chemical Oxygen Demand	mg/L	SM5220D	88.7	147	35.7	32.2	58.2
General	Chloride	mg/L	SM4110B	10.7	15.2	6.83	9.99	73.4
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.3	0.23	0.05	0.18	0.16
General	Fluoride	mg/L	SM4110B	0.241	0.508	0.18	0.176	0.215
General	Hardness as CaCO3	mg/L	SM2340C	60	80	40	30	70
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.24	8.24	1.38	0.558	1.32
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.75	0.709	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.87	1.58	0.19	0.421	0.434
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.58	6.36	2.13	3.04	3.56
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	<0.03	1.43	<0.03	0.685	0.803
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	0.0343	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.87	0.99	0.3	0.19	0.33
General	Specific Conductance	umhos/cm	SM2510B	158	201	104	105	382
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	19.3	26.9	11.6	13.9	25.8
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	108	138	70	72	220
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	20.5	39.8	7.91	9.32	6.93
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	>1.5&<5	<1.5	<1.5	>1.5&<5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	559	286	177	295	39
General	Turbidity	NTU	SM2130B	5.08	15.6	8.24	26.3	7.9
General	Volatile Suspended Solids	mg/L	SM2540E	125	93	35	88	15
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74
				TS21 2009-10Event13 10/13/2009	TS21 2009-10Event15 12/07/2009	TS21 2009-10Event16 12/11/2009	TS21 2009-10Event19 01/17/2009	TS21 2009-10Event21 02/05/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	1.94	2.07	1.39	1.2	1.08
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.77	1.53	1.3	1.81	2.61
Metals	Dissolved Barium	ug/L	EPA200.8	26.2	51	21.5	20.6	147
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	2.55	2.35	1.61	1.61	2.89
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	21.4*	17.2*	12*	11.3*	11.7*
Metals	Dissolved Iron	ug/L	EPA200.8	156	185	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	1.72	2.06	1.03	1.55	1.95
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	8.33	7.76	7.28	2.77	2.77
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.65	2.51
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	163*	147*	103*	106*	62.3
Metals	Aluminum	ug/L	EPA200.8	409	3000	3040	3980	3450
Metals	Antimony	ug/L	EPA200.8	1.95	4.76	2.61	2.74	2.68
Metals	Arsenic	ug/L	EPA200.8	1.87	2.85	2.33	3.21	4.06
Metals	Barium	ug/L	EPA200.8	28.2	177	74.3	97.4	248
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	1.16	0.536	0.799	0.694
Metals	Chromium	ug/L	EPA200.8	2.76	12.8	8.65	12.3	11.1
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	27.9	84.5	40.1	46.9	41.1
Metals	Iron	ug/L	EPA200.8	223	4900	5990	6260	5700
Metals	Lead	ug/L	EPA200.8	2.33	40	24.3	36.2	33.6
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.73	17.1	13.9	10	8.74
Metals	Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.7	2.64
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	185	531	289	376	192
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	NS	<0.67	<0.33	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	<0.67	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2,4,6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2,4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2,4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2,4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33

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Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	5.93	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	11.7	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	0.412	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.292	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	PD 21 - Hollypark Drain TS22 2009-10Event13 10/13/2009	PD 21 - Hollypark Drain TS22 2009-10Event15 12/07/2009	PD 21 - Hollypark Drain TS22 2009-10Event16 12/11/2009	PD 21 - Hollypark Drain TS22 2009-10Event19 01/17/2010	PD 21 - Hollypark Drain TS22 2009-10Event21 02/05/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	240,000**	5,000**	90,000**	30,000**	50,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	160,000	160,000	240,000	240,000	50,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	160,000	160,000	240,000	300,000	50,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	900,000	24,000	220,000	300,000	2,400,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.007	0.03*	0.02
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	8.64	13	11.6	10	11.7
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	>1.44&<5	<1.44	>1.44&<5	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.22	6.39*	7.2	7.2	7.67
General	Alkalinity as CaCO3	mg/L	SM2320B	55	28	55	28	60.5
General	Ammonia	mg/L	SM4500-NH3 F	1.82	0.895	0.157	0.555	0.254
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	18.7	16.8	8.81	7.15	4.51
General	Chemical Oxygen Demand	mg/L	SM5220D	106	59.6	44.9	27.7	36.1
General	Chloride	mg/L	SM4110B	18.6	11.8	12.6	11.6	41.1
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.37	<0.05	0.22	0.27	0.29
General	Fluoride	mg/L	SM4110B	0.337	0.353	0.304	0.277	0.527
General	Hardness as CaCO3	mg/L	SM2340C	120	40	60	40	110
General	Kjeldahl-N	mg/L	SM4500-NHorg C	2.4	1.62	0.36	1.23	1.52
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	0.67	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.5	0.74	0.13	0.459	0.21
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.7	4.92	4.66	2.86	3.71
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	<0.03	1.11	1.05	0.645	0.837
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.86	0.27	0.3	0.3	0.32
General	Specific Conductance	umhos/cm	SM2510B	220	147	177	112	360
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	24.3	17.9	22.1	15.1	64.1
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	140	102	122	74	226
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	23.5	19.6	9.65	5.65	5.64
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	778	292	66	223	119
General	Turbidity	NTU	SM2130B	2.95	21	12.7	75.8	18.2
General	Volatile Suspended Solids	mg/L	SM2540E	166	48	14	44	21
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	PD 21 - Hollypark Drain	PD 21 - Hollypark Drain	PD 21 - Hollypark Drain	PD 21 - Hollypark Drain	PD 21 - Hollypark Drain
				TS22 2009-10Event13 10/13/2009	TS22 2009-10Event15 12/07/2009	TS22 2009-10Event16 12/11/2009	TS22 2009-10Event19 01/17/2010	TS22 2009-10Event21 02/05/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	1.99	1.2	1.39	0.723	0.682
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.12	1.28	1.84	1.65	1.77
Metals	Dissolved Barium	ug/L	EPA200.8	29.8	22.3	19.7	17.6	36.2
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.13	0.803	1.1	0.757	0.693
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	11.4	9.07*	11.3*	7.08*	6.07
Metals	Dissolved Iron	ug/L	EPA200.8	222	128	100	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	1.49	1.17	1.19	1.45	0.864
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	7.74	3.77	2.65	1.82	2.67
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.68	<0.5
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	105	82*	88.1*	61.1*	34.8
Metals	Aluminum	ug/L	EPA200.8	171	4510	1560	3950	2370
Metals	Antimony	ug/L	EPA200.8	2	2.6	1.98	2.09	1.91
Metals	Arsenic	ug/L	EPA200.8	2.3	2.69	2.48	2.98	2.45
Metals	Barium	ug/L	EPA200.8	32.2	97.4	47.6	94.3	75.3
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	0.528	<0.1	0.54	<0.1
Metals	Chromium	ug/L	EPA200.8	1.23	7.8	3.79	9	5.05
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	18.3	52.6	25.9	39.7	16.6
Metals	Iron	ug/L	EPA200.8	295	5500	2710	5330	3630
Metals	Lead	ug/L	EPA200.8	2.15	24.5	11	31.9	8.4
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.33	10.6	5.47	8.37	5.74
Metals	Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.81	1.07
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	117	264	125	199	75.8
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	NS	<0.67	<0.33	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	<0.67	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2,4,6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	QNS	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2,4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2,4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2,4-Dinitrophenol	ug/L	EPA625	<1	<1	QNS	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	QNS	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	QNS	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	QNS	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33

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Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	QNS	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	QNS	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	QNS	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	QNS	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	QNS	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	QNS	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	QNS	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	QNS	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	QNS	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	QNS	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	QNS	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	QNS	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	QNS	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	DDI8 TS23 2009-10Event13 10/13/2009	DDI8 TS23 2009-10Event15 12/07/2009	DDI8 TS23 2009-10Event16 12/11/2009	DDI8 TS23 2009-10Event19 01/17/2010	DDI8 TS23 2009-10Event21 02/05/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	35,000**	160,000**	90,000**	50,000**	160,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	240,000	16,000	300,000	500,000	160,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	240,000	16,000	300,000	500,000	160,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	300,000	240,000	500,000	240,000	900,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.006	0.02	0.02
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	10	13.4	12.2	11.3	11.3
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	>1.44&<5	<1.44	<1.44	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.34	6.28*	7.03	6.71	6.98
General	Alkalinity as CaCO3	mg/L	SM2320B	28	14	28	14	16.5
General	Ammonia	mg/L	SM4500-NH3 F	1.5	0.843	0.551	0.9	0.255
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	52.2	13	8.34	6.9	5.82
General	Chemical Oxygen Demand	mg/L	SM5220D	111	89.9	56.7	33.2	36.9
General	Chloride	mg/L	SM4110B	17.2	8.3	7.94	8.3	5.39
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.32	0.22	0.26	0.16	0.11
General	Fluoride	mg/L	SM4110B	0.224	<0.1	0.119	<0.1	0.218
General	Hardness as CaCO3	mg/L	SM2340C	60	30	50	20	20
General	Kjeldahl-N	mg/L	SM4500-NHorg C	5.04	1.56	0.82	1.49	0.976
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	1.02	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.24	0.697	0.455	0.744	0.211
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.27	4.24	3.58	2.18	2.62
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	<0.03	0.958	0.809	<0.03	0.592
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.2	<0.01	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.87	0.57	0.27	0.32	0.16
General	Specific Conductance	umhos/cm	SM2510B	179	96	117	58	66
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	17.3	8.24	10.2	5.48	6.71
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	120	66	78	34	38
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	26	15.6	8.2	3.79	5.46
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<1.5	<1.5	<1.5	<1.5	>1.5&<5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	253	81	34	98	19
General	Turbidity	NTU	SM2130B	5.53	17.1	7.85	31	9.4
General	Volatile Suspended Solids	mg/L	SM2540E	81	21	8	22	12
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	DDI8 TS23 2009-10Event13 10/13/2009	DDI8 TS23 2009-10Event15 12/07/2009	DDI8 TS23 2009-10Event16 12/11/2009	DDI8 TS23 2009-10Event19 01/17/2010	DDI8 TS23 2009-10Event21 02/05/2010
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	109	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	5.78	2.54	2.21	1.39	1.91
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.13	1.32	2.55	1.6	1.58
Metals	Dissolved Barium	ug/L	EPA200.8	24.4	18.5	15.1	16.5	13.6
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	0.255	0.27	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	2.79	1.92	2.29	1.2	1.2
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	35.8*	24.2*	15.2*	11.3*	11.6*
Metals	Dissolved Iron	ug/L	EPA200.8	186	<50	<50	167	<50
Metals	Dissolved Lead	ug/L	EPA200.8	2.55	2.27	0.972	4.7	1.53
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	10.2	3.53	2.38	1.48	1.46
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.47	<0.5
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	278*	174*	94.4*	107*	96.7*
Metals	Aluminum	ug/L	EPA200.8	206	1520	342	1560	1120
Metals	Antimony	ug/L	EPA200.8	5.85	7.59	3.4	3.51	3.51
Metals	Arsenic	ug/L	EPA200.8	2.29	2.19	2.97	2.25	2.03
Metals	Barium	ug/L	EPA200.8	26.9	69	27.6	49.7	42.2
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	0.287	0.947	0.341	0.52	0.673
Metals	Chromium	ug/L	EPA200.8	3.08	8.01	4.21	7.62	5.73
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	44.4	75.1	30.7	38	33
Metals	Iron	ug/L	EPA200.8	249	2200	487	2030	1680
Metals	Lead	ug/L	EPA200.8	3.73	37.2	7.2	23.5	18.8
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	10.5	8.52	3.85	4.7	4.08
Metals	Selenium	ug/L	EPA200.8	1	<0.5	<0.5	1.69	<0.5
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	317	356	126	188	159
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	NS	<0.67	<0.33	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	<0.67	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2,4,6-Trichlorophenol	ug/L	EPA625	<3.3	<3.3	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2,4-Dichlorophenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2,4-Dimethylphenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2,4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33

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Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	<3.33	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	<1.67	<1.67	>1.67&<5	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	<3.33	>3.33&<10	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	<0.67	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	<0.017	<0.017	0.593	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	<0.033	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	<1.67	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	<0.067	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	<0.33	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.106	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	<0.017	<0.017	0.391	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Dominguez Channel @116th Street TS24 2009-10Event13 10/13/2009	Dominguez Channel @116th Street TS24 2009-10Event15 12/07/2009	Dominguez Channel @116th Street TS24 2009-10Event16 12/11/2009	Dominguez Channel @116th Street TS24 2009-10Event19 01/17/2010	Dominguez Channel @116th Street TS24 2009-10Event21 02/05/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	2,800	5,000**	3,000	16,000**	240,000**
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	9,000	5,000	3,000	30,000	240,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	9,000	16,000	3,000	30,000	240,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	16,000	2,800	5,000	160,000	350,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.011	<0.011	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	NS	NS	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.033	<0.033	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	0.005	0.02	<0.005	0.02
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	10.1	10.8	12	10.2	13
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.33	>1.44&<5	>1.44&<5	>1.44&<5	>1.44&<5
Conventionals	pH	pH units	SM4500H B	7.23	6.65	7.55	6.77	7.74
General	Alkalinity as CaCO3	mg/L	SM2320B	41	21	55	14	116
General	Ammonia	mg/L	SM4500-NH3 F	0.508	0.946	0.162	0.903	0.908
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	18.8	19.9	7.52	7.13	3.18
General	Chemical Oxygen Demand	mg/L	SM5220D	122	90.3	74.8	<10	43.1
General	Chloride	mg/L	SM4110B	27.3	12.8	12.1	7.77	23.9
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.33	0.22	0.13	0.11	0.16
General	Fluoride	mg/L	SM4110B	0.23	<0.1	0.13	0.23	0.227
General	Hardness as CaCO3	mg/L	SM2340C	80	50	60	30	90
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.1	1.4	1.4	0.944	1.62
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<1	<1	<1	<0.4	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	<0.01	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.42	0.782	0.134	0.746	0.75
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	10	6.77	3.53	2	4.05
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	2.3	1.53	0.796	<0.03	0.915
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	0.0419	<0.01	<0.01	<0.01
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.95	0.53	0.25	0.12	0.17
General	Specific Conductance	umhos/cm	SM2510B	272	137	182	246	278
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	35.6	13.1	17.2	5.58	37.8
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	186	92	128	144	170
General	Total Organic Carbon	mg/L	SM5310B	NS	NS	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	20.2	19	9.87	3.25	6.97
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	6.76	>1.5&<5	>1.5&<5	<1.5	>1.5&<5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	319	128	49	110	10
General	Turbidity	NTU	SM2130B	4.06	17.9	31.2	34.8	6.18
General	Volatile Suspended Solids	mg/L	SM2540E	112	41	11	36	5
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.067	<0.067	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015	<0.015

Appendix B.1. 2009-2010 Annual Report Wet Weather Mass Emission and Tributary Stations Concentrations

Group	Parameter Code	Units	Analysis Method	Dominguez Channel @116th Street TS24 2009-10Event13 10/13/2009	Dominguez Channel @ 116th Street TS24 2009-10Event15 12/07/2009	Dominguez Channel @ 116th Street TS24 2009-10Event16 12/11/2009	Dominguez Channel @ 116th Street TS24 2009-10Event19 01/17/2010	Dominguez Channel @ 116th Street TS24 2009-10Event21 02/05/2010
Herbicides	Glyphosate	ug/L	EPA547	24.2	<5	17.4	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	160	<50	138	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	7.06	3.27	2.31	1.28	1.95
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.36	1.19	2.3	1.33	2.09
Metals	Dissolved Barium	ug/L	EPA200.8	29.7	23.4	22.1	13.4	24.7
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	0.799	0.435	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	3.89	1.69	3.92	1.33	3.93
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	80.6*	41.3*	34.7*	13.7*	18.4*
Metals	Dissolved Iron	ug/L	EPA200.8	160	<50	149	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	1.75	0.945	0.85	0.856	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	7.76	4.16	2.83	1.34	1.97
Metals	Dissolved Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.54	<0.5
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	501*	338*	63.5	134*	65.8
Metals	Aluminum	ug/L	EPA200.8	325	1920	1470	2800	471
Metals	Antimony	ug/L	EPA200.8	7.19	7.71	3	4.45	2.9
Metals	Arsenic	ug/L	EPA200.8	1.61	2.25	2.77	2.31	2.33
Metals	Barium	ug/L	EPA200.8	33.2	91.9	46.4	79	40.2
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	0.853	2.01	0.521	1.4	0.421
Metals	Chromium	ug/L	EPA200.8	4.5	10.1	6.27	11.5	6.56
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	90.3	165	62.8	100	35.6
Metals	Iron	ug/L	EPA200.8	245	3000	1500	4210	620
Metals	Lead	ug/L	EPA200.8	2.24	31.4	5.96	32.3	6.16
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.66	11	4.9	8.06	3.85
Metals	Selenium	ug/L	EPA200.8	<0.5	<0.5	<0.5	1.67	<0.5
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	746	754	143	469	125
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.667	<0.667	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	NS	<0.67	<0.33	<0.33	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	<0.67	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.67	<0.67	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.0001	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2,4,6-Trichlorophenol	ug/L	EPA625	<3.3	QNS	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2,4-Dichlorophenol	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2,4-Dimethylphenol	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2,4-Dinitrophenol	ug/L	EPA625	<1	QNS	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	QNS	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	QNS	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	QNS	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33

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Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.33	QNS	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	QNS	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<3.33	QNS	>3.33&<10	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.033	QNS	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.67	QNS	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.017	QNS	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.033	QNS	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.017	QNS	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.67	QNS	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.067	QNS	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.33	QNS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.017	QNS	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.017	QNS	<0.017	<0.017	<0.017

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as QNS = Quantity Not Sufficient

* Exceedance of Water Quality Objective

** Not an exceedance due to the High Flow Suspension Basin Plan Amendment (LARQCB 2003).

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Ballona Creek @ Sawtelle S01 2009-10Event02 07/14/2009	Ballona Creek @ Sawtelle S01 2009-10Event12 09/15/2009	Ballona Creek @ Sawtelle S01 2009-10Event14 12/01/2009	Ballona Creek @ Sawtelle S01 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	2,400	800	230	80
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	130	230	7,000	<20
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	130	230	11,000	<20
Bacteria	Total Coliform	MPN/100mL	SM9221B	220,000	3,000	7,000	800
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	<0.005	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	17.4	15	17.8	18.4
Conventionals	Oil and Grease	mg/L	EPA1664A	>0.4&<5	<0.4	>1.44&<5	<1.44
Conventionals	pH	pH units	SM4500H B	8.43	8.51*	8.41	8.66*
General	Alkalinity as CaCO3	mg/L	SM2320B	248	<2	261	248
General	Ammonia	mg/L	SM4500-NH3 F	0.3	<0.1	0.182	0.182
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	14.8	2.97	8.12	9.4
General	Chemical Oxygen Demand	mg/L	SM5220D	283	65.6	53.5	132
General	Chloride	mg/L	SM4110B	128	107	122	117
General	Dissolved Phosphorus	mg/L	SM4500-PE	<0.05	0.37	0.22	0.1
General	Fluoride	mg/L	SM4110B	0.59	0.366	0.731	0.304
General	Hardness as CaCO3	mg/L	SM2340C	430	425	405	410
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.62	0.36	0.48	0.32
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.25	<0.1	0.15	0.15
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.08	4.82	4.71	3.62
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	>0.03&<0.5	1.06	0.818
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.44	0.38	0.24	0.12
General	Specific Conductance	umhos/cm	SM2510B	1139	1070	1170	1110
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	196	172	167	211
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	788	734	804	768
General	Total Organic Carbon	mg/L	SM5310B	2.4	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	4.2	3.98	20.1
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	269	28	33	36
General	Turbidity	NTU	SM2130B	5.32	1.8	1.34	1.73
General	Volatile Suspended Solids	mg/L	SM2540E	81	16	4	20

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Ballona Creek @ Sawtelle S01 2009-10Event02 07/14/2009	Ballona Creek @ Sawtelle S01 2009-10Event12 09/15/2009	Ballona Creek @ Sawtelle S01 2009-10Event14 12/01/2009	Ballona Creek @ Sawtelle S01 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	>50&<100	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	0.72	0.556	0.736	<0.2
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.65	2.53	4.02	2.31
Metals	Dissolved Barium	ug/L	EPA200.8	53.6	55.5	56.6	48.1
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	2.7	1.38	1.79	2.02
Metals	Dissolved Chromium +6	ug/L	EPA218.6	>0.25&<5	>0.25&<5	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	4.18	4.71	5.18	5.24
Metals	Dissolved Iron	ug/L	EPA200.8	<50	218	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	>0.28<0.5	0.5	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	3.8	2.63	3.52	3.38
Metals	Dissolved Selenium	ug/L	EPA200.8	3.78	3.68	6.92	3.29
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	10.2	17.2	24	30.1
Metals	Aluminum	ug/L	EPA200.8	1460	266	228	136
Metals	Antimony	ug/L	EPA200.8	0.99	0.708	0.886	0.573
Metals	Arsenic	ug/L	EPA200.8	3.65	2.85	4.12	2.71
Metals	Barium	ug/L	EPA200.8	101	69.6	70	62.8
Metals	Beryllium	ug/L	EPA200.8	<0.1	<1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.303	<0.1
Metals	Chromium	ug/L	EPA200.8	3.94	1.5	3.59	2.17
Metals	Chromium +6	ug/L	EPA218.6	>0.25&<5	>0.25&<5	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	22.7	12.3	13.2	10.7
Metals	Iron	ug/L	EPA200.8	2450	566	329	236
Metals	Lead	ug/L	EPA200.8	5.31	1.7	1.13	1.17
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	6.94	3.82	4.79	4.51
Metals	Selenium	ug/L	EPA200.8	4.15	3.95	6.94*	3.62
Metals	Silver	ug/L	EPA200.8	>0.1&<0.25	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	68.4	65.7	95.5	33.8
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Ballona Creek @ Sawtelle S01 2009-10Event02 07/14/2009	Ballona Creek @ Sawtelle S01 2009-10Event12 09/15/2009	Ballona Creek @ Sawtelle S01 2009-10Event14 12/01/2009	Ballona Creek @ Sawtelle S01 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g,h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a,h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	>0.7&<2	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a ">" and a "<" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are reported as >MDL <RL

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Malibu Creek @ Piuma S02 2009-10Event02 07/14/2009	Malibu Creek @ Piuma S02 2009-10Event12 09/15/2009	Malibu Creek @ Piuma S02 2009-10Event14 12/01/2009	Malibu Creek @ Piuma S02 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	340	20	20	230
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	80	230	300	80
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	80	230	500	80
Bacteria	Total Coliform	MPN/100mL	SM9221B	1,300	3,000	50,000	24,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.012	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	9.66	10	11.7	13
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	7.76	8.12	7.73	8.13
General	Alkalinity as CaCO3	mg/L	SM2320B	330	<2	234	261
General	Ammonia	mg/L	SM4500-NH3 F	<0.1	0.157	0.133	0.666
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	<1	2.11	2.83	<1
General	Chemical Oxygen Demand	mg/L	SM5220D	259	86.3	57.1	90.6
General	Chloride	mg/L	SM4110B	148	175	136	121
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.16	0.419	0.579	0.67
General	Fluoride	mg/L	SM4110B	0.131	0.195	0.71	0.213
General	Hardness as CaCO3	mg/L	SM2340C	1100	980	835	605
General	Kjeldahl-N	mg/L	SM4500-NHorg C	0.45	0.396	0.28	4.08
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	<0.01	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	<0.1	0.13	0.11	0.55
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	>0.1&<1	7.25	20.4	12.1
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	1.64	4.6	2.72
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.19	0.42	0.582	0.69
General	Specific Conductance	umhos/cm	SM2510B	3255	2700	1940	1430
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	712*	749*	494	401
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	2,002*	1,870	1,340	970
General	Total Organic Carbon	mg/L	SM5310B	3.4	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	4.84	4.53	17.9
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	10	13	17	2
General	Turbidity	NTU	SM2130B	0.77	0.76	1.12	0.94
General	Volatile Suspended Solids	mg/L	SM2540E	3	8	3	1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Malibu Creek @ Piuma S02 2009-10Event02 07/14/2009	Malibu Creek @ Piuma S02 2009-10Event12 09/15/2009	Malibu Creek @ Piuma S02 2009-10Event14 12/01/2009	Malibu Creek @ Piuma S02 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	>0.2&<0.5	>0.2&<0.5	<0.2	<0.2
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.11	2.13	3.42	1.86
Metals	Dissolved Barium	ug/L	EPA200.8	46.6	52.6	38.6	24.7
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	>0.1&<0.25	0.45	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	0.59	0.5	1.07	1.1
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	1.63	1.86	2.57	2.39
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	<0.2	<0.2	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	10.6	8.4	8	5.89
Metals	Dissolved Selenium	ug/L	EPA200.8	4.39	2.66	9.52	3.21
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	5.14	20.9	44.1	21.7
Metals	Aluminum	ug/L	EPA200.8	>50&<100	>50&<100	<50	122
Metals	Antimony	ug/L	EPA200.8	>0.2&<0.5	>0.2&<0.5	<0.2	<0.2
Metals	Arsenic	ug/L	EPA200.8	2.3	2.35	3.57	2.1
Metals	Barium	ug/L	EPA200.8	48.9	60.4	45.5	32.6
Metals	Beryllium	ug/L	EPA200.8	<0.1	<1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	>0.1&<0.25	0.499	<0.1
Metals	Chromium	ug/L	EPA200.8	2.16	0.503	3.33	1.15
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	7.62	8.43	7.98	7.44
Metals	Iron	ug/L	EPA200.8	158	141	230	177
Metals	Lead	ug/L	EPA200.8	0.59	0.663	0.758	0.861
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	11.5	10.5	10.2	7.44
Metals	Selenium	ug/L	EPA200.8	4.62	3.23	9.55*	3.75
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	26.7	48.2	103	26.4
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Malibu Creek @ Piuma S02 2009-10Event02 07/14/2009	Malibu Creek @ Piuma S02 2009-10Event12 09/15/2009	Malibu Creek @ Piuma S02 2009-10Event14 12/01/2009	Malibu Creek @ Piuma S02 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL
 Values reported with a ">" and a "<" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are
 QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Los Angeles @ Wardlow S10 2009-10Event02 07/14/2009	Los Angeles @ Wardlow S10 2009-10Event12 09/15/2009	Los Angeles @ Wardlow S10 2009-10Event14 12/01/2009	Los Angeles @ Wardlow S10 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	20	20	300	300
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	20	230	130	40
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	20	230	130	40
Bacteria	Total Coliform	MPN/100mL	SM9221B	20	20	2,400	800
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.006	<0.005	0.027*	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	10.2	21.5	15.5	17.4
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	9.25*	7.97	8.54*	9.4*
General	Alkalinity as CaCO3	mg/L	SM2320B	151	151	206	165
General	Ammonia	mg/L	SM4500-NH3 F	0.16	0.218	0.448	0.23
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	24.4	31.5	21.6	24
General	Chemical Oxygen Demand	mg/L	SM5220D	234	71.3	64.5	63.2
General	Chloride	mg/L	SM4110B	131	149	114	118
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.25	0.19	0.39	0.06
General	Fluoride	mg/L	SM4110B	0.43	0.507	0.892	0.479
General	Hardness as CaCO3	mg/L	SM2340C	260	255	300	290
General	Kjeldahl-N	mg/L	SM4500-NHorg C	6.18	1.6	1.98	1.08
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.13	0.18	0.37	0.19
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.07	5.49	15.7	2.35
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	1.24	3.55	0.53
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	0.17	0.0502	0.0766
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.5	0.21	0.52	0.07
General	Specific Conductance	umhos/cm	SM2510B	1011	1020	1040	980
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	149	168	134	197
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	690	664	696	662
General	Total Organic Carbon	mg/L	SM5310B	14	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	10.9	7.84	20.8
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	135	14	110	38
General	Turbidity	NTU	SM2130B	5.5	2.53	4.07	4.48
General	Volatile Suspended Solids	mg/L	SM2540E	66	11	39	15

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Los Angeles @ Wardlow S10 2009-10Event02 07/14/2009	Los Angeles @ Wardlow S10 2009-10Event12 09/15/2009	Los Angeles @ Wardlow S10 2009-10Event14 12/01/2009	Los Angeles @ Wardlow S10 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	0.82	<0.2	0.932	0.887
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.25	2.4	4.31	2.14
Metals	Dissolved Barium	ug/L	EPA200.8	38.3	<1	45.2	41.2
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.689	0.275
Metals	Dissolved Chromium	ug/L	EPA200.8	1.54	<0.5	2.05	1.57
Metals	Dissolved Chromium +6	ug/L	EPA218.6	0.37	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	6.17	<0.5	5.25	6.72
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.55	<0.2	1.27	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	7.27	<0.5	4.81	4.5
Metals	Dissolved Selenium	ug/L	EPA200.8	2.6	<0.5	5.84	2.67
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	15.7	<1	39.6	27.6
Metals	Aluminum	ug/L	EPA200.8	282	<50	1200	1100
Metals	Antimony	ug/L	EPA200.8	0.82	0.948	1.05	1.13
Metals	Arsenic	ug/L	EPA200.8	2.38	2.56	4.31	2.57
Metals	Barium	ug/L	EPA200.8	48.2	44.6	62.4	63.1
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	>0.1&<0.25	0.783	0.34
Metals	Chromium	ug/L	EPA200.8	1.61	0.807	3.01	2.11
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	13.8	10.5	12.3	16.7
Metals	Iron	ug/L	EPA200.8	556	>50&<100	979	1170
Metals	Lead	ug/L	EPA200.8	2.64	0.803	8.5	6.07
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.2	4.84	6.03	6.43
Metals	Selenium	ug/L	EPA200.8	2.75	2.23	5.94*	2.88
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	66.1	108	95.3	75.3
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.33	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Los Angeles @ Wardlow S10 2009-10Event02 07/14/2009	Los Angeles @ Wardlow S10 2009-10Event12 09/15/2009	Los Angeles @ Wardlow S10 2009-10Event14 12/01/2009	Los Angeles @ Wardlow S10 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	9.9
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Coyote Creek S13 2009-10Event02 07/14/2009	Coyote Creek S13 2009-10Event12 09/15/2009	Coyote Creek S13 2009-10Event14 12/01/2009	Coyote Creek S13 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	9,000*	1,300*	300	1,400*
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	40	230	300	80
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	40	230	300	80
Bacteria	Total Coliform	MPN/100mL	SM9221B	50,000	2,400	3,000	16,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.034*	0.01	0.016	0.02
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	15.6	20	15.2	18
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.31	8.04	8.18	8.58*
General	Alkalinity as CaCO3	mg/L	SM2320B	275	220	289	275
General	Ammonia	mg/L	SM4500-NH3 F	0.55	0.121	0.121	0.133
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	14.5	14.8	12.1	24
General	Chemical Oxygen Demand	mg/L	SM5220D	368	74.8	55.8	117
General	Chloride	mg/L	SM4110B	262	205	194	237
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.05	<0.05	<0.05	<0.05
General	Fluoride	mg/L	SM4110B	1.23	1.11	1.23	1.18
General	Hardness as CaCO3	mg/L	SM2340C	380	355	410	400
General	Kjeldahl-N	mg/L	SM4500-NHorg C	3.3	0.92	0.62	0.76
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.45	0.1	0.1	0.11
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	4.49	8.22	17.7	12.5
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	1.01	2.03	4	2.82
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	0.06	0.058	<0.01	0.133
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.11	<0.05	<0.05	<0.05
General	Specific Conductance	umhos/cm	SM2510B	1836	1590	1800	1830
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	439	329	357	423
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	1,276	1,080	1,250	1,260
General	Total Organic Carbon	mg/L	SM5310B	11.2	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	9.74	4.7	21
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	141	78	14	16
General	Turbidity	NTU	SM2130B	3.89	3.08	0.98	1.88
General	Volatile Suspended Solids	mg/L	SM2540E	38	25	2	5

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Coyote Creek S13 2009-10Event02 07/14/2009	Coyote Creek S13 2009-10Event12 09/15/2009	Coyote Creek S13 2009-10Event14 12/01/2009	Coyote Creek S13 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	0.85	0.794	0.557	0.562
Metals	Dissolved Arsenic	ug/L	EPA200.8	5.92	4.58	5.35	3.77
Metals	Dissolved Barium	ug/L	EPA200.8	55	55	49.9	49.1
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.44	0.938	1.42	1.34
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	5.36	4.82	4.17	5.34
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	>0.28<0.5	<0.2	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	4.3	2.97	3.91	3.42
Metals	Dissolved Selenium	ug/L	EPA200.8	6.39	4.38	9.64	5.61
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	12.4	8.2	<1	24.3
Metals	Aluminum	ug/L	EPA200.8	303	187	<50	166
Metals	Antimony	ug/L	EPA200.8	0.93	0.875	0.663	0.644
Metals	Arsenic	ug/L	EPA200.8	6.06	4.93	5.4	4.09
Metals	Barium	ug/L	EPA200.8	73.4	74.4	59.6	61.8
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Chromium	ug/L	EPA200.8	2.01	0.965	4.28	2.14
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	14	13.5	9.12	11.3
Metals	Iron	ug/L	EPA200.8	700	417	118	<50
Metals	Lead	ug/L	EPA200.8	2.17	1.51	<0.2	1.17
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	5.63	4.52	4.76	4.52
Metals	Selenium	ug/L	EPA200.8	6.49*	4.48	9.77*	6.08*
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	46.6	71.6	38.5	40.6
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.33	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Coyote Creek S13 2009-10Event02 07/14/2009	Coyote Creek S13 2009-10Event12 09/15/2009	Coyote Creek S13 2009-10Event14 12/01/2009	Coyote Creek S13 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	San Gabriel River @ SGR Parkway S14 2009-10Event02 07/14/2009	San Gabriel River @ SGR Parkway S14 2009-10Event12 09/15/2009	San Gabriel River @ SGR Parkway S14 2009-10Event14 12/01/2009	San Gabriel River @ SGR Parkway S14 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	800*	300	230	800*
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	20	800	300	<20
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	20	800	300	<20
Bacteria	Total Coliform	MPN/100mL	SM9221B	2,200	9,000	3,000	24,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.021	0.02	0.025*	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	8.79	10.4	11.8	12.4
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.19	7.98	7.82	8.01
General	Alkalinity as CaCO3	mg/L	SM2320B	179	151	165	165
General	Ammonia	mg/L	SM4500-NH3 F	0.92	0.581	0.678	0.169
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	9.72	25.3	41.2	5.9
General	Chemical Oxygen Demand	mg/L	SM5220D	116	84.3	66.1	57.9
General	Chloride	mg/L	SM4110B	138	161*	113	118
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.16	0.09	0.13	0.07
General	Fluoride	mg/L	SM4110B	0.59	0.314	0.417	0.244
General	Hardness as CaCO3	mg/L	SM2340C	260	265	280	20
General	Kjeldahl-N	mg/L	SM4500-NHorg C	1.64	1.36	1.94	0.58
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.76	0.48	0.56	0.14
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	24.3	22.1	27	6.17
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	5.5	4.99	6.1	1.39
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	0.13	0.177	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.18	0.1	0.19	0.08
General	Specific Conductance	umhos/cm	SM2510B	1027	1080	1010	1000
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	443*	172	117	199
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	694	706	668	670
General	Total Organic Carbon	mg/L	SM5310B	6.2	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	7.79	6.64	17.9
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	14	31	28	23
General	Turbidity	NTU	SM2130B	1.46	1.18	0.73	2.79
General	Volatile Suspended Solids	mg/L	SM2540E	3	15	4	8

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	San Gabriel River @ SGR Parkway S14 2009-10Event02 07/14/2009	San Gabriel River @ SGR Parkway S14 2009-10Event12 09/15/2009	San Gabriel River @ SGR Parkway S14 2009-10Event14 12/01/2009	San Gabriel River @ SGR Parkway S14 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	0.62	0.603	0.588	<0.2
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.14	1	2.2	1.93
Metals	Dissolved Barium	ug/L	EPA200.8	44.9	50.6	52.6	73.6
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	0.95	0.808	1.74	1.19
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	3.15	3.08	4.61	2.85
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	>0.28<0.5	>0.28<0.5	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	4.61	3.19	3.47	4.39
Metals	Dissolved Selenium	ug/L	EPA200.8	1.53	1.35	5.27	1.2
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	42.2	43.7	56.6	22.1
Metals	Aluminum	ug/L	EPA200.8	106	116	<50	453
Metals	Antimony	ug/L	EPA200.8	0.63	0.632	0.712	0.793
Metals	Arsenic	ug/L	EPA200.8	1.21	1.09	2.34	2.31
Metals	Barium	ug/L	EPA200.8	48.1	57.3	62.2	97.1
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.276	<0.1
Metals	Chromium	ug/L	EPA200.8	1.5	0.872	2.99	1.27
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	8.39	10.1	9.94	9.82
Metals	Iron	ug/L	EPA200.8	200	256	229	667
Metals	Lead	ug/L	EPA200.8	0.98	1.32	0.893	2.14
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	5.03	4.24	4.46	5.69
Metals	Selenium	ug/L	EPA200.8	1.8	1.61	5.54*	1.37
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	61.2	103	80	45.6
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.33	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	San Gabriel River @ SGR Parkway S14 2009-10Event02 07/14/2009	San Gabriel River @ SGR Parkway S14 2009-10Event12 09/15/2009	San Gabriel River @ SGR Parkway S14 2009-10Event14 12/01/2009	San Gabriel River @ SGR Parkway S14 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	>1.7&<5	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Dominguez Channel @ Artesia S28 2009-10Event02 07/14/2009	Dominguez Channel @ Artesia S28 2009-10Event12 09/15/2009	Dominguez Channel @ Artesia S28 2009-10Event14 12/01/2009	Dominguez Channel @ Artesia S28 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	13,000*	1,300	300	500
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	40	230	130	800
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	80	230	230	800
Bacteria	Total Coliform	MPN/100mL	SM9221B	90,000	3,000	2,400	5,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	>0.004&<0.02
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.007	<0.005	<0.005	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	13.7	15.1	14.1	18.1
Conventionals	Oil and Grease	mg/L	EPA1664A	>0.4&<5	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.49	8.59*	8.43	8.83*
General	Alkalinity as CaCO3	mg/L	SM2320B	220	<2	234	179
General	Ammonia	mg/L	SM4500-NH3 F	<0.1	0.29	0.218	0.109
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	15.3	8.83	7	10.5
General	Chemical Oxygen Demand	mg/L	SM5220D	328	102	62.2	118
General	Chloride	mg/L	SM4110B	189	151	146	211
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.16	0.23	0.12	0.89
General	Fluoride	mg/L	SM4110B	0.801	0.832	0.863	0.372
General	Hardness as CaCO3	mg/L	SM2340C	290	270	390	330
General	Kjeldahl-N	mg/L	SM4500-NHorg C	2.72	2.52	1.1	0.56
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	<0.1	0.24	0.18	<0.1
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	8.63	13.6	13.2	8.87
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	1.95	3.07	2.98	2
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.25	0.32	0.3	0.99
General	Specific Conductance	umhos/cm	SM2510B	1154	1130	1370	1220
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	99.6	84	126	153
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	770	736	894	810
General	Total Organic Carbon	mg/L	SM5310B	14	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	11.4	6.09	16.9
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	64	153	70	25
General	Turbidity	NTU	SM2130B	2.76	4.61	1.6	2.26
General	Volatile Suspended Solids	mg/L	SM2540E	18	58	10	11

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Dominguez Channel @ Artesia S28 2009-10Event02 07/14/2009	Dominguez Channel @ Artesia S28 2009-10Event12 09/15/2009	Dominguez Channel @ Artesia S28 2009-10Event14 12/01/2009	Dominguez Channel @ Artesia S28 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	184	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	2.75	2.25	1.65	1.65
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.82	2.62	3.3	1.73
Metals	Dissolved Barium	ug/L	EPA200.8	68.7	69.4	91.2	71.3
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.339	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.85	1.36	1.78	1.61
Metals	Dissolved Chromium +6	ug/L	EPA218.6	>0.25&<5	>0.25&<5	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	16.1	20.8	13	11.3
Metals	Dissolved Iron	ug/L	EPA200.8	<50	286	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.63	2.23	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	5.17	4.38	4.42	3.16
Metals	Dissolved Selenium	ug/L	EPA200.8	2.23	1.49	5.98	2.35
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	15.7	35.8	39	42.4
Metals	Aluminum	ug/L	EPA200.8	1410	1470	461	235
Metals	Antimony	ug/L	EPA200.8	2.8	<0.2	1.92	1.95
Metals	Arsenic	ug/L	EPA200.8	2.84	3.26	3.63	1.91
Metals	Barium	ug/L	EPA200.8	84	105	110	97.3
Metals	Beryllium	ug/L	EPA200.8	<0.1	<1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.37	<0.1
Metals	Chromium	ug/L	EPA200.8	2.01	<0.5	3.31	1.86
Metals	Chromium +6	ug/L	EPA218.6	>0.25&<5	>0.25&<5	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	29.2	45.9	23.3	21
Metals	Iron	ug/L	EPA200.8	1600	2350	967	282
Metals	Lead	ug/L	EPA200.8	3.49	8.65	2.43	2.26
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	6.38	7.36	5.61	4.27
Metals	Selenium	ug/L	EPA200.8	2.58	1.75	6.62*	2.69
Metals	Silver	ug/L	EPA200.8	<0.1	>0.1&<0.25	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	63	123	90	44.9
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Dominguez Channel @ Artesia S28 2009-10Event02 07/14/2009	Dominguez Channel @ Artesia S28 2009-10Event12 09/15/2009	Dominguez Channel @ Artesia S28 2009-10Event14 12/01/2009	Dominguez Channel @ Artesia S28 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g,h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Santa Clara River S29 2009-10Event02 07/14/2009	Santa Clara River S29 2009-10Event12 09/15/2009	Santa Clara River S29 2009-10Event14 12/01/2009	Santa Clara River S29 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	80	130	<20	2,400*
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	2,400	1,300	130	230
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	2,400	1,300	130	230
Bacteria	Total Coliform	MPN/100mL	SM9221B	220	2,400	5,000	2,400
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.006	<0.005	0.012	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	8.32	9.48	8.95	12.1
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	7.87	8.3	7.8	7.98
General	Alkalinity as CaCO3	mg/L	SM2320B	275	28	289	261
General	Ammonia	mg/L	SM4500-NH3 F	<0.1	<0.1	<0.1	<0.1
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	<1	<1	<1	2.51
General	Chemical Oxygen Demand	mg/L	SM5220D	117	71.3	<10	46.6
General	Chloride	mg/L	SM4110B	104*	119*	92.9	109*
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.14	0.19	0.13	0.165
General	Fluoride	mg/L	SM4110B	0.31	0.307	0.748	0.308
General	Hardness as CaCO3	mg/L	SM2340C	400	435	445	415
General	Kjeldahl-N	mg/L	SM4500-NHorg C	0.37	0.24	0.66	0.36
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	0.03	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	<0.1	<0.1	<0.1	<0.1
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	6.42	7.56	8.38	8.32
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	1.44	1.71	1.89	1.88
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.01	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.2	0.2	0.22	0.173
General	Specific Conductance	umhos/cm	SM2510B	1139	1190	1190	1110
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	193	215	177	202
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	788	812	830	770
General	Total Organic Carbon	mg/L	SM5310B	2.4	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	2.42	1.29	20.1
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	3	5	12	18
General	Turbidity	NTU	SM2130B	0.45	0.31	0.34	1.57
General	Volatile Suspended Solids	mg/L	SM2540E	1	4	3	5

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Santa Clara River S29 2009-10Event02 07/14/2009	Santa Clara River S29 2009-10Event12 09/15/2009	Santa Clara River S29 2009-10Event14 12/01/2009	Santa Clara River S29 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	<0.2	<0.2	<0.2	<0.2
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.28	<0.2	2.32	>0.2&<1
Metals	Dissolved Barium	ug/L	EPA200.8	53.1	<1	50.4	>1&<10
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	<0.5	<0.5	0.835	>0.5&<0.5
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	1.54	<0.5	1.54	>0.5&<0.5
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	<0.2	<0.2	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	11.3	<0.5	10.3	>0.5&<1
Metals	Dissolved Selenium	ug/L	EPA200.8	2.68	<0.5	6.5	>0.5&<1
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	7.07	<1	34.7	>1&<1
Metals	Aluminum	ug/L	EPA200.8	<50	>50&<100	<50	320
Metals	Antimony	ug/L	EPA200.8	<0.2	<0.2	<0.2	<0.2
Metals	Arsenic	ug/L	EPA200.8	1.56	1.34	2.45	1.55
Metals	Barium	ug/L	EPA200.8	55.7	56.7	54.1	89
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Chromium	ug/L	EPA200.8	2.11	<0.5	3.39	1.51
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	7.63	8.86	7.08	7.73
Metals	Iron	ug/L	EPA200.8	>50&<100	>50&<100	118	430
Metals	Lead	ug/L	EPA200.8	0.57	0.544	<0.2	1.14
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	11.6	11	11.8	12.7
Metals	Selenium	ug/L	EPA200.8	3.23	2.53	6.76*	2.77
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	<1	36.2	75.7	56.5
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Santa Clara River S29 2009-10Event02 07/14/2009	Santa Clara River S29 2009-10Event12 09/15/2009	Santa Clara River S29 2009-10Event14 12/01/2009	Santa Clara River S29 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g,h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a,h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Project No. 1232 TS19 2009-10Event02 07/14/2009	Project No. 1232 TS19 2009-10Event12 09/15/2009	Project No. 1232 TS19 2009-10Event14 12/01/2009	Project No. 1232 TS19 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	80	900,000*	230	270
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	2,400	22,000	300	300
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	2,400	22,000	300	500
Bacteria	Total Coliform	MPN/100mL	SM9221B	340	1,600,000	2,400	24,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	<0.005	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	12.1	6.91	17.2	16.1
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.17	7.96	8.84*	8.91*
General	Alkalinity as CaCO3	mg/L	SM2320B	138	138	124	96
General	Ammonia	mg/L	SM4500-NH3 F	5.17*	0.629	<0.1	0.109
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	15	10.5	6.68	8.35
General	Chemical Oxygen Demand	mg/L	SM5220D	384	155	102	93
General	Chloride	mg/L	SM4110B	182	571	306	174
General	Dissolved Phosphorus	mg/L	SM4500-PE	1.03	0.19	0.08	<0.05
General	Fluoride	mg/L	SM4110B	0.78	1.17	1.35	1.14
General	Hardness as CaCO3	mg/L	SM2340C	230	785	390	320
General	Kjeldahl-N	mg/L	SM4500-NHorg C	5.8	2.54	1.46	0.58
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	4.27	0.52	<0.1	<0.1
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.01	1.46	1.22	3.98
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	>0.03&<0.5	<0.03	0.898
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	1.06	0.35	0.09	0.05
General	Specific Conductance	umhos/cm	SM2510B	955	2710	1750	1320
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	109	383	289	290
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	644	1,870	1,220	910
General	Total Organic Carbon	mg/L	SM5310B	16.8	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	18.8	12.9	34
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	33	71	23	17
General	Turbidity	NTU	SM2130B	6.13	5.75	1.47	2.6
General	Volatile Suspended Solids	mg/L	SM2540E	23	40	4	10

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Group	Parameter Code	Units	Analysis_Method	Project No. 1232 TS19 2009-10Event02 07/14/2009	Project No. 1232 TS19 2009-10Event12 09/15/2009	Project No. 1232 TS19 2009-10Event14 12/01/2009	Project No. 1232 TS19 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	0.87	1.58	1.24	2.3
Metals	Dissolved Arsenic	ug/L	EPA200.8	3.33	5.36	3.93	4.06
Metals	Dissolved Barium	ug/L	EPA200.8	49.5	123	96.2	95.4
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.306	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.23	0.82	1.15	1.46
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	14.2	9.58	7.39	13.3
Metals	Dissolved Iron	ug/L	EPA200.8	<50	>50&<100	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.62	0.52	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	4.05	6.52	5.22	4.98
Metals	Dissolved Selenium	ug/L	EPA200.8	2.07	5.62	5.56	2.19
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	34.6	28.9	41.1	36.2
Metals	Aluminum	ug/L	EPA200.8	319	224	<50	202
Metals	Antimony	ug/L	EPA200.8	0.98	1.68	1.39	2.6
Metals	Arsenic	ug/L	EPA200.8	3.83	5.61	4.09	4.41
Metals	Barium	ug/L	EPA200.8	72.8	137	105	112
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	>0.1&<0.25	<0.1	0.445	0.321
Metals	Chromium	ug/L	EPA200.8	1.91	1.05	2.23	2.81
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	40.5	24.4	14.7	21.6
Metals	Iron	ug/L	EPA200.8	830	391	161	320
Metals	Lead	ug/L	EPA200.8	5.91	2.87	1.03	2.53
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	5.78	7.89	6.26	6.24
Metals	Selenium	ug/L	EPA200.8	2.8	6.17*	6.03*	2.58
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	144	68.8	78.5	58.9
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Project No. 1232 TS19 2009-10Event02 07/14/2009	Project No. 1232 TS19 2009-10Event12 09/15/2009	Project No. 1232 TS19 2009-10Event14 12/01/2009	Project No. 1232 TS19 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	>1.67&<5
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	PD669 TS20 2009-10Event02 07/14/2009	PD669 TS20 2009-10Event12 09/15/2009	PD669 TS20 2009-10Event14 12/01/2009	PD669 TS20 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	24,000*	3,000	3,000	500
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	130	300	5,000	<20
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	130	300	5,000	<20
Bacteria	Total Coliform	MPN/100mL	SM9221B	24,000	90,000	90,000	30,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.041*	0.01	0.009	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	17.5	16.1	18.1	22.4
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.59*	8.5	8.55*	8.79*
General	Alkalinity as CaCO3	mg/L	SM2320B	261	275	303	220
General	Ammonia	mg/L	SM4500-NH3 F	0.99	0.182	0.242	0.109
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	28.3	34.5	19	6.38
General	Chemical Oxygen Demand	mg/L	SM5220D	637	276	299	320
General	Chloride	mg/L	SM4110B	1702	2290	2220	2050
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.2	0.2	0.17	<0.05
General	Fluoride	mg/L	SM4110B	0.91	0.958	0.689	0.581
General	Hardness as CaCO3	mg/L	SM2340C	2100	2470	2880	2630
General	Kjeldahl-N	mg/L	SM4500-NHorg C	4.68	1.78	1.72	2
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.82	0.15	0.2	<0.1
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	2.48	4.81	6.1	<0.1
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	0.56	1.09	1.38	<0.03
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.33	0.22	0.42	0.05
General	Specific Conductance	umhos/cm	SM2510B	13640	15600	13500	16700
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	3566	5140	3940	4690
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	9,464	10,800	9,170	11,600
General	Total Organic Carbon	mg/L	SM5310B	28	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	20.5	22.7	34.2
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	12	30	41	19
General	Turbidity	NTU	SM2130B	4.73	2.25	1.9	2.14
General	Volatile Suspended Solids	mg/L	SM2540E	5	18	12	8

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	PD669 TS20 2009-10Event02 07/14/2009	PD669 TS20 2009-10Event12 09/15/2009	PD669 TS20 2009-10Event14 12/01/2009	PD669 TS20 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	1.73	1.59	1.35	1.15
Metals	Dissolved Arsenic	ug/L	EPA200.8	9.75	8.2	10.5	9.63
Metals	Dissolved Barium	ug/L	EPA200.8	53.1	46.6	54.7	47.4
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	2.31	1.47	1.55	1.23
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	46.7	30.7	23.5	27.8
Metals	Dissolved Iron	ug/L	EPA200.8	>50&<100	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	>0.2&<0.5	<0.2	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	13.1	9.39	11	8.63
Metals	Dissolved Selenium	ug/L	EPA200.8	33.7	32.4	42.7	35.3
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	26.3	23.1	57.3	31.3
Metals	Aluminum	ug/L	EPA200.8	155	115	<50	133
Metals	Antimony	ug/L	EPA200.8	1.75	1.73	1.55	1.34
Metals	Arsenic	ug/L	EPA200.8	9.8	10.1	12.3	11.3
Metals	Barium	ug/L	EPA200.8	61.6	56.7	65.6	58.9
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Chromium	ug/L	EPA200.8	2.76	1.47	3.97	1.68
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	93.2	170	34.4	38.8
Metals	Iron	ug/L	EPA200.8	316	238	262	164
Metals	Lead	ug/L	EPA200.8	1.24	0.99	0.888	0.731
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	14	10.8	12.6	9.94
Metals	Selenium	ug/L	EPA200.8	35.2*	37.2*	49*	40.1*
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	75.3	60.3	73.5	36.3
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

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Group	Parameter Code	Units	Analysis_Method	PD669 TS20 2009-10Event02 07/14/2009	PD669 TS20 2009-10Event12 09/15/2009	PD669 TS20 2009-10Event14 12/01/2009	PD669 TS20 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g,h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	>0.67&<2	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74
				TS21 2009-10Event02 07/14/2009	TS21 2009-10Event12 09/15/2009	TS21 2009-10Event14 12/01/2009	TS21 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	3,000	2,400	1,300	1,400
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	5,000	28,000	3,000	300
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	5,000	28,000	5,000	300
Bacteria	Total Coliform	MPN/100mL	SM9221B	5,000	30,000	500,000	1,600,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.008	0.01
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	14.8	10.9	15.1	10.9
Conventionals	Oil and Grease	mg/L	EPA1664A	>0.4&<5	<0.4	<1.44	5.9
Conventionals	pH	pH units	SM4500H B	8.63*	8.95*	8.41	9.16*
General	Alkalinity as CaCO3	mg/L	SM2320B	172	220	220	206
General	Ammonia	mg/L	SM4500-NH3 F	0.69	0.327	0.29	0.23
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	6.44	5.46	3.83	12.7
General	Chemical Oxygen Demand	mg/L	SM5220D	97.5	183	67.5	152
General	Chloride	mg/L	SM4110B	109	109	207	89.5
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.89	0.42	0.57	0.11
General	Fluoride	mg/L	SM4110B	0.91	1.34	0.984	0.52
General	Hardness as CaCO3	mg/L	SM2340C	230	265	340	275
General	Kjeldahl-N	mg/L	SM4500-NHorg C	2.54	1.76	1.28	0.56
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.57	0.27	0.24	0.19
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.52	1.71	13.6	1.81
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	>0.03&<0.5	3.08	<0.03
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.91	0.7	0.65	0.13
General	Specific Conductance	umhos/cm	SM2510B	848	932	1120	1010
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	108	128	182	155
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	564	630	734	630
General	Total Organic Carbon	mg/L	SM5310B	15.8	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	23.9	12.4	34.1
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	5.05
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	4	52	26	39
General	Turbidity	NTU	SM2130B	2.3	2.68	1.59	7.34
General	Volatile Suspended Solids	mg/L	SM2540E	3	27	4	23

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Group	Parameter Code	Units	Analysis_Method	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74
				TS21 2009-10Event02 07/14/2009	TS21 2009-10Event12 09/15/2009	TS21 2009-10Event14 12/01/2009	TS21 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	214	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	2.49	3.17	2.5	1.59
Metals	Dissolved Arsenic	ug/L	EPA200.8	3	3.74	4.23	2.29
Metals	Dissolved Barium	ug/L	EPA200.8	59.9	69.3	218	231
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	0.59	0.4	0.382	0.374
Metals	Dissolved Chromium	ug/L	EPA200.8	1.24	1.49	2.09	1.91
Metals	Dissolved Chromium +6	ug/L	EPA218.6	>0.25&<5	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	13.7	15.3	9.43	17.7
Metals	Dissolved Iron	ug/L	EPA200.8	<50	>50&<100	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	2.29	1.6	0.542	0.831
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	7.91	12.4	9.07	11.2
Metals	Dissolved Selenium	ug/L	EPA200.8	1.6	1.51	7.35	1.78
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	101	79	99.3	113
Metals	Aluminum	ug/L	EPA200.8	>50&<100	299	239	325
Metals	Antimony	ug/L	EPA200.8	2.53	3.46	3.04	1.98
Metals	Arsenic	ug/L	EPA200.8	3.06	3.94	4.64	3.06
Metals	Barium	ug/L	EPA200.8	66.8	85.4	276	296
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	0.64	0.6	0.537	0.664
Metals	Chromium	ug/L	EPA200.8	1.88	1.91	3.42	2.22
Metals	Chromium +6	ug/L	EPA218.6	>0.25&<5	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	27.9	33.3	19.2	30.2
Metals	Iron	ug/L	EPA200.8	221	502	426	528
Metals	Lead	ug/L	EPA200.8	4.48	5.09	4.95	5.6
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	8.76	14.1	7.88	14.7
Metals	Selenium	ug/L	EPA200.8	2.37	2.31	9.11*	3.26
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	141	130	317	172
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

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Group	Parameter Code	Units	Analysis_Method	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74	Project Nos. 5246 & 74
				TS21 2009-10Event02 07/14/2009	TS21 2009-10Event12 09/15/2009	TS21 2009-10Event14 12/01/2009	TS21 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g,h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	>1.67&<5
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL
 Values reported with a ">" and a "<" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are
 QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	PD 21 - Hollypark Drain TS22 2009-10Event02 07/14/2009	PD 21 - Hollypark Drain TS22 2009-10Event12 09/15/2009	PD 21 - Hollypark Drain TS22 2009-10Event14 12/01/2009	PD 21 - Hollypark Drain TS22 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	800	40	40	80
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	80	<20	500	130
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	130	<20	500	130
Bacteria	Total Coliform	MPN/100mL	SM9221B	2,400	40	300	5,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	0.008	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	10.8	12.6	15.8	16.3
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.81*	8.81*	8.95*	8.41
General	Alkalinity as CaCO3	mg/L	SM2320B	151	110	193	96
General	Ammonia	mg/L	SM4500-NH3 F	1.57*	0.206	0.109	<0.1
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	102	11.9	9.1	8.74
General	Chemical Oxygen Demand	mg/L	SM5220D	1150	189	81.5	123
General	Chloride	mg/L	SM4110B	227	145	77.9	140
General	Dissolved Phosphorus	mg/L	SM4500-PE	QNS	0.15	0.41	<0.05
General	Fluoride	mg/L	SM4110B	0.51	1.35	0.624	0.634
General	Hardness as CaCO3	mg/L	SM2340C	247	135	310	320
General	Kjeldahl-N	mg/L	SM4500-NHorg C	13.3	3.06	1.34	0.58
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	1.3	0.17	<0.1	<0.1
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	1.55	1.16	<0.1	<0.1
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	>0.03&<0.5	<0.03	<0.03
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	QNS	0.4	0.54	0.05
General	Specific Conductance	umhos/cm	SM2510B	1366	862	916	1230
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	137	96.7	126	318
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	948	588	628	832
General	Total Organic Carbon	mg/L	SM5310B	190	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	36.2	12.2	36.8
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	>1.5&<5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	95	360	66	40
General	Turbidity	NTU	SM2130B	10.5	11.3	3.32	3.71
General	Volatile Suspended Solids	mg/L	SM2540E	62	193	10	15

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Group	Parameter Code	Units	Analysis_Method	PD 21 - Hollypark Drain TS22 2009-10Event02 07/14/2009	PD 21 - Hollypark Drain TS22 2009-10Event12 09/15/2009	PD 21 - Hollypark Drain TS22 2009-10Event14 12/01/2009	PD 21 - Hollypark Drain TS22 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	3.52	1.68	1.05	1.51
Metals	Dissolved Arsenic	ug/L	EPA200.8	5.53	2.97	4.6	2.22
Metals	Dissolved Barium	ug/L	EPA200.8	93.4	57	75	108
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	>0.1&<0.25	>0.1&<0.25	0.31	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	2.47	0.67	1.29	0.899
Metals	Dissolved Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	19.4	15.2	7.5	9.99
Metals	Dissolved Iron	ug/L	EPA200.8	>50&<100	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	2.12	0.89	<0.2	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	11.5	6	3.8	4.08
Metals	Dissolved Selenium	ug/L	EPA200.8	4.95	1.55	5.1	1.88
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	45.1	13.3	26.8	34.5
Metals	Aluminum	ug/L	EPA200.8	930	1090	357	1080
Metals	Antimony	ug/L	EPA200.8	3.66	1.96	1.25	1.95
Metals	Arsenic	ug/L	EPA200.8	5.57	3.9	4.71	2.7
Metals	Barium	ug/L	EPA200.8	111	99.7	84.6	150
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	0.46	0.84	0.397	<0.1
Metals	Chromium	ug/L	EPA200.8	3.42	2.71	2.59	2.26
Metals	Chromium +6	ug/L	EPA218.6	<0.25	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	36.2	37.3	14	23.9
Metals	Iron	ug/L	EPA200.8	1380	1960	491	961
Metals	Lead	ug/L	EPA200.8	5.45	7.54	2.31	5.72
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	17.2	9.66	4.86	6.09
Metals	Selenium	ug/L	EPA200.8	5.18*	1.74	5.33*	2.19
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	150	116	51.1	64.3
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

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Group	Parameter Code	Units	Analysis_Method	PD 21 - Hollypark Drain TS22 2009-10Event02 07/14/2009	PD 21 - Hollypark Drain TS22 2009-10Event12 09/15/2009	PD 21 - Hollypark Drain TS22 2009-10Event14 12/01/2009	PD 21 - Hollypark Drain TS22 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	D D I 8 TS23 2009-10Event02 07/14/2009	D D I 8 TS23 2009-10Event12 09/15/2009	D D I 8 TS23 2009-10Event14 12/01/2009	D D I 8 TS23 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	3,000	230	300	24,000*
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	16,000	2,400	3,000	240,000
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	16,000	2,400	3,000	240,000
Bacteria	Total Coliform	MPN/100mL	SM9221B	3,000	300	30,000	90,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	0.006	<0.005	0.005	<0.005
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	10	10.1	13.7	14.6
Conventionals	Oil and Grease	mg/L	EPA1664A	>0.4&<5	<0.4	>1.44&<5	<1.44
Conventionals	pH	pH units	SM4500H B	8.66*	8.8*	9.11*	9.36*
General	Alkalinity as CaCO3	mg/L	SM2320B	220	220	220	110
General	Ammonia	mg/L	SM4500-NH3 F	<0.1	0.169	0.218	0.145
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	24.4	6.23	6	7.31
General	Chemical Oxygen Demand	mg/L	SM5220D	199	118	56.2	75.4
General	Chloride	mg/L	SM4110B	92	114	92.4	93.5
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.3	0.39	0.39	<0.05
General	Fluoride	mg/L	SM4110B	0.18	0.283	0.523	0.515
General	Hardness as CaCO3	mg/L	SM2340C	180	205	220	210
General	Kjeldahl-N	mg/L	SM4500-NHorg C	3.14	1.44	0.7	0.54
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	<0.1	0.14	0.18	0.12
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	>0.1&<1	1.29	1.3	<0.1
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	>0.03&<0.5	>0.03&<0.5	<0.03	<0.03
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	<0.01	<0.01	<0.03
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.42	0.41	0.58	0.05
General	Specific Conductance	umhos/cm	SM2510B	684	754	783	798
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	33.8	47.8	75.9	157
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	452	478	510	534
General	Total Organic Carbon	mg/L	SM5310B	17.4	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	10	7.2	23.2
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	<1.5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	73	52	52	28
General	Turbidity	NTU	SM2130B	3.45	1.73	1.11	2
General	Volatile Suspended Solids	mg/L	SM2540E	43	32	19	15

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	D D I 8 TS23 2009-10Event02 07/14/2009	D D I 8 TS23 2009-10Event12 09/15/2009	D D I 8 TS23 2009-10Event14 12/01/2009	D D I 8 TS23 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	<5
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	1.24	0.69	0.826	1.57
Metals	Dissolved Arsenic	ug/L	EPA200.8	1.26	>0.2&<1	1.84	1.3
Metals	Dissolved Barium	ug/L	EPA200.8	50.9	52.7	51.1	68
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	<0.1	<0.1	0.252	<0.1
Metals	Dissolved Chromium	ug/L	EPA200.8	1.4	0.67	1.22	1.05
Metals	Dissolved Chromium +6	ug/L	EPA218.6	>0.25&<5	<0.25	<0.25	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	13.9	5.72	6.48	11.3
Metals	Dissolved Iron	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	0.63	>0.2&<0.5	0.636	<0.2
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	3.04	2.3	2.37	3.09
Metals	Dissolved Selenium	ug/L	EPA200.8	1.07	>0.5&<1	4.38	1.24
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	17.1	18.6	34.7	39.8
Metals	Aluminum	ug/L	EPA200.8	172	119	186	299
Metals	Antimony	ug/L	EPA200.8	1.53	0.8	1.11	1.9
Metals	Arsenic	ug/L	EPA200.8	1.37	1.18	1.97	1.59
Metals	Barium	ug/L	EPA200.8	59.8	59.2	61.2	85.4
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	>0.1&<0.25	<0.1	0.343	<0.1
Metals	Chromium	ug/L	EPA200.8	1.69	0.67	2.47	1.96
Metals	Chromium +6	ug/L	EPA218.6	>0.25&<5	<0.25	<0.25	<0.25
Metals	Copper	ug/L	EPA200.8	28.6	20	13.6	21.2
Metals	Iron	ug/L	EPA200.8	373	198	281	338
Metals	Lead	ug/L	EPA200.8	5.33	2.72	2.86	3.45
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	4.54	3.08	3.44	3.96
Metals	Selenium	ug/L	EPA200.8	1.28	1.02	4.85	2.02
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	84.2	61.8	75.6	61.1
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

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Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g-h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

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Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Dominguez Channel @ 116th Street TS24 2009-10Event02 07/14/2009	Dominguez Channel @ 116th Street TS24 2009-10Event12 09/15/2009	Dominguez Channel @ 116th Street TS24 2009-10Event14 12/01/2009	Dominguez Channel @ 116th Street TS24 2009-10Event28 03/23/2010
Bacteria	Fecal Coliform	MPN/100mL	SM9221E	2,400	16,000*	20	<20
Bacteria	Fecal Enterococcus	MPN/100mL	SM9230B	24,000	16,000	300	800
Bacteria	Fecal Streptococcus	MPN/100mL	SM9230B	30,000	16,000	300	1,300
Bacteria	Total Coliform	MPN/100mL	SM9221B	3,000	50,000	800	90,000
Chlorinated Pesticides	4-4'-DDD	ug/L	EPA608	<0.01	<0.011	<0.011	<0.011
Chlorinated Pesticides	4-4'-DDE	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	4-4'-DDT	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Aldrin	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	Dieldrin	ug/L	EPA608	<0.002	<0.002	<0.002	<0.002
Chlorinated Pesticides	Endosulfan sulfate	ug/L	EPA608	<0.05	<0.05	<0.05	<0.05
Chlorinated Pesticides	Endrin	ug/L	EPA608	<0.006	<0.006	<0.006	<0.006
Chlorinated Pesticides	Endrin aldehyde	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Endrin ketone	ug/L	EPA625	<0	NS	NS	NS
Chlorinated Pesticides	Heptachlor	ug/L	EPA608	<0.003	<0.003	<0.003	<0.003
Chlorinated Pesticides	Heptachlor Epoxide	ug/L	EPA608	<0.01	<0.01	<0.01	<0.01
Chlorinated Pesticides	Toxaphene	ug/L	EPA608	<0.24	<0.24	<0.24	<0.24
Chlorinated Pesticides	alpha-BHC	ug/L	EPA608	<0.003	<0.01	<0.01	<0.01
Chlorinated Pesticides	alpha-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Chlorinated Pesticides	beta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	delta-BHC	ug/L	EPA608	<0.005	<0.005	<0.005	<0.005
Chlorinated Pesticides	gamma-BHC (lindane)	ug/L	EPA608	<0.004	<0.004	<0.004	<0.004
Chlorinated Pesticides	gamma-chlordane	ug/L	EPA608	<0.04	<0.033	<0.033	<0.033
Conventionals	Cyanide	mg/L	SM4500-CNE	<0.005	<0.005	<0.005	0.02
Conventionals	Dissolved Oxygen	mg/L	SM4500 (OG)	9.61	9.05	9.76	10.8
Conventionals	Oil and Grease	mg/L	EPA1664A	<0.4	<0.4	<1.44	<1.44
Conventionals	pH	pH units	SM4500H B	8.29	8.9*	7.94	8.04
General	Alkalinity as CaCO3	mg/L	SM2320B	96	179	138	151
General	Ammonia	mg/L	SM4500-NH3 F	0.15	0.242	0.484	2.95
General	BioChemical Oxygen Demand- Five-Day	mg/L	SM5210B	2.56	4.68	24.9	24.3
General	Chemical Oxygen Demand	mg/L	SM5220D	128	71.3	71.3	166
General	Chloride	mg/L	SM4110B	76.6	119	108	117
General	Dissolved Phosphorus	mg/L	SM4500-PE	0.59	0.21	0.14	2.29
General	Fluoride	mg/L	SM4110B	0.97	0.689	1.04	0.736
General	Hardness as CaCO3	mg/L	SM2340C	170	205	310	210
General	Kjeldahl-N	mg/L	SM4500-NHorg C	1.98	0.64	1.7	11.7
General	Methyl Tertiary Butyl Ether (MTBE)	ug/L	EPA624	<0.4	<0.4	<1	<0.4
General	Methylene Blue Active Substances (MBAS)	mg/L	SM5540-C	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5	>0.01&<0.5
General	NH3-N	mg/L	SM4500-NH3 F	0.12	0.2	0.4	2.44
General	Nitrate (NO3)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate (NO3)	mg/L	SM4110B	12.4	2.8	9.68	20
General	Nitrate-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrate-N	mg/L	SM4110B	2.8	0.63	2.19	4.52
General	Nitrite (NO2)	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	EPA300.1	NS	NS	NS	NS
General	Nitrite-N	mg/L	SM4110B	<0.03	<0.01	0.145	0.143
General	Phosphorus- Total (as P)	mg/L	SM4500-PE	0.6	0.47	0.5	2.39
General	Specific Conductance	umhos/cm	SM2510B	621	727	1050	910
General	Sulfate	mg/L	EPA300.1	NS	NS	NS	NS
General	Sulfate	mg/L	SM4110B	86.3	53.1	172	130
General	Total Dissolved Phosphate	mg/L	AM4500-PE	NS	NS	NS	NS
General	Total Dissolved Solids	mg/L	SM2540C	428	452	710	618
General	Total Organic Carbon	mg/L	SM5310B	10.6	NS	NS	NS
General	Total Organic Carbon	mg/L	SM5310B/EPA415.1	NS	5.86	12.9	33.5
General	Total Petroleum Hydrocarbons	mg/L	EPA418.1	<0.4	<0.4	>1.5&<5	<1.5
General	Total Phosphate	mg/L	SM4500-PE	NS	NS	NS	NS
General	Total Suspended Solids	mg/L	SM2540D	81	89	52	20
General	Turbidity	NTU	SM2130B	2.6	1.55	1.67	2.77
General	Volatile Suspended Solids	mg/L	SM2540E	21	34	20	8

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Dominguez Channel @ 116th Street TS24 2009-10Event02 07/14/2009	Dominguez Channel @ 116th Street TS24 2009-10Event12 09/15/2009	Dominguez Channel @ 116th Street TS24 2009-10Event14 12/01/2009	Dominguez Channel @ 116th Street TS24 2009-10Event28 03/23/2010
Herbicides	2-4-5-TP-SILVEX	ug/L	EPA515.3	<0.07	<0.067	<0.067	<0.067
Herbicides	2-4-D	ug/L	EPA515.3	<0.015	<0.015	<0.015	<0.015
Herbicides	Glyphosate	ug/L	EPA547	<5	<5	<5	55.7
Metals	Dissolved Aluminum	ug/L	EPA200.8	<50	<50	<50	<50
Metals	Dissolved Antimony	ug/L	EPA200.8	3.38	1.48	3.37	14
Metals	Dissolved Arsenic	ug/L	EPA200.8	2.8	1.89	3.61	3.13
Metals	Dissolved Barium	ug/L	EPA200.8	48	56.3	76.9	58.7
Metals	Dissolved Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Cadmium	ug/L	EPA200.8	>0.1&<0.25	<0.5	0.42	0.872
Metals	Dissolved Chromium	ug/L	EPA200.8	1.28	0.87	7.21	1.36
Metals	Dissolved Chromium +6	ug/L	EPA218.6	>0.25&<5	<0.25	6.63	<0.25
Metals	Dissolved Copper	ug/L	EPA200.8	62.1*	9.46	23	100*
Metals	Dissolved Iron	ug/L	EPA200.8	234	>50&<100	<50	<50
Metals	Dissolved Lead	ug/L	EPA200.8	1.62	0.58	<0.2	0.996
Metals	Dissolved Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Nickel	ug/L	EPA200.8	4.06	2.13	3.94	9.69
Metals	Dissolved Selenium	ug/L	EPA200.8	>0.5&<1	>0.5&<1	5.19	1.16
Metals	Dissolved Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Dissolved Zinc	ug/L	EPA200.8	116	22	103	322*
Metals	Aluminum	ug/L	EPA200.8	1210	500	254	328
Metals	Antimony	ug/L	EPA200.8	4.26	1.72	3.92	15.7
Metals	Arsenic	ug/L	EPA200.8	3.25	2.1	3.77	3.35
Metals	Barium	ug/L	EPA200.8	76.9	75	92.2	80.9
Metals	Beryllium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Cadmium	ug/L	EPA200.8	0.93	>0.1&<0.25	0.555	1.17
Metals	Chromium	ug/L	EPA200.8	4.64	1.5	7.26	3.64
Metals	Chromium +6	ug/L	EPA218.6	>0.25&<5	<0.25	6.63	<0.25
Metals	Copper	ug/L	EPA200.8	155	28.9	45.2	136
Metals	Iron	ug/L	EPA200.8	2580	980	586	575
Metals	Lead	ug/L	EPA200.8	20.9	4.18	2.2	5.54
Metals	Mercury	ug/L	EPA245.1	<0.1	<0.1	<0.1	<0.1
Metals	Nickel	ug/L	EPA200.8	7.56	3.81	5.25	12.2
Metals	Selenium	ug/L	EPA200.8	1.23	1.25	5.73*	1.45
Metals	Silver	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Thallium	ug/L	EPA200.8	<0.1	<0.1	<0.1	<0.1
Metals	Zinc	ug/L	EPA200.8	422	127	144	459
Organophosphate Pesticides	Atrazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Chlorpyrifos	ug/L	EPA507	<0.02	<0.02	<0.02	<0.02
Organophosphate Pesticides	Cyanazine	ug/L	EPA507	<0.7	<0.667	<0.667	<0.667
Organophosphate Pesticides	Diazinon	ug/L	EPA507	<0.003	<0.003	<0.003	<0.003
Organophosphate Pesticides	Malathion	ug/L	EPA507	<0.4	<0.67	<0.67	<0.33
Organophosphate Pesticides	Malathion	ug/L	EPA625	NS	NS	NS	NS
Organophosphate Pesticides	Prometryn	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Organophosphate Pesticides	Simazine	ug/L	EPA507	<0.7	<0.67	<0.67	<0.67
Polychlorinated Biphenyls	PCB-1016 (Aroclor 1016)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1221 (Aroclor 1221)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1232 (Aroclor 1232)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1242 (Aroclor 1242)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1248 (Aroclor 1248)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1254 (Aroclor 1254)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Polychlorinated Biphenyls	PCB-1260 (Aroclor 1260)	ug/L	EPA608	<0.065	<0.065	<0.065	<0.065
Semivolatile Organic Compounds (Acids)	2-4-6-Trichlorophenol	ug/L	EPA625	<0.4	<3.3	<3.3	<3.3
Semivolatile Organic Compounds (Acids)	2-4-Dichlorophenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Acids)	2-4-Dimethylphenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-4-Dinitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	2-Chlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	2-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1

Appendix B.2. 2009-2010 Annual Report Mass Emission and Tributary Dry Weather Concentration

Group	Parameter Code	Units	Analysis_Method	Dominguez Channel @ 116th Street TS24 2009-10Event02 07/14/2009	Dominguez Channel @ 116th Street TS24 2009-10Event12 09/15/2009	Dominguez Channel @ 116th Street TS24 2009-10Event14 12/01/2009	Dominguez Channel @ 116th Street TS24 2009-10Event28 03/23/2010
Semivolatile Organic Compounds (Acids)	4-Chloro-3-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	4-Nitrophenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Acids)	Pentachlorophenol	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Acids)	Phenol	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-4-Trichlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Benzanthracene	ug/L	EPA625	<0.03	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	1-2-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-2-Diphenylhydrazine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-3-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	1-4-Dichlorobenzene	ug/L	EPA625	<0.2	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-4-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-6-Dinitrotoluene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	2-Chloroethyl vinyl ether	ug/L	EPA625	NS	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	2-Chloronaphthalene	ug/L	EPA625	<3.4	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	3-3-Dichlorobenzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-6-Dinitro-2-methylphenol	ug/L	EPA625	<1	<1	<1	<1
Semivolatile Organic Compounds (Base/Neutral)	4-Bromophenyl phenyl ether	ug/L	EPA625	<0.4	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	4-Chlorophenyl phenyl ether	ug/L	EPA625	<0.04	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Acenaphthylene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Anthracene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzidine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(a)pyrene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(k)fluoranthene	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Benzo(g,h-i)perylene	ug/L	EPA625	<0.2	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethoxy) methane	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroethyl) ether	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Chloroisopropyl) ether	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Bis(2-Ethylhexyl) phthalate	ug/L	EPA625	77.3	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Butyl benzyl phthalate	ug/L	EPA625	<0.1	<3.33	<3.33	<3.33
Semivolatile Organic Compounds (Base/Neutral)	Chrysene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Dibenzo(a-h)anthracene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Diethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Dimethyl phthalate	ug/L	EPA625	<0.7	<0.67	<0.67	<0.67
Semivolatile Organic Compounds (Base/Neutral)	Fluoranthene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Fluorene	ug/L	EPA625	<0.04	<0.033	<0.033	<0.033
Semivolatile Organic Compounds (Base/Neutral)	Hexachloro-cyclopentadiene	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachlorobutadiene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Hexachloroethane	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Indeno(1-2-3-c-d)pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Isophorone	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-di-n-propyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-dimethyl amine	ug/L	EPA625	<1.7	<1.67	<1.67	<1.67
Semivolatile Organic Compounds (Base/Neutral)	N-Nitroso-diphenyl amine	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Naphthalene	ug/L	EPA625	<0.07	<0.067	<0.067	<0.067
Semivolatile Organic Compounds (Base/Neutral)	Nitrobenzene	ug/L	EPA625	<0.4	<0.33	<0.33	<0.33
Semivolatile Organic Compounds (Base/Neutral)	Phenanthrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	Pyrene	ug/L	EPA625	<0.02	<0.017	<0.017	<0.017
Semivolatile Organic Compounds (Base/Neutral)	di-n-Butyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS
Semivolatile Organic Compounds (Base/Neutral)	di-n-Octyl phthalate	ug/L	EPA625	<3.4	NS	NS	NS

Values reported with a "<" are not detected (ND) at the method detection level, and reported as <MDL

Values reported with a "<" and a ">" were detected but not quantified (DNQ) between the method detection limit and reporting limit, they are

QNS = Quantity Not Sufficient

APPENDIX B

***Monitoring Results for Mass Emission
and Tributary Monitoring Sites***

Appendix B

2008-2009 Sampling Results for Ballona Creek

WEATHER CONDITION					Wet											Dry		
STATION NO.					S01	S01	S01	S01	S01	S01	S01	S01	S01	S01	S01	S01	S01	
STATION NAME					Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	Ballona Creek	
EVENT CODE					2008-09Event03	2008-09Event06	2008-09Event09	2008-09Event18	2008-09Event21	2008-09Event22	2008-09Event23	2008-09Event24	2008-09Event26	2008-09Event15	2008-09Event30	2008-09Event36		
DATE	Sample Type	EPA Method	PQL ³	Units	11/4/2008	11/25/2008	12/15/2008	12/24/2008	1/23/2009	2/5/2009	2/8/2009	2/13/2009	2/16/2009	3/4/2009	1/12/2009	3/24/2009	5/11/2009	
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Polychlorinated Biphenyls																		
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Organophosphate Pesticides																		
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Herbicides																		
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Other																		
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.2	0.86	0.402	0.2	0.86	0.402	0.2	0.86	0.402	0.2	0.86	0.402	0.2	
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Malibu Creek

WEATHER CONDITION STATION NO. STATION NAME					Wet										Dry		
					S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek	S02 Malibu Creek
EVENT CODE	Sample	EPA	PQL ³	Units	2008-09Event03 11/4/2008	2008-09Event06 11/25/2008	2008-09Event09 12/15/2008	2008-09Event11 12/24/2008	2008-09Event18 1/23/2009	2008-09Event21 2/5/2009	2008-09Event22 2/8/2009	2008-09Event23 2/13/2009	2008-09Event24 2/16/2009	2008-09Event26 3/4/2009	2008-09Event15 1/12/2009	2008-09Event30 3/23/2009	2008-09Event36 5/11/2009
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls																	
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides																	
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Herbicides																	
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Other																	
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.11	0.24	0.186	-99	-99	-99	-99	-99	-99	-99	-99	1.1	-99
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99

- Note:
 1) blank cell indicates sample was not analyzed
 2) -99 indicates concentration below minimum detection level
 3) PQL = minimum level
 4) Highlighted cells show exceedances

Appendix B

2008-2009 Sampling Results for Los Angeles River

					Mass Emission Monitoring													
WEATHER CONDITION					Wet										Dry			
STATION NO.					S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10		
STATION NAME					Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River	Los Angeles River		
EVENT CODE	Sample Type	EPA Method	PQL ³	Units	2008-09Event03	2008-09Event06	2008-09Event09	2008-09Event10	2008-09Event11	2008-09Event18	2008-09Event21	2008-09Event22	2008-09Event23	2008-09Event24	2008-09Event26	2008-09Event15	2008-09Event30	2008-09Event36
DATE					11/04/2008	11/25/2008	12/15/2008	12/21/2008	12/24/2008	01/23/2009	02/05/2009	02/08/2009	02/13/2009	02/16/2009	03/04/2009	01/12/2009	03/23/2009	05/11/2009
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99					-99		-99			-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Polychlorinated Biphenyls																		
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99					-99		-99			-99	-99	-99
Organophosphate Pesticides																		
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99					-99		-99			-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99					-99		-99			-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Herbicides																		
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99					-99		-99			-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99					-99		-99			-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99					-99		-99			-99	-99	-99
Other																		
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.74	0.88					-99		0.32			0.16	0.63	0.12
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99					-99		-99			-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99					-99		-99			-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Coyote Creek

					Mass Emission Monitoring													
WEATHER CONDITION					Wet										Dry			
STATION NO.					S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13		
STATION NAME					Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek	Coyote Creek		
EVENT CODE	Sample Type	EPA Method	PQL ³	Units	2008-09Event03	2008-09Event06	2008-09Event09	2008-09Event10	2008-09Event11	2008-09Event18	2008-09Event21	2008-09Event22	2008-09Event23	2008-09Event24	2008-09Event26	2008-09Event15	2008-09Event30	2008-09Event36
DATE					11/04/2008	11/25/2008	12/15/2008	12/21/2008	12/24/2008	01/23/2009	02/05/2009	02/08/2009	02/13/2009	02/16/2009	03/04/2009	01/12/2009	03/23/2009	05/11/2009
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Polychlorinated Biphenyls																		
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Organophosphate Pesticides																		
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Herbicides																		
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Other																		
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.74	0.52	0.4				-99		0.14			-99	-99	-99
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99				-99		-99			-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99				-99		-99			-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for San Gabriel River

					Mass Emission Monitoring												
WEATHER CONDITION					Wet										Dry		
STATION NO.					S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14
STATION NAME					San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River	San Gabriel River
EVENT CODE	Sample	EPA	PQL ³	Units	2008-09Event03	2008-09Event06	2008-09Event09	2008-09Event11	2008-09Event18	2008-09Event21	2008-09Event22	2008-09Event23	2008-09Event24	2008-09Event26	2008-09Event15	2008-09Event30	2008-09Event36
DATE	Type	Method			11/04/2008	11/26/2008	12/15/2008	12/24/2008	01/23/2009	02/05/2009	02/08/2009	02/13/2009	02/16/2009	03/04/2009	01/12/2009	03/23/2009	05/11/2009
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Polychlorinated Biphenyls																	
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Organophosphate Pesticides																	
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Herbicides																	
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Other																	
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	1.18	0.38	-99			-99			0.13		0.4	0.46	0.48
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99			-99		-99			-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99			-99		-99			-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Dominguez Channel

Mass Emission Monitoring

WEATHER CONDITION STATION NO. STATION NAME					Wet								Dry				
					S28	S28	S28	S28	S28	S28	S28	S28	S28	S28	S28	S28	
EVENT CODE	Sample	EPA	PQL ³	Units	Dominguez Channel 2008-09Event03	Dominguez Channel 2008-09Event06	Dominguez Channel 2008-09Event09	Dominguez Channel 2008-09Event10	Dominguez Channel 2008-09Event11	Dominguez Channel 2008-09Event18	Dominguez Channel 2008-09Event21	Dominguez Channel 2008-09Event22	Dominguez Channel 2008-09Event23	Dominguez Channel 2008-09Event24	Dominguez Channel 2008-09Event15	Dominguez Channel 2008-09Event30	Dominguez Channel 2008-09Event36
DATE	Type	Method			11/4/2008	11/25/2008	12/15/2008	12/21/2008	12/24/2008	1/23/2009	2/5/2009	2/8/2009	2/13/2009	2/16/2009	1/12/2009	3/23/2009	5/11/2009
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls																	
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides																	
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Herbicides																	
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Other																	
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.44	0.79	0.299	-99	-99	-99	-99	-99	0.27	-99	0.11	0.17	0.23
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Santa Clara River

					Mass Emission Monitoring						
WEATHER CONDITION					Wet				Dry		
STATION NO.					S29	S29	S29	S29	S29	S29	S29
STATION NAME					Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River
EVENT CODE	Sample	EPA	PQL ³	Units	2008-09Event06	2008-09Event09	2008-09Event21	2008-09Event23	2008-09Event15	2008-09Event30	2008-09Event36
DATE	Type	Method			11/26/2008	12/15/2008	2/5/2009	2/13/2009	1/12/2009	3/24/2009	5/11/2009
Conventional											
Oil and Grease	Grab	EPA1664A / EPA413.1	1	mg/L	0.7	-99	1.8	2	-99	1.1	-99
Total Phenols	Grab	EPA420.1	0.10	mg/L	-99	-99	-99	-99	-99	-99	-99
Cyanide	Grab	SM4500-CNE	0.01	mg/L	-99	-99	-99	-99	-99	0.012	0.008
pH	Comp	SM4500H B	0.00	NONE	6.7	7.96	7.13	7.25	7.88	7.92	7.5
Dissolved Oxygen	Grab	SM4500 (OG)	1.00	mg/L	10.8	11.7	11.5	11.8	9.6	8.79	10.5
Indicator Bacteria											
Total Coliform	Grab	SM9221B/SM9221E	20.00	MPN/100ml	300000	90000	50000	160000	3000	1110	3000
Fecal Coliform	Grab	SM9221E/SM9221B	20.00	MPN/100ml	9000	16000	3000	5000	40	230	800
Streptococcus	Grab	SM9230B	20.00	MPN/100ml	160000	24000	9000	16000	20	230	800
Enterococcus	Grab	SM9230B	20.00	MPN/100ml	160000	24000	9000	16000	20	130	80
General											
Chloride	Comp	SM4110B	2.00	mg/L	23.7	17.1	13.5	15.8	109	107	104
Fluoride	Comp	SM4110B	0.10	mg/L	0.05	-99	-99	-99	0.56	0.51	0.35
Nitrate	Comp	SM4110B	0.10	mg/L	4.41	3.74	3.72	2.77	6.24	7.82	7.88
Sulfate	Comp	SM4110B	1.00	mg/L	35	27.3	22.8	33.6	200	191	189
Alkalinity	Comp	SM2320B	1.00	mg/L	50	50	55	48	289	262	261
Hardness	Comp	SM2340C	2.00	mg/L	85	90	70	70	410	390	416
COD	Comp	SM5220D	10.00	mg/L	37.3	67.7	33.7	20.8	59.1	46.6	93.4
Total Petroleum Hydrocarbons	Grab	EPA418.1	1.00	mg/L	0.62	-99	0.75	0.75	-99	-99	-99
Specific Conductance	Comp	SM2510B	1.00	umhos/cm	265	220	204	229	1220	1212	1263
Total Dissolved Solids	Comp	SM2540C	2.00	mg/L	174	136	136	130	810	802	764
Turbidity	Comp	SM2130B	0.10	NTU	216	202	25.4	87.7	0.6	1.01	0.58
Total Suspended Solids	Comp	SM2540D	1.00	mg/L	518	1983	718	644	3	5	5
Volatile Suspended Solids	Comp	SM2540E	1.00	mg/L	79	364	101	86	-99	2	2
MBAS	Comp	SM5540-C	0.05	mg/L	0.05	-99	-99	-99	-99	0.07	0.07
Total Organic Carbon	Comp	SM5310B / EPA415.1		mg/L	8.92	10.6	5.79	3.63	1.66	2.05	1.8
BOD	Comp	SM5210B	2.00	mg/L	10.7	8.3	6.52	6.27	-99	-99	-99
Methyl Tertiary Butyl Ether (MTBE)	Grab	EPA624	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Nutrients											
Dissolved Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.14	0.28	0.36	0.14	-99	0.218	0.22
Total Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.92	0.94	0.68	0.76	-99	0.219	0.22
NH3-N	Comp	SM4500-NH3 F	0.10	mg/L	0.15	0.15	-99	-99	-99	-99	-99
Nitrate - N	Comp	SM4110B	0.50	mg/L	1	0.84	0.84	0.63	1.41	1.77	1.78
Nitrite - N	Comp	SM4110B	0.03	mg/L	-99	-99	-99	-99	-99	-99	-99
Kjeidahl-N	Comp	SM4500-NHorg C	0.10	mg/L	0.97	1.42	0.45	0.7	0.38	0.712	0.4
Metals											
Dissolved Aluminum	Comp	EPA200.8	100.00	ug/L	-99	-99	-99	752	-99	-99	-99
Total Aluminum	Comp	EPA200.8	100.00	ug/L	171	5800	5430	7690	-99	-99	-99
Dissolved Antimony	Comp	EPA200.8	0.50	ug/L	0.72	0.66	0.69	0.57	-99	0.25	0.21
Total Antimony	Comp	EPA200.8	0.50	ug/L	1.34	1.05	1.52	0.99	0.2	0.26	0.21
Dissolved Arsenic	Comp	EPA200.8	1.00	ug/L	1.31	1.32	1.08	0.85	1.22	1.35	1.24
Total Arsenic	Comp	EPA200.8	1.00	ug/L	4.17	4.33	4.18	2.82	1.25	1.43	1.5
Dissolved Barium	Comp	EPA200.8	10.00	ug/L	29.2	31.3	19.5	23.7	53.8	62.2	56.6
Total Barium	Comp	EPA200.8	10.00	ug/L	273	495	401	126	57.9	64.9	61.9
Dissolved Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Total Beryllium	Comp	EPA200.8	0.50	ug/L	0.63	1.13	0.92	0.5	-99	-99	-99
Dissolved Cadmium	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	0.11	-99	-99
Total Cadmium	Comp	EPA200.8	0.25	ug/L	1.23	1.28	1.3	0.35	0.12	-99	-99
Dissolved Chromium	Comp	EPA200.8	0.50	ug/L	1.1	0.87	1.49	1.87	3.16	2.58	2.33
Total Chromium	Comp	EPA200.8	0.50	ug/L	33.9	46.4	41.9	17.1	4.11	2.9	2.94
Dissolved Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	-99	0.34	0.28	-99	-99	-99
Total Chromium +6	Comp	EPA218.6	0.25	ug/L	0.11	-99	0.34	0.28	-99	-99	-99
Dissolved Copper	Comp	EPA200.8	0.50	ug/L	5.26	3.82	4.21	3.7	0.99	1.71	1.64
Total Copper	Comp	EPA200.8	0.50	ug/L	51.7	39.6	49	24.6	4.41	7.92	6.78
Dissolved Iron	Comp	EPA200.8	100.00	ug/L	314	171	173	434	-99	-99	-99
Total Iron	Comp	EPA200.8	100.00	ug/L	31000	44400	39600	12100	73.7	83.9	96.6
Dissolved Lead	Comp	EPA200.8	0.50	ug/L	1.14	2.35	1.15	1.57	-99	-99	-99
Total Lead	Comp	EPA200.8	0.50	ug/L	27.7	110	53.8	15.3	0.29	0.68	0.43
Dissolved Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Total Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Dissolved Nickel	Comp	EPA200.8	1.00	ug/L	3.15	1.76	3.44	1.94	10.2	10.9	10.9
Total Nickel	Comp	EPA200.8	1.00	ug/L	27.9	27.9	31	11.9	10.8	11.6	11.6
Dissolved Selenium	Comp	EPA200.8	1.00	ug/L	-99	-99	-99	-99	2.24	2	2.33
Total Selenium	Comp	EPA200.8	1.00	ug/L	-99	-99	0.78	-99	2.92	2.27	2.63
Dissolved Silver	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Santa Clara River

					Mass Emission Monitoring						
WEATHER CONDITION					Wet				Dry		
STATION NO.					S29	S29	S29	S29	S29	S29	S29
STATION NAME					Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara
					River	River	River	River	River	River	River
EVENT CODE					2008-09Event06	2008-09Event09	2008-09Event21	2008-09Event23	2008-09Event15	2008-09Event30	2008-09Event36
DATE					11/26/2008	12/15/2008	2/5/2009	2/13/2009	1/12/2009	3/24/2009	5/11/2009
Sample	EPA	PQL ³	Units								
Type	Method										
Total Silver	Comp	EPA200.8	0.25	ug/L	0.41	0.13	0.39	0.1	-99	-99	-99
Dissolved Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Total Thallium	Comp	EPA200.8	0.50	ug/L	-99	0.37	0.39	0.12	-99	-99	-99
Dissolved Zinc	Comp	EPA200.8	10.00	ug/L	12.8	16.3	27.2	12.2	9.23	10.6	6.59
Total Zinc	Comp	EPA200.8	10.00	ug/L	163	168	170	80.1	11.1	17.2	19.9
Semi-Volatiles Organics (EPA 625)											
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Base/Neutral											
Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
1,2-Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
3,4-Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99
2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99
2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
4,6 Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99
Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Chlorinated Pesticides											

Appendix B

2008-2009 Sampling Results for Santa Clara River

					Mass Emission Monitoring						
WEATHER CONDITION					Wet				Dry		
STATION NO.					S29	S29	S29	S29	S29	S29	S29
STATION NAME					Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River	Santa Clara River
EVENT CODE	Sample	EPA	PQL ³	Units	2008-09Event06	2008-09Event09	2008-09Event21	2008-09Event23	2008-09Event15	2008-09Event30	2008-09Event36
DATE	Type	Method			11/26/2008	12/15/2008	2/5/2009	2/13/2009	1/12/2009	3/24/2009	5/11/2009
Aldrin		EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls											
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides											
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Herbicides											
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
Other											
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.18	0.18	-99	-99	-99	-99	-99
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99

- Note:
 1) blank cell indicates sample was not analyzed
 2) -99 indicates concentration below minimum detection level
 3) PQL = minimum level
 4) Highlighted cells show exceedances

					Wet					Dry		
					TS19	TS19	TS19	TS19	TS19	TS19	TS19	TS19
					Dominguez Channel-TRIB - Project No. 1232 2008-09Event03	Dominguez Channel-TRIB - Project No. 1232 2008-09Event06	Dominguez Channel-TRIB - Project No. 1232 2008-09Event09	Dominguez Channel-TRIB - Project No. 1232 2008-09Event21	Dominguez Channel-TRIB - Project No. 1232 2008-09Event23	Dominguez Channel-TRIB - Project No. 1232 2008-09Event16	Dominguez Channel-TRIB - Project No. 1232 2008-09Event30	Dominguez Channel-TRIB - Project No. 1232 2008-09Event36
WEATHER CONDITION	STATION NO.	STATION NAME	EVENT CODE	DATE	11/04/2008	11/25/2008	12/15/2008	02/05/2009	02/13/2009	01/13/2009	03/23/2009	05/11/2009
	Sample Type	EPA Method	PQL ³	Units								
Tributary Monitoring												
Conventional												
Oil and Grease	Grab	EPA1664A / EPA413.1	1	mg/L	1.5	3.1	3.5	7.3	2.9	-99	-99	0.5
Total Phenols	Grab	EPA420.1	0.10	mg/L	-99	-99	-99	-99	-99	-99	-99	-99
Cyanide	Grab	SM4500-CNE	0.01	mg/L	0.011	-99.000	-99.000	-99	0.007	-99	-99	-99
pH	Comp	SM4500H B	0.00	NONE	6.52	6.35	6.97	6.79	6.95	8.25	8.17	8.73
Dissolved Oxygen	Grab	SM4500 (OG)	1.00	mg/L	9.09	10.50	10.10	8.41	12.3	16.1	11.3	12.6
Indicator Bacteria												
Total Coliform	Grab	SM9221B/SM9221E	20.00	MPN/100ml	300000	90000	240000	300000	160000	5000	90000	90000
Fecal Coliform	Grab	SM9221E/SM9221B	20.00	MPN/100ml	90000	24000	160000	90000	2200	500	24000	9000
Streptococcus	Grab	SM9230B	20.00	MPN/100ml	900000	900000	300000	900000	16000	40	9000	2400
Enterococcus	Grab	SM9230B	20.00	MPN/100ml	170000	900000	300000	900000	5000	40	9000	2400
General												
Chloride	Comp	SM4110B	2.00	mg/L	26.6	21.8	24	24	16.2	155	160	186
Fluoride	Comp	SM4110B	0.10	mg/L	0.47	0.17	0.13	0.21	-99	0.74	0.96	1.07
Nitrate	Comp	SM4110B	0.10	mg/L	2.79	1.95	8.26	2.44	2.38	0.93	1.79	1.52
Sulfate	Comp	SM4110B	1.00	mg/L	35.3	22.1	29.6	27	13	199	214	295
Alkalinity	Comp	SM2320B	1.00	mg/L	50	33	33	41	34	103	127	117
Hardness	Comp	SM2340C	2.00	mg/L	90	55	60	55	30	295	295	372
COD	Comp	SM5220D	10.00	mg/L	112	67.1	60.2	50.5	133	62.7	675	117
Total Petroleum Hydrocarbons	Grab	EPA418.1	1.00	mg/L	2	4	2.12	9.37	0.87	-99	-99	-99
Specific Conductance	Comp	SM2510B	1.00	umhos/cm	274	191	263	233	138	1378	1388	1670
Total Dissolved Solids	Comp	SM2540C	2.00	mg/L	164	120	150	148	90	792	846	1036
Turbidity	Comp	SM2130B	0.10	NTU	6.69	9.11	8.77	6.44	9.11	2.14	1.83	2.69
Total Suspended Solids	Comp	SM2540D	1.00	mg/L	954	292	67	215	236	20	92	18
Volatile Suspended Solids	Comp	SM2540E	1.00	mg/L	309	101	20	89	84	5	44	9
MBAS	Comp	SM5540-C	0.05	mg/L	0.64	0.71	0.65	0.47	-99	0.2	0.75	0.33
Total Organic Carbon	Comp	SM5310B / EPA415.1		mg/L	31.5	15.4	15.2	11.7	8.77	8.88	33	22.1
BOD	Comp	SM5210B	2.00	mg/L	39.2	32.6	18.5	13.4	21.1	8.41	12.4	11.3
Methyl Tertiary Butyl Ether (MTBE)	Grab	EPA624	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Nutrients												
Dissolved Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.26	0.2	0.29	0.33	0.06	-99	0.12	-99
Total Phosphorus	Comp	SM4500-PE	0.05	mg/L	1.09	0.25	0.5	0.58	0.55	-99	0.31	0.2
NH3-N	Comp	SM4500-NH3 F	0.10	mg/L	1.68	2.28	0.63	-99	0.3	-99	0.23	0.11
Nitrate - N	Comp	SM4110B	0.50	mg/L	0.63	0.44	1.86	0.55	0.54	0.21	0.4	0.34
Nitrite - N	Comp	SM4110B	0.03	mg/L	0.24	0.32	-99	-99	-99	-99	-99	-99
Kjeldahl-N	Comp	SM4500-NHorg C	0.10	mg/L	3.76	5.24	1.78	1.27	1.04	0.62	4.7	1.76
Metals												
Dissolved Aluminum	Comp	EPA200.8	100.00	ug/L	64	-99	-99	-99	241	-99	-99	-99
Total Aluminum	Comp	EPA200.8	100.00	ug/L	1150	255	243	580	1990	-99	-99	91.2
Dissolved Antimony	Comp	EPA200.8	0.50	ug/L	3.25	1.72	1.83	2.24	1.78	1.03	2.3	1.19
Total Antimony	Comp	EPA200.8	0.50	ug/L	6.8	3.98	2.81	4.29	3.57	1.08	2.37	1.25
Dissolved Arsenic	Comp	EPA200.8	1.00	ug/L	2.12	1.21	1.77	1.53	1.15	2.33	3.2	4.21
Total Arsenic	Comp	EPA200.8	1.00	ug/L	6.2	2.14	2.32	2.73	2.11	2.4	3.23	4.22
Dissolved Barium	Comp	EPA200.8	10.00	ug/L	38.1	22.7	22.2	23.4	21.8	94.7	95.9	91.9
Total Barium	Comp	EPA200.8	10.00	ug/L	319	96.3	55.2	102	105	101	96.1	102
Dissolved Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Beryllium	Comp	EPA200.8	0.50	ug/L	0.29	-99	-99	0.13	0.13	-99	-99	-99
Dissolved Cadmium	Comp	EPA200.8	0.25	ug/L	0.38	-99	0.2	0.11	0.16	0.24	-99	-99
Total Cadmium	Comp	EPA200.8	0.25	ug/L	2.81	0.81	0.47	1.49	0.73	0.24	-99	-99
Dissolved Chromium	Comp	EPA200.8	0.50	ug/L	3.56	1.75	2.88	2.08	2.46	0.84	0.87	4.14
Total Chromium	Comp	EPA200.8	0.50	ug/L	32.3	8.71	8.02	14.2	12.6	1.03	1.13	5.19
Dissolved Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	-99	0.67	0.36	0.62	-99	-99	-99
Total Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	-99	0.67	0.36	0.62	-99	-99	-99
Dissolved Copper	Comp	EPA200.8	0.50	ug/L	28.7	13.6	15	10	11.9	9.46	15.9	7.65
Total Copper	Comp	EPA200.8	0.50	ug/L	235	59.4	36.5	60.9	45.2	12.9	24.4	13.2
Dissolved Iron	Comp	EPA200.8	100.00	ug/L	786	124	85.7	88.5	210	56.3	70.9	72.9
Total Iron	Comp	EPA200.8	100.00	ug/L	12300	2420	2110	4310	4060	156	125	271
Dissolved Lead	Comp	EPA200.8	0.50	ug/L	6.95	1.47	2.31	1.36	3.04	0.36	0.32	0.4
Total Lead	Comp	EPA200.8	0.50	ug/L	97.6	31.2	16.3	33.1	31.2	0.87	0.89	1.35
Dissolved Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	0.18	0.16	-99	-99
Dissolved Nickel	Comp	EPA200.8	1.00	ug/L	10.2	5.97	5.04	3.75	2.9	4.35	7.85	7.16
Total Nickel	Comp	EPA200.8	1.00	ug/L	30.4	13.3	8.03	11.1	9.12	4.78	8.24	8.45
Dissolved Selenium	Comp	EPA200.8	1.00	ug/L	0.61	-99	-99	-99	-99	2.14	2.61	2.39
Total Selenium	Comp	EPA200.8	1.00	ug/L	0.91	1.28	0.67	-99	-99	2.17	3.11	2.98
Dissolved Silver	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Silver	Comp	EPA200.8	0.25	ug/L	0.65	-99	0.4	0.21	0.19	-99	-99	-99
Dissolved Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dissolved Zinc	Comp	EPA200.8	10.00	ug/L	141	130	158	129	112	31.8	50	53.3
Total Zinc	Comp	EPA200.8	10.00	ug/L	1540	414	282	416	306	35.9	50.8	68.9
Semi-Volatiles Organics (EPA 625)												
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Dominguez Channel-TRJB - Project No. 1232 (TS19)

					Tributary Monitoring										
					Wet					Dry					
					TS19	TS19	TS19	TS19	TS19	TS19	TS19	TS19	TS19		
					Dominguez Channel-TRIB - Project No. 1232 2008-09Event03	Dominguez Channel-TRIB - Project No. 1232 2008-09Event06	Dominguez Channel-TRIB - Project No. 1232 2008-09Event09	Dominguez Channel-TRIB - Project No. 1232 2008-09Event21	Dominguez Channel-TRIB - Project No. 1232 2008-09Event23	Dominguez Channel-TRIB - Project No. 1232 2008-09Event16	Dominguez Channel-TRIB - Project No. 1232 2008-09Event30	Dominguez Channel-TRIB - Project No. 1232 2008-09Event36			
WEATHER CONDITION	STATION NO.	STATION NAME	EVENT CODE	Sample	EPA	PQL ³	Units	11/04/2008	11/25/2008	12/15/2008	02/05/2009	02/13/2009	01/13/2009	03/23/2009	05/11/2009
				2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Base/Neutral											
				Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				1,2-Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
				3,4-Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99
				Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99
				2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99
				2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
				1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
				1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99
				3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				4,6-Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99
				Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99
				Chlorinated Pesticides											
				Aldrin		EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99
				4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99
				Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99
				Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Dominguez Channel-TRJB - Project No. 1232 (TS19)

					Tributary Monitoring											
					Wet					Dry						
					TS19	TS19	TS19	TS19	TS19	TS19	TS19	TS19	TS19			
					Dominguez Channel-TRIB - Project No. 1232 2008-09Event03	Dominguez Channel-TRIB - Project No. 1232 2008-09Event06	Dominguez Channel-TRIB - Project No. 1232 2008-09Event09	Dominguez Channel-TRIB - Project No. 1232 2008-09Event21	Dominguez Channel-TRIB - Project No. 1232 2008-09Event23	Dominguez Channel-TRIB - Project No. 1232 2008-09Event16	Dominguez Channel-TRIB - Project No. 1232 2008-09Event30	Dominguez Channel-TRIB - Project No. 1232 2008-09Event36				
WEATHER CONDITION	STATION NO.	STATION NAME	EVENT CODE	DATE	Sample Type	EPA Method	PQL ³	Units	11/04/2008	11/25/2008	12/15/2008	02/05/2009	02/13/2009	01/13/2009	03/23/2009	05/11/2009
			Heptachlor Epoxide		Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Toxaphene		Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Polychlorinated Biphenyls													
			Aroclor-1016		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Aroclor-1221		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Aroclor-1232		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Aroclor-1242		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Aroclor-1248		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Aroclor-1254		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Aroclor-1260		Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Organophosphate Pesticides													
			Chlorpyrifos		Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Diazinon		Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Prometryn		Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Atrazine		Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Simazine		Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Cyanazine		Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Malathion		Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Herbicides													
			Glyphosate		Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	12.1	-99
			2,4-D		Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			2,4,5-TP-SILVEX		Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Other													
			Ammonia		Comp	SM4500-NH3 F	0.1	mg/l	2.03	2.76	0.76	-99	0.37	-99	0.27	0.13
			Endrin ketone		Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
			Methoxychlor		Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - PD 669 (TS20)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME					Wet					Dry		
					TS20 Dominguez Channel TRIB - PD 669 2008-09Event03 11/04/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event06 11/25/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event09 12/15/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event21 02/05/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event23 02/13/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event16 01/13/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event30 03/23/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event36 05/11/2009
EVENT CODE	Sample Type	EPA Method	PQL ³	Units								
DATE												
Conventional												
Oil and Grease	Grab	EPA1664A / EPA413.1	1	mg/L	1.1	1	3.7	3.9	4.1	0.4	-99	0.4
Total Phenols	Grab	EPA420.1	0.10	mg/L	-99	-99	-99	-99	-99	-99	-99	-99
Cyanide	Grab	SM4500-CNE	0.01	mg/L	0.011	-99	-99	-99	-99	-99	0.007	0.006
pH	Comp	SM4500H B	0.00	NONE	6.6	7.15	7.9	7.41	8.8	8.43	8.07	8.75
Dissolved Oxygen	Grab	SM4500 (OG)	1.00	mg/L	9.24	10.7	10.6	9.56	11.2	17.7	15.4	15.8
Indicator Bacteria												
Total Coliform	Grab	SM9221B/SM9221E	20.00	MPN/100ml	1600000	160000	160000	160000	500000	90000	240000	230
Fecal Coliform	Grab	SM9221E/SM9221B	20.00	MPN/100ml	50000	9000	30000	16000	22000	2800	5000	20
Streptococcus	Grab	SM9230B	20.00	MPN/100ml	240000	170000	240000	350000	50000	170	230	230
Enterococcus	Grab	SM9230B	20.00	MPN/100ml	240000	35000	240000	350000	50000	170	230	230
General												
Chloride	Comp	SM4110B	2.00	mg/L	76.6	174	3625	60	56.3	1193	975	1302
Fluoride	Comp	SM4110B	0.10	mg/L	0.24	0.12	0.18	-99	-99	0.51	0.89	1.59
Nitrate	Comp	SM4110B	0.10	mg/L	9.26	7.47	5	5.26	2.74	1.09	2.74	2.01
Sulfate	Comp	SM4110B	1.00	mg/L	155	349	820	107	102	2513	1990	2641
Alkalinity	Comp	SM2320B	1.00	mg/L	33	55	72	41	63	199	176	261
Hardness	Comp	SM2340C	2.00	mg/L	110	190	1315	95	75	1370	1050	1652
COD	Comp	SM5220D	10.00	mg/L	69.3	67.6	343	53.6	50.9	124	268	197
Total Petroleum Hydrocarbons	Grab	EPA418.1	1.00	mg/L	0.75	1.5	0.75	1.62	2.25	-99	-99	-99
Specific Conductance	Comp	SM2510B	1.00	umhos/cm	687	1162	10820	562	518	9750	7080	10830
Total Dissolved Solids	Comp	SM2540C	2.00	mg/L	426	778	6920	328	304	6384	4630	7380
Turbidity	Comp	SM2130B	0.10	NTU	4.54	25.4	6.22	11.5	12.2	18.9	3.41	1.36
Total Suspended Solids	Comp	SM25400D	1.00	mg/L	238	71	75	115	174	18	187	171
Volatile Suspended Solids	Comp	SM2540E	1.00	mg/L	56	23	15	24	49	8	44	69
MBAS	Comp	SM5540-C	0.05	mg/L	0.66	0.31	0.37	0.35	0.27	0.43	1	0.32
Total Organic Carbon	Comp	SM5310B / EPA415.1		mg/L	16.8	12.9	10.9	9.48	8.07	14.1	46.8	27.1
BOD	Comp	SM5210B	2.00	mg/L	13.6	11.9	7.5	6.72	7.67	6.1	82.4	10.8
Methyl Tertiary Butyl Ether (MTBE)	Grab	EPA624	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Nutrients												
Dissolved Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.2	-99	0.22	0.36	0.12	-99	0.11	0.1
Total Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.59	0.34	0.45	0.43	0.39	0.1	0.24	0.12
NH3-N	Comp	SM4500-NH3 F	0.10	mg/L	0.42	0.27	0.29	-99	0.15	-99	0.57	-99
Nitrate - N	Comp	SM4110B	0.50	mg/L	2.09	1.67	1.13	1.19	0.62	0.25	0.67	0.45
Nitrite - N	Comp	SM4110B	0.03	mg/L	-99	0.03	-99	-99	-99	-99	0.27	-99
Kjeidahl-N	Comp	SM4500-NHorg C	0.10	mg/L	0.64	1.44	0.74	0.97	1	1.48	4.54	3.02
Metals												
Dissolved Aluminum	Comp	EPA200.8	100.00	ug/L	-99	-99	-99	-99	128	-99	-99	-99
Total Aluminum	Comp	EPA200.8	100.00	ug/L	378	213	167	292	1390	-99	74.4	250
Dissolved Antimony	Comp	EPA200.8	0.50	ug/L	1.36	1.07	0.84	1.1	0.98	1.12	2.22	1.55
Total Antimony	Comp	EPA200.8	0.50	ug/L	2.88	1.68	1.51	1.8	1.9	1.22	2.25	1.6
Dissolved Arsenic	Comp	EPA200.8	1.00	ug/L	1.74	1.97	8.98	1.53	1.68	4.48	5.5	6.96
Total Arsenic	Comp	EPA200.8	1.00	ug/L	2.58	2.74	9.87	2	2.13	4.69	5.59	7.38
Dissolved Barium	Comp	EPA200.8	10.00	ug/L	19.3	28	28.4	19	19.6	48.3	59.9	57.8
Total Barium	Comp	EPA200.8	10.00	ug/L	76.2	54.4	44.9	44.6	52.2	52.4	62.8	69.8
Dissolved Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	0.1	-99	-99	-99
Dissolved Cadmium	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	0.35	-99	-99
Total Cadmium	Comp	EPA200.8	0.25	ug/L	0.4	0.16	-99	0.21	0.25	0.38	-99	-99
Dissolved Chromium	Comp	EPA200.8	0.50	ug/L	1.7	1.51	1.77	1.81	2.08	2.11	1.48	1.72
Total Chromium	Comp	EPA200.8	0.50	ug/L	9.78	4.88	4.98	6.58	7.04	2.18	1.85	3.27
Dissolved Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	0.3	-99	0.52	0.57	-99	-99	-99
Total Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	0.3	-99	0.52	0.57	-99	-99	-99
Dissolved Copper	Comp	EPA200.8	0.50	ug/L	17.7	10.6	15.2	8.51	10.7	16	19.4	16.2
Total Copper	Comp	EPA200.8	0.50	ug/L	52	23.7	27.9	25.6	30.3	18.9	27.7	25
Dissolved Iron	Comp	EPA200.8	100.00	ug/L	219	89.9	73.9	85.5	112	50.9	83.6	56.2
Total Iron	Comp	EPA200.8	100.00	ug/L	3490	1560	1840	2340	2160	153	183	598
Dissolved Lead	Comp	EPA200.8	0.50	ug/L	1.83	0.95	1.08	1.45	0.93	0.28	0.39	0.39
Total Lead	Comp	EPA200.8	0.50	ug/L	17.8	9.75	6.25	9.02	10.3	0.75	1.04	1.82
Dissolved Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	0.16	0.12	-99
Dissolved Nickel	Comp	EPA200.8	1.00	ug/L	5.23	3.83	5.13	2.31	2.33	7.3	10.6	11.9
Total Nickel	Comp	EPA200.8	1.00	ug/L	11.4	7.45	7.25	5.61	5.21	7.81	11	13.4
Dissolved Selenium	Comp	EPA200.8	1.00	ug/L	1.55	2.04	29.2	-99	0.55	17.5	15	22.1
Total Selenium	Comp	EPA200.8	1.00	ug/L	2.36	4.26	31.6	-99	0.65	17.8	15.2	22.4
Dissolved Silver	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Silver	Comp	EPA200.8	0.25	ug/L	0.29	-99	-99	0.11	-99	-99	-99	-99
Dissolved Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dissolved Zinc	Comp	EPA200.8	10.00	ug/L	120	62.9	50.6	52.2	55.6	25.3	76.7	25.2
Total Zinc	Comp	EPA200.8	10.00	ug/L	304	168	143	113	198	32.2	79.6	47.1
Semi-Volatiles Organics (EPA 625)												
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - PD 669 (TS20)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME EVENT CODE DATE					Wet					Dry		
					TS20 Dominguez Channel TRIB - PD 669 2008-09Event03 11/04/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event06 11/25/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event09 12/15/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event21 02/05/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event23 02/13/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event16 01/13/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event30 03/23/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event36 05/11/2009
Sample Type	EPA Method	PQL ³	Units									
2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Base/Neutral												
Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2 Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
3,4 Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,6 Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chlorinated Pesticides												
Aldrin	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - PD 669 (TS20)

					Tributary Monitoring								
WEATHER CONDITION STATION NO. STATION NAME EVENT CODE DATE					Wet					Dry			
					TS20 Dominguez Channel TRIB - PD 669 2008-09Event03 11/04/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event06 11/25/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event09 12/15/2008	TS20 Dominguez Channel TRIB - PD 669 2008-09Event21 02/05/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event23 02/13/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event16 01/13/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event30 03/23/2009	TS20 Dominguez Channel TRIB - PD 669 2008-09Event36 05/11/2009	
Sample Type	EPA Method	PQL ³	Units										
Polychlorinated Biphenyls													
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Organophosphate Pesticides													
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Herbicides													
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	11.2	-99	
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Other													
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.57	0.33	0.36	-99	0.18	-99	0.69	0.11	
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	

- Note:
 1) blank cell indicates sample was not analyzed
 2) -99 indicates concentration below minimum detection level
 3) PQL = minimum level
 4) Highlighted cells show exceedances
 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - Project Nos. 5246 & 74 (TS21)

					Tributary Monitoring													
					Wet					Dry								
					TS21	TS21	TS21	TS21	TS21	TS21	TS21	TS21	TS21					
					Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event03	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event06	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event09	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event21	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event23	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event16	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event30	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event36						
					11/4/2008	11/25/2008	12/15/2008	2/5/2009	2/13/2009	1/13/2009	3/23/2009	5/11/2009						
WEATHER CONDITION	STATION NO.	STATION NAME	EPA Method	PQL ³	Units													
EVENT CODE	Sample Type	EPA Method	PQL ³	Units														
DATE	Type	Method	PQL ³	Units														
Conventional																		
Oil and Grease	Grab	EPA1664A / EPA413.1	1	mg/L	3.3	1.3	1.3	4.7	5.1	-99	-99	-99						
Total Phenols	Grab	EPA420.1	0.10	mg/L	-99	-99	-99	-99	-99	-99	-99	-99						
Cyanide	Grab	SM4500-CNE	0.01	mg/L	0.013	-99	-99	-99	-99	0.008	-99	-99						
pH	Comp	SM4500H B	0.00	NONE	6.14	6.48	6.64	6.53	7.22	8.27	8.62	8.71						
Dissolved Oxygen	Grab	SM4500 (OG)	1.00	mg/L	8.74	10.3	11.3	8.82	9.35	8.82	10.5	9.93						
Indicator Bacteria																		
Total Coliform	Grab	SM9221B/SM9221E	20.00	MPN/100ml	1600000	160000	90000	160000	240000	160000	160000	800						
Fecal Coliform	Grab	SM9221E/SM9221B	20.00	MPN/100ml	240000	9000	16000	22000	5000	340	220	230						
Streptococcus	Grab	SM9230B	20.00	MPN/100ml	1600000	160000	28000	9000	9000	230	300	500						
Enterococcus	Grab	SM9230B	20.00	MPN/100ml	1600000	160000	28000	9000	9000	230	300	220						
General																		
Chloride	Comp	SM4110B	2.00	mg/L	16.4	20.8	6.93	10.2	7.26	72	43.8	79						
Fluoride	Comp	SM4110B	0.10	mg/L	0.49	0.47	0.19	0.23	-99	0.64	0.52	0.96						
Nitrate	Comp	SM4110B	0.10	mg/L	9.58	3.87	3.39	3.34	2.4	2.73	3.87	2.5						
Sulfate	Comp	SM4110B	1.00	mg/L	41.3	41.9	12.9	19.9	17.2	159	64.2	147						
Alkalinity	Comp	SM2320B	1.00	mg/L	39	44	22	28	21	206	149	186						
Hardness	Comp	SM2340C	2.00	mg/L	200	95	40	50	40	275	180	288						
COD	Comp	SM5220D	10.00	mg/L	135	123	34.3	55.8	31.9	78.3	102	38.7						
Total Petroleum Hydrocarbons	Grab	EPA418.1	1.00	mg/L	6	2	1.62	6	4.75	1.5	-99	-99						
Specific Conductance	Comp	SM2510B	1.00	umhos/cm	246	282	108	150	116	968	600	986						
Total Dissolved Solids	Comp	SM2540C	2.00	mg/L	152	182	70	96	66	628	402	622						
Turbidity	Comp	SM2130B	0.10	NTU	6.88	16.2	6.17	11.3	23.6	3.83	1.76	1.1						
Total Suspended Solids	Comp	SM2540D	1.00	mg/L	464	402	111	270	373	50	31	44						
Volatile Suspended Solids	Comp	SM2540E	1.00	mg/L	138	135	17	62	89	18	15	23						
MBAS	Comp	SM5540-C	0.05	mg/L	0.64	0.46	0.47	0.5	0.19	0.86	0.47	0.34						
Total Organic Carbon	Comp	SM5310B / EPA415.1		mg/L	34.1	34.4	10.5	13.2	5.97	11.7	16.6	13						
BOD	Comp	SM5210B	2.00	mg/L	32.1	52.4	10.2	16.4	10.8	45.3	6.36	7.23						
Methyl Tertiary Butyl Ether (MTBE)	Grab	EPA624	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99						
Nutrients																		
Dissolved Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.15	0.27	0.19	0.42	0.07	0.08	0.31	0.27						
Total Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.54	1.36	0.75	0.42	0.41	0.25	0.39	0.31						
NH3-N	Comp	SM4500-NH3 F	0.10	mg/L	0.61	2.9	0.27	0.719	0.12	-99	0.1	0.44						
Nitrate - N	Comp	SM4110B	0.50	mg/L	2.16	0.87	0.77	0.75	0.54	0.62	0.87	0.56						
Nitrite - N	Comp	SM4110B	0.03	mg/L	0.04	0.24	-99	0.04	-99	0.17	-99	-99						
Kjeidahl-N	Comp	SM4500-NHorg C	0.10	mg/L	4.9	11.1	0.9	1.75	1.35	1.71	2.28	1.46						
Metals																		
Dissolved Aluminum	Comp	EPA200.8	100.00	ug/L	-99	-99	-99	-99	295	-99	-99	-99						
Total Aluminum	Comp	EPA200.8	100.00	ug/L	634	495	414	851	1860	56.1	-99	258						
Dissolved Antimony	Comp	EPA200.8	0.50	ug/L	2.08	2.78	0.93	1.59	0.97	2.22	1.04	4.75						
Total Antimony	Comp	EPA200.8	0.50	ug/L	4.72	5.82	1.92	3.79	2.88	2.41	1.06	7.16						
Dissolved Arsenic	Comp	EPA200.8	1.00	ug/L	1.77	2.08	0.99	1.08	1.06	2.27	1.13	2.01						
Total Arsenic	Comp	EPA200.8	1.00	ug/L	3.54	3.71	1.88	2.38	2.53	2.39	1.19	2.1						
Dissolved Barium	Comp	EPA200.8	10.00	ug/L	31.2	41.4	17.3	24.8	19.6	71.7	50.6	76.6						
Total Barium	Comp	EPA200.8	10.00	ug/L	157	188	63.3	127	111	83.5	52.7	105						
Dissolved Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99						
Total Beryllium	Comp	EPA200.8	0.50	ug/L	0.17	0.29	0.22	0.24	0.21	-99	-99	-99						
Dissolved Cadmium	Comp	EPA200.8	0.25	ug/L	0.18	0.13	0.14	0.43	0.14	0.37	-99	0.53						
Total Cadmium	Comp	EPA200.8	0.25	ug/L	1.63	1.56	0.43	0.9	0.75	0.44	-99	2.49						
Dissolved Chromium	Comp	EPA200.8	0.50	ug/L	4.52	3	18.5	3.29	3.58	2.49	1.08	2.01						
Total Chromium	Comp	EPA200.8	0.50	ug/L	21.3	17.8	32.1	14.6	16.8	2.71	1.26	2.56						
Dissolved Chromium +6	Comp	EPA218.6	0.25	ug/L	0.6	-99	8.16	0.81	1.39	0.44	-99	0.34						
Total Chromium +6	Comp	EPA218.6	0.25	ug/L	0.6	-99	8.16	0.81	1.39	0.44	0.46	0.34						
Dissolved Copper	Comp	EPA200.8	0.50	ug/L	30.5	25.7	13.7	17	11.8	17.9	13.1	8.52						
Total Copper	Comp	EPA200.8	0.50	ug/L	147	135	41	71	53	26	18.3	36.8						
Dissolved Iron	Comp	EPA200.8	100.00	ug/L	450	275	58.2	81	292	-99	70.3	-99						
Total Iron	Comp	EPA200.8	100.00	ug/L	6060	7680	3460	6270	5580	470	127	666						
Dissolved Lead	Comp	EPA200.8	0.50	ug/L	6.4	3.33	2.29	2.73	5.24	1.31	0.77	0.42						
Total Lead	Comp	EPA200.8	0.50	ug/L	80.9	79.3	19.9	49.3	49.2	5.04	1.23	11.4						
Dissolved Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99						
Total Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	0.12	-99	-99	-99	-99						
Dissolved Nickel	Comp	EPA200.8	1.00	ug/L	12.4	23.8	3.7	8.41	2.6	7.89	6.46	7.42						
Total Nickel	Comp	EPA200.8	1.00	ug/L	24.9	36.5	8.14	18.9	11.7	8.88	6.47	9.17						
Dissolved Selenium	Comp	EPA200.8	1.00	ug/L	0.53	0.65	-99	-99	-99	1.08	0.7	1.34						
Total Selenium	Comp	EPA200.8	1.00	ug/L	0.72	0.9	-99	-99	-99	1.1	0.89	1.86						
Dissolved Silver	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	-99	-99	-99						
Total Silver	Comp	EPA200.8	0.25	ug/L	0.32	-99	-99	0.21	0.7	-99	-99	-99						
Dissolved Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99						
Total Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99						
Dissolved Zinc	Comp	EPA200.8	10.00	ug/L	297	255	99.1	150	68.9	87.9	45.2	113						
Total Zinc	Comp	EPA200.8	10.00	ug/L	987	1070	233	373	320	135	48.3	332						
Semi-Volatiles Organics (EPA 625)																		

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - Project Nos. 5246 & 74 (TS21)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME					Wet					Dry		
					TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event03 11/4/2008	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event06 11/25/2008	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event09 12/15/2008	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event21 2/5/2009	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event23 2/13/2009	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event16 1/13/2009	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event30 3/23/2009	TS21 Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event36 5/11/2009
EVENT CODE	Sample Type	EPA Method	PQL ³	Units								
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Base/Neutral												
Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
3,4-Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,6 Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chlorinated Pesticides												
Aldrin		EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - Project Nos. 5246 & 74 (TS21)

					Tributary Monitoring											
					Wet					Dry						
					TS21	TS21	TS21	TS21	TS21	TS21	TS21	TS21	TS21			
					Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event03	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event06	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event09	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event21	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event23	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event16	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event30	Dominguez Channel TRIB - Project Nos. 5246 + 74 2008-09Event36				
WEATHER CONDITION	STATION NO.	STATION NAME	EVENT CODE	DATE	Sample Type	EPA Method	PQL ³	Units	11/4/2008	11/25/2008	12/15/2008	2/5/2009	2/13/2009	1/13/2009	3/23/2009	5/11/2009
Endosulfan I [alpha]			Comp		EPA608	0.10	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]			Comp		EPA608	0.10	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate			Comp		EPA608	0.10	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Endrin			Comp		EPA608	0.10	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde			Comp		EPA608	0.10	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor			Comp		EPA608	0.05	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide			Comp		EPA608	0.05	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene			Comp		EPA608	1.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls																
Aroclor-1016			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260			Comp		EPA608	0.50	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides																
Chlorpyrifos			Comp		EPA507	0.05	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Diazinon			Comp		EPA507	0.01	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Prometryn			Comp		EPA507	2.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Atrazine			Comp		EPA507	2.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Simazine			Comp		EPA507	2.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Cyanazine			Comp		EPA507	2.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Malathion			Comp		EPA507	2.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Herbicides																
Glyphosate			Comp		EPA547	25.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
2,4-D			Comp		EPA515.3	5.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX			Comp		EPA515.3	10.00	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Other																
Ammonia			Comp		SM4500-NH3 F	0.1	mg/l		0.74	3.51	0.33	0.87	0.15	-99	0.13	0.53
Endrin ketone			Comp		EPA625	1	ug/L		-99	-99	-99	-99	-99	-99	-99	-99
Methoxychlor			Comp		EPA608	0.5	ug/L		-99	-99	-99	-99	-99	-99	-99	-99

- Note:
 1) blank cell indicates sample was not analyzed
 2) -99 indicates concentration below minimum detection level
 3) PQL = minimum level
 4) Highlighted cells show exceedances
 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - PD 21-Hollypark Drain (TS22)

					Tributary Monitoring								
WEATHER CONDITION					Wet					Dry			
STATION NO.					TS22	TS22	TS22	TS22	TS22	TS22	TS22	TS22	TS22
STATION NAME					Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain
EVENT CODE					2008-09Event03	2008-09Event06	2008-09Event09	2008-09Event21	2008-09Event23	2008-09Event16	2008-09Event30	2008-09Event36	
DATE	Sample Type	EPA Method	PQL ³	Units	11/4/2008	11/25/2008	12/15/2008	2/5/2009	2/13/2009	1/13/2009	3/23/2009	5/11/2009	
Conventional													
Oil and Grease	Grab	EPA1664A / EPA413.1	1	mg/L	1.2	0.4	1.8	4.8	3.8	-99	0.4	0.6	
Total Phenols	Grab	EPA420.1	0.10	mg/L	-99	-99	-99	-99	-99	-99	-99	-99	
Cyanide	Grab	SM4500-CNE	0.01	mg/L	0.015	-99	-99	0.005	-99	-99	0.005	-99	
pH	Comp	SM4500H B	0.00	NONE	7.47	6.73	6.87	7.84	8.38	8.02	8.22	8.79	
Dissolved Oxygen	Grab	SM4500 (OG)	1.00	mg/L	10.8	10.5	11.1	9.68	11.4	14.4	8.95	9.69	
Indicator Bacteria													
Total Coliform	Grab	SM9221B/SM9221E	20.00	MPN/100ml	9000	160000	500000	240000	90000	24000	2400	1300	
Fecal Coliform	Grab	SM9221E/SM9221B	20.00	MPN/100ml	1300	50000	50000	30000	5000	24000	80	230	
Streptococcus	Grab	SM9230B	20.00	MPN/100ml	16000	160000	300000	280000	22000	300	1300	1300	
Enterococcus	Grab	SM9230B	20.00	MPN/100ml	3500	160000	300000	280000	22000	300	130	220	
General													
Chloride	Comp	SM4110B	2.00	mg/L	43.8	27.1	13.2	47.9	20	97.4	80.6	207	
Fluoride	Comp	SM4110B	0.10	mg/L	0.62	0.28	0.21	0.25	0.15	0.57	0.26	0.53	
Nitrate	Comp	SM4110B	0.10	mg/L	4.86	4.84	4	2.73	2.53	0.9	1.04	1.22	
Sulfate	Comp	SM4110B	1.00	mg/L	70.3	47.4	18.3	81	27.6	137	100	308	
Alkalinity	Comp	SM2320B	1.00	mg/L	77	55	33	83	55	165	184	172	
Hardness	Comp	SM2340C	2.00	mg/L	120	90	40	130	60	245	255	392	
COD	Comp	SM5220D	10.00	mg/L	160	81.1	31.8	54.9	40.6	73.4	457	114	
Total Petroleum Hydrocarbons	Grab	EPA418.1	1.00	mg/L	0.5	-99	1.25	3.75	4	-99	-99	-99	
Specific Conductance	Comp	SM2510B	1.00	umhos/cm	476	320	156	522	241	885	1082	1702	
Total Dissolved Solids	Comp	SM2540C	2.00	mg/L	306	210	100	316	154	560	718	1080	
Turbidity	Comp	SM2130B	0.10	NTU	4.03	5.46	8.24	11	13.4	18.5	2.82	1.92	
Total Suspended Solids	Comp	SM2540D	1.00	mg/L	169	94	262	47	48	35	118	21	
Volatile Suspended Solids	Comp	SM2540E	1.00	mg/L	48	64	15	9	26	8	40	12	
MBAS	Comp	SM5540-C	0.05	mg/L	0.5	0.41	0.33	0.34	-99	0.26	1.38	0.28	
Total Organic Carbon	Comp	SM5310B / EPA415.1		mg/L	22.1	21.1	9.57	11.9	9.97	7.92	96.1	28	
BOD	Comp	SM5210B	2.00	mg/L	18.5	20.5	6	8.55	9.91	9.46	38.2	13.9	
Methyl Tertiary Butyl Ether (MTBE)	Grab	EPA624	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Nutrients													
Dissolved Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.25	0.24	0.21	0.42	0.12	-99	0.58	0.14	
Total Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.44	0.6	0.64	0.53	0.3	0.21	0.58	0.48	
NH3-N	Comp	SM4500-NH3 F	0.10	mg/L	0.34	1.25	0.28	-99	0.35	0.23	-99	0.14	
Nitrate - N	Comp	SM4110B	0.50	mg/L	1.1	1.09	0.9	0.62	0.57	0.2	0.23	0.28	
Nitrite - N	Comp	SM4110B	0.03	mg/L	-99	0.06	-99	-99	-99	-99	-99	-99	
Kjeidahl-N	Comp	SM4500-NHorg C	0.10	mg/L	4.68	4.92	1	0.96	1.19	1.46	2.86	2.28	
Metals													
Dissolved Aluminum	Comp	EPA200.8	100.00	ug/L	-99	-99	-99	-99	174	60.5	-99	-99	
Total Aluminum	Comp	EPA200.8	100.00	ug/L	491	465	341	109	1430	108	-99	166	
Dissolved Antimony	Comp	EPA200.8	0.50	ug/L	1.52	1.53	0.89	1.31	1.32	0.81	3.33	1.87	
Total Antimony	Comp	EPA200.8	0.50	ug/L	2.52	3.17	1.52	1.65	1.84	0.86	3.34	1.89	
Dissolved Arsenic	Comp	EPA200.8	1.00	ug/L	1.79	1.57	1.16	1.76	1.46	1.95	4.01	3.36	
Total Arsenic	Comp	EPA200.8	1.00	ug/L	2.82	2.78	1.75	1.82	1.75	1.96	4.24	3.78	
Dissolved Barium	Comp	EPA200.8	10.00	ug/L	40.5	31.9	17.6	42.6	23.9	90.3	107		
Total Barium	Comp	EPA200.8	10.00	ug/L	122	131	51.2	56.8	49.7	66.9	95.4	116	
Dissolved Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Total Beryllium	Comp	EPA200.8	0.50	ug/L	-99	0.2	-99	-99	-99	-99	-99	-99	
Dissolved Cadmium	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	0.15	-99	0.21	0.15	-99	
Total Cadmium	Comp	EPA200.8	0.25	ug/L	1.09	0.84	0.3	0.24	0.21	0.27	0.17	0.13	
Dissolved Chromium	Comp	EPA200.8	0.50	ug/L	2.08	1.54	1.46	2.37	2.15	2.02	0.95	4.1	
Total Chromium	Comp	EPA200.8	0.50	ug/L	11.4	11.5	7.17	3.7	6.07	2.29	1.67	5.57	
Dissolved Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	-99	0.43	0.56	0.57	-99	-99	-99	
Total Chromium +6	Comp	EPA218.6	0.25	ug/L	-99	-99	0.43	0.56	0.57	-99	-99	-99	
Dissolved Copper	Comp	EPA200.8	0.50	ug/L	12	9.44	10.7	13.8	12.2	11.3	32.4	10.6	
Total Copper	Comp	EPA200.8	0.50	ug/L	72	78.5	34.5	25	23.5	15.2	43.3	18	
Dissolved Iron	Comp	EPA200.8	100.00	ug/L	201	87.2	57.1	62.3	158	399	53.4	-99	
Total Iron	Comp	EPA200.8	100.00	ug/L	4600	6980	2880	923	2150	995	109	312	
Dissolved Lead	Comp	EPA200.8	0.50	ug/L	1.48	0.98	1.48	1.49	1.99	1.81	0.53	0.35	
Total Lead	Comp	EPA200.8	0.50	ug/L	22.3	34.1	13.7	5.19	10.1	3.16	1.13	1.42	
Dissolved Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Total Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Dissolved Nickel	Comp	EPA200.8	1.00	ug/L	7.53	6.83	2.77	3.41	2.52	3.56	14.8	6.82	
Total Nickel	Comp	EPA200.8	1.00	ug/L	15.3	17.2	6.03	7.79	5	4.53	16	9.04	
Dissolved Selenium	Comp	EPA200.8	1.00	ug/L	0.79	-99	-99	0.71	-99	1.23	1.6	2.16	
Total Selenium	Comp	EPA200.8	1.00	ug/L	1.04	0.52	-99	0.73	-99	1.43	1.75	2.33	
Dissolved Silver	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Total Silver	Comp	EPA200.8	0.25	ug/L	0.28	-99	-99	-99	-99	-99	-99	-99	
Dissolved Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Total Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Dissolved Zinc	Comp	EPA200.8	10.00	ug/L	64	74.2	68.4	42.3	54	22	30.4	26	
Total Zinc	Comp	EPA200.8	10.00	ug/L	339	395	214	90	103	32.7	34.3	42.4	
Semi-Volatiles Organics (EPA 625)													
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - PD 21-Hollypark Drain (TS22)

					Tributary Monitoring								
WEATHER CONDITION					Wet					Dry			
STATION NO.					TS22	TS22	TS22	TS22	TS22	TS22	TS22	TS22	TS22
STATION NAME					Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain	Dominguez Channel TRIB - PD 21-Hollypark Drain
EVENT CODE					2008-09Event03	2008-09Event06	2008-09Event09	2008-09Event21	2008-09Event23	2008-09Event16	2008-09Event30	2008-09Event36	
DATE	Sample Type	EPA Method	PQL ³	Units	11/4/2008	11/25/2008	12/15/2008	2/5/2009	2/13/2009	1/13/2009	3/23/2009	5/11/2009	
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Base/Neutral													
Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
1,2-Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
3,4-Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4,6 Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Chlorinated Pesticides													
Aldrin	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99	

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - PD 21-Hollypark Drain (TS22)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME EVENT CODE DATE					Wet					Dry		
					TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event03 11/4/2008	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event06 11/25/2008	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event09 12/15/2008	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event21 2/5/2009	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event23 2/13/2009	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event16 1/13/2009	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event30 3/23/2009	TS22 Dominguez Channel TRIB - PD 21-Hollypark Drain 2008-09Event36 5/11/2009
Sample Type	EPA Method	PQL ³	Units									
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls												
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides												
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Herbicides												
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	49.5	11.3
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Other												
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.41	1.51	0.34	-99	0.42	0.28	-99	0.17
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME					Wet					Dry		
					TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event03 11/4/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event06 11/25/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event09 12/15/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event21 2/5/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event23 2/13/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event16 1/13/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event30 3/23/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event36 5/11/2009
EVENT CODE	Sample Type	EPA Method	PQL ³	Units								
Conventional												
Oil and Grease	Grab	EPA1664A / EPA413.1	1	mg/L	11.9	1	11.4	6.8	12	-99	0.4	-99
Total Phenols	Grab	EPA420.1	0.10	mg/L	-99	-99	-99	-99	-99	-99	-99	-99
Cyanide	Grab	SM4500-CNE	0.01	mg/L	0.012	-99	-99	0.007	-99	-99	-99	-99
pH	Comp	SM4500H B	0.00	NONE	8.25	7.18	6.81	7.78	9.53	8.21	8.69	8.93
Dissolved Oxygen	Grab	SM4500 (OG)	1.00	mg/L	11.9	10	11.4	9.18	12	20.3	10.4	14.2
Indicator Bacteria												
Total Coliform	Grab	SM9221B/SM9221E	20.00	MPN/100ml	280000	5000	90000	240000	240000	800	230	20
Fecal Coliform	Grab	SM9221E/SM9221B	20.00	MPN/100ml	160000	22000	30000	5000	2800	230	130	20
Streptococcus	Grab	SM9230B	20.00	MPN/100ml	160000	160000	240000	240000	16000	800	9000	24000
Enterococcus	Grab	SM9230B	20.00	MPN/100ml	28000	160000	240000	240000	16000	800	2800	9000
General												
Chloride	Comp	SM4110B	2.00	mg/L	45.4	14.1	9.11	56.8	56.8	89.5	86	130
Fluoride	Comp	SM4110B	0.10	mg/L	0.26	0.08	0.14	0.11	0.11	0.61	0.57	0.31
Nitrate	Comp	SM4110B	0.10	mg/L	4.24	5.16	2.94	1.99	1.99	0.97	1.22	1.27
Sulfate	Comp	SM4110B	1.00	mg/L	67.1	13.4	11	42.6	42.6	149	121	151
Alkalinity	Comp	SM2320B	1.00	mg/L	77	33	28	89	89	179	182	179
Hardness	Comp	SM2340C	2.00	mg/L	123	30	35	110	110	265	230	280
COD	Comp	SM5220D	10.00	mg/L	149	118	24.3	33.7	33.7	59.2	79.6	71.9
Total Petroleum Hydrocarbons	Grab	EPA418.1	1.00	mg/L	0.5	0.87	1.25	11.3	11.3	-99	-99	-99
Specific Conductance	Comp	SM2510B	1.00	umhos/cm	452	-99	107	472	472	979	908	1181
Total Dissolved Solids	Comp	SM2540C	2.00	mg/L	280	-99	66	266	266	616	590	708
Turbidity	Comp	SM2130B	0.10	NTU	8.06	3.78	9.62	4.59	4.59	1.74	2.34	1.56
Total Suspended Solids	Comp	SM2540D	1.00	mg/L	20	114	25	93	93	22	9	35
Volatile Suspended Solids	Comp	SM2540E	1.00	mg/L	6	40	5	23	23	7	7	17
MBAS	Comp	SM5540-C	0.05	mg/L	0.9	0.37	0.36	0.18	0.18	0.25	0.32	0.27
Total Organic Carbon	Comp	SM5310B / EPA415.1		mg/L	86.7	12.1	7.16	5.49	5.49	6.59	9.6	16.1
BOD	Comp	SM5210B	2.00	mg/L	16.4	9.7	6.6	4.98	6.39	4	6.38	11.8
Methyl Tertiary Butyl Ether (MTBE)	Grab	EPA624	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Nutrients												
Dissolved Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.24	0.07	0.24	0.54	0.16	-99	0.13	0.18
Total Phosphorus	Comp	SM4500-PE	0.05	mg/L	0.31	0.11	0.33	0.69	0.2	-99	0.17	0.26
NH3-N	Comp	SM4500-NH3 F	0.10	mg/L	-99	-99	0.25	-99	0.19	-99	0.18	-99
Nitrate - N	Comp	SM4110B	0.50	mg/L	0.96	1.16	0.66	0.45	0.35	0.22	0.28	0.29
Nitrite - N	Comp	SM4110B	0.03	mg/L	-99	0.05	-99	-99	-99	-99	-99	-99
Kjeldahl-N	Comp	SM4500-NHorg C	0.10	mg/L	2.34	-99	0.78	0.56	1.29	0.92	1.22	1.24
Metals												
Dissolved Aluminum	Comp	EPA200.8	100.00	ug/L	-99	49	-99	-99	94.5	-99	-99	-99
Total Aluminum	Comp	EPA200.8	100.00	ug/L	-99	144	148	343	223	-99	-99	117
Dissolved Antimony	Comp	EPA200.8	0.50	ug/L	3.32	1.96	1.4	1.17	2.47	1	1.36	1.84
Total Antimony	Comp	EPA200.8	0.50	ug/L	3.67	3.03	2.51	3.99	2.72	1.06	1.38	1.92
Dissolved Arsenic	Comp	EPA200.8	1.00	ug/L	1.74	1.59	1.19	1.07	1.5	1.15	1.28	1.21
Total Arsenic	Comp	EPA200.8	1.00	ug/L	1.78	1.95	1.49	1.68	1.56	1.19	1.29	1.26
Dissolved Barium	Comp	EPA200.8	10.00	ug/L	42.5	37.6	14.8	35.2	34.6	77.5	65.5	80.1
Total Barium	Comp	EPA200.8	10.00	ug/L	50.4	57	33.6	77.7	39.4	81.6	68	84.6
Dissolved Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Beryllium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dissolved Cadmium	Comp	EPA200.8	0.25	ug/L	0.41	0.74	0.16	0.17	0.15	0.15	-99	-99
Total Cadmium	Comp	EPA200.8	0.25	ug/L	0.5	0.76	0.37	0.69	0.19	0.17	0.1	0.13
Dissolved Chromium	Comp	EPA200.8	0.50	ug/L	3.91	3.17	2.09	2.21	2.81	0.66	0.55	3.71
Total Chromium	Comp	EPA200.8	0.50	ug/L	4.8	6.8	6.79	10.6	3.22	2.24	0.9	4.11
Dissolved Chromium +6	Comp	EPA218.6	0.25	ug/L	1.32	1.06	1.2	0.53	1.21	0.45	-99	0.43
Total Chromium +6	Comp	EPA218.6	0.25	ug/L	1.32	1.06	1.2	0.53	1.21	0.45	-99	0.43
Dissolved Copper	Comp	EPA200.8	0.50	ug/L	37.7	35.2	13.8	10.3	17.4	10.4	14	12.7
Total Copper	Comp	EPA200.8	0.50	ug/L	45.9	42.8	29.4	56.7	24.6	14	21.4	20.3
Dissolved Iron	Comp	EPA200.8	100.00	ug/L	266	600	50.1	-99	-99	-99	-99	-99
Total Iron	Comp	EPA200.8	100.00	ug/L	438	2070	1420	2670	275	205	100	292
Dissolved Lead	Comp	EPA200.8	0.50	ug/L	2.75	16.9	2.2	1.18	1.09	0.39	0.36	0.4
Total Lead	Comp	EPA200.8	0.50	ug/L	4.01	17.2	13.1	26	3.31	4.3	1.76	2.54
Dissolved Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Mercury	Comp	EPA245.1	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dissolved Nickel	Comp	EPA200.8	1.00	ug/L	9.75	5.68	2.08	2.1	2.57	3.95	4.5	4.39
Total Nickel	Comp	EPA200.8	1.00	ug/L	11.1	9.04	4.56	6.56	3.16	4.49	5	5.02
Dissolved Selenium	Comp	EPA200.8	1.00	ug/L	0.9	-99	-99	-99	-99	1.1	0.91	1.55
Total Selenium	Comp	EPA200.8	1.00	ug/L	0.96	0.59	-99	-99	-99	1.15	1.17	1.91
Dissolved Silver	Comp	EPA200.8	0.25	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Silver	Comp	EPA200.8	0.25	ug/L	-99	0.17	-99	-99	0.15	-99	-99	-99
Dissolved Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Total Thallium	Comp	EPA200.8	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dissolved Zinc	Comp	EPA200.8	10.00	ug/L	119	285	101	56.4	28.3	58.8	24.9	38.8
Total Zinc	Comp	EPA200.8	10.00	ug/L	144	292	245	203	51.9	108	27.2	100

Semi-Volatiles Organics (EPA 625)

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - D.D.J. 8 (TS23)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME EVENT CODE DATE					Wet					Dry		
					TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event03 11/4/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event06 11/25/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event09 12/15/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event21 2/5/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event23 2/13/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event16 1/13/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event30 3/23/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event36 5/11/2009
Sample Type	EPA Method	PQL ³	Units									
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Base/Neutral												
Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
3,4-Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,6 Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chlorinated Pesticides												
Aldrin		EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - D.D.J. 8 (TS23)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME EVENT CODE DATE					Wet					Dry		
					TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event03 11/4/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event06 11/25/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event09 12/15/2008	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event21 2/5/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event23 2/13/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event16 1/13/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event30 3/23/2009	TS23 Dominguez Channel TRIB - D.D.I. 8 2008-09Event36 5/11/2009
Sample Type	EPA Method	PQL ³	Units									
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls												
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides												
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Herbicides												
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Other												
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.2	-99	0.3	-99	0.22	-99	0.22	-99
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

- Note:
 1) blank cell indicates sample was not analyzed
 2) -99 indicates concentration below minimum detection level
 3) PQL = minimum level
 4) Highlighted cells show exceedances
 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - Dominguez Channel at 116th St. (TS24) (Formerly used as LU-See S23)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME EVENT CODE DATE					Wet					Dry		
					TS24	TS24	TS24	TS24	TS24	TS24	TS24	TS24
Sample Type	EPA Method	PQL ³	Units	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event03 11/4/2008	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event06 11/25/2008	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event09 12/15/2008	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event21 2/5/2009	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event23 2/13/2009	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event16 1/13/2009	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event30 3/23/2009	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event36 5/11/2009	
2-Chlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2,4-dichlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2,4-dimethylphenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2,4-dinitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
4-nitrophenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
4-chloro-3-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Pentachlorophenol	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Phenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2,4,6-trichlorophenol	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Base/Neutral												
Acenaphthene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Acenaphthylene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Anthracene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Benzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
1,2-Benzanthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	
Benzo(a)pyrene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Benzo(g,h,i)perylene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	
3,4-Benzofluoranthene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	
Benzo(k)fluoranthene	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Chloroethoxy)methane	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Chloroisopropyl)ether	Comp	EPA625	2	ug/L	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Chloroethyl)ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Bis(2-Ethylhexyl)phthalate	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
4-Bromophenyl phenyl ether	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Butyl benzyl phthalate	Comp	EPA625	0.30	ug/L	-99	-99	-99	-99	-99	-99	-99	
2-Chloroethyl vinyl ether	Comp	EPA624	2.50	ug/L	-99	-99	-99	-99	-99	-99	-99	
2-Chloronaphthalene	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
4-Chlorophenyl phenyl ether	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	
Chrysene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Dibenzo(a,h)anthracene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	
1,3-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	
1,4-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	
1,2-Dichlorobenzene	Comp	EPA625	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	
3,3-Dichlorobenzidine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Diethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Dimethyl phthalate	Comp	EPA625	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
di-n-Butyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2,4-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
2,6-Dinitrotoluene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
4,6-Dinitro-2-methylphenol	Comp	EPA625	3.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
1,2-Diphenylhydrazine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
di-n-Octyl phthalate	Comp	EPA625	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Fluoranthene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
Fluorene	Comp	EPA625	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	
Hexachlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Hexachlorobutadiene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Hexachloro-cyclopentadiene	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Hexachloroethane	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Indeno (1,2,3-cd)pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
Isophorone	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Naphthalene	Comp	EPA625	0.20	ug/L	-99	-99	-99	-99	-99	-99	-99	
Nitrobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
N-Nitroso-dimethyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
N-Nitroso-diphenyl amine	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
N-Nitroso-di-n-propyl amine	Comp	EPA625	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Phenanthrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
Pyrene	Comp	EPA625	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
1,2,4-Trichlorobenzene	Comp	EPA625	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	
Chlorinated Pesticides												
Aldrin		EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
alpha-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
beta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
delta-BHC	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
Gamma-BHC (Lindane)	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
alpha-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
gamma-chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
Chlordane	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDD	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDE	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	
4,4'-DDT	Comp	EPA608	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	
Dieldrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	

Appendix B

2008-2009 Sampling Results for Dominguez Channel TRJB - Dominguez Channel at 116th St. (TS24) (Formerly used as LU-See S23)

Tributary Monitoring

WEATHER CONDITION STATION NO. STATION NAME					Wet					Dry		
					TS24	TS24	TS24	TS24	TS24	TS24	TS24	TS24
EVENT CODE	Sample Type	EPA Method	PQL ³	Units	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event03	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event06	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event09	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event21	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event23	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event16	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event30	Dominguez Channel TRIB - Dominguez Channel at 116th 2008-09Event36
DATE					11/4/2008	11/25/2008	12/15/2008	2/5/2009	2/13/2009	1/13/2009	3/23/2009	5/11/2009
Endosulfan I [alpha]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan II [beta]	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endosulfan sulfate	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Endrin aldehyde	Comp	EPA608	0.10	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Heptachlor Epoxide	Comp	EPA608	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Toxaphene	Comp	EPA608	1.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Polychlorinated Biphenyls												
Aroclor-1016	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1221	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1232	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1242	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1248	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1254	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Aroclor-1260	Comp	EPA608	0.50	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Organophosphate Pesticides												
Chlorpyrifos	Comp	EPA507	0.05	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Diazinon	Comp	EPA507	0.01	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Prometryn	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Atrazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Simazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Cyanazine	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Malathion	Comp	EPA507	2.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Herbicides												
Glyphosate	Comp	EPA547	25.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4-D	Comp	EPA515.3	5.00	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
2,4,5-TP-SILVEX	Comp	EPA515.3	10.00	ug/L	-99	-99	-99	-99	-99	-99	-99	13.5
Other												
Ammonia	Comp	SM4500-NH3 F	0.1	mg/l	0.28	0.19	1.29	-99	-99	2.53	0.5	1.68
Endrin ketone	Comp	EPA625	1	ug/L	-99	-99	-99	-99	-99	-99	-99	-99
Methoxychlor	Comp	EPA608	0.5	ug/L	-99	-99	-99	-99	-99	-99	-99	-99

- Note:
- 1) blank cell indicates sample was not analyzed
 - 2) -99 indicates concentration below minimum detection level
 - 3) PQL = minimum level
 - 4) Highlighted cells show exceedances
 - 5) Wet weather suspension of fecal coliform objective applies to 2008-09Event06, 2008-09Event09, and 2008-09Event21

2008-09 Annual Report



Ventura Countywide Stormwater Quality Management Program



*A cooperative project of the County of Ventura,
the cities of Ventura County and the
Ventura County Watershed Protection District*

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PREPARED UNDER THE DIRECTION OF:

Gerhardt Hubner, Deputy Director,
Watershed Protection District

Arne Anselm, Manager, Water Quality Monitoring Section

Tommy Liddell, Water Quality Analyst

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EXECUTIVE SUMMARY

The purpose of this document is to comply with NPDES Permit No. CAS004002/Order No. 00-108, which requires submittal by October 1 of each year of an Annual Storm Water Report (Report). This Report discusses the Co-permittees' Second Term Permit compliance activities for the period of July 1, 2008 to June 30, 2009, includes a description of all activities conducted during the reporting period, and an assessment of the Ventura Countywide Stormwater Program's effectiveness. This Annual Report was prepared with the cooperation and assistance of the Ventura Countywide Co-permittees who contributed the detailed permit compliance information and data regarding their various stormwater programs. The Co-permittees through implementation of various comprehensive program elements, have achieved compliance with all requirements of the Permit.

Although the Regional Board adopted a new permit, (Order No. 09-0057), on May 7, 2009, the new Order did not become effective until August 5, 2009, after the reporting period ended on June 30, 2009. The new permit was not in effect for any part of the reporting year covered by this Report, and this Report only addresses compliance with Order No. 00-108.

The organization of the Report reflects the organization of the 2001 Stormwater Management Plan (SMP). The implementation portion of the SMP consists of the following elements, with this Report containing a section on each element: 2. Management, 3. Program for Residents, 4. Programs for Industrial and Commercial Businesses, 5. Programs for Planning and Land Development, 6. Programs for Construction Sites, 7. Programs for Public Agency Activities, 8. Programs for Illicit Discharges/Illegal Connections, 9. Stormwater Quality Monitoring.

For this year's annual Program Effectiveness Assessment (PEA), the Co-permittees utilized a series of measures (both *direct* and *indirect*) to verify program implementation and ultimately validate achievement of Program goals. The identified measures are designed to assess the effectiveness of the Program to improve stormwater water quality.

This year's PEA shows strong evidence of increasing program effectiveness:

- A. For the past five years illicit discharges have decreased signaling a change in the public's behavior for the better;
- B. Increased enforcement of stormwater requirements at construction sites even though there was a reduction in grading permits granted;
- C. Increased program activities removing trash and debris from catch basins, channels, ditches and detentions basins resulting in more debris removed;
- D. Land development projects are increasingly identified and conditioned for stormwater BMPs based on site activity and pollutants of concern, and not solely on permit requirements.

In addition, key baseline data has been compiled on a watershed and countywide basis for future comparative assessment and trends analysis in the areas of municipal activities, new and existing development, and construction.

Notable accomplishments that occurred during this reporting period include:

- A. The achievement of over 4.6 million impressions in the countywide public outreach effort. 20% of media placed was in Spanish.
- B. Over 1 million pet waste pickup bags were given out at local parks, beaches and trail heads countywide at a cost of over \$100,000.
- C. A cooperative effort with Police and Sheriffs to catch illicit discharges by installing hidden security cameras in areas of frequent illegal dumping.
- D. 1197 food service facilities were inspected for stormwater compliance.

EXECUTIVE SUMMARY

- E. 644 automotive service facilities inspected for stormwater compliance.
- F. 412 industrial facilities were visited for stormwater quality education.
- G. 82 development projects identified within one or more of the SQUIMP categories were conditioned for stormwater quality controls.
- H. 51 development projects that were not one of the SQUIMP categories were also conditioned for stormwater quality controls.
- I. 268 stormwater quality inspections were made at active construction sites but only 159 grading permits issued.
- J. Over 43,000 tons of debris was removed by public works crews by cleaning 15,453 catch basins, 220 miles of channels and ditches, and sweeping over 115,000 miles of curbs and gutters.
- K. Inspectors responded to 541 reports of illicit discharges resulting in 357 enforcement actions taken, a decrease for the fifth consecutive year.
- L. Permittees decided to voluntarily implement progressive stormwater programs in advance of permit renewal, even though these programs are not required by the current permit such as storm drain mapping, catch basin prioritization and a Youth Awareness Survey.

With respect to water quality monitoring, the Co-permittees continued to implement a very comprehensive monitoring program. Key points are highlighted below:

- A. The Ventura Countywide Stormwater Monitoring Program met all the monitoring requirements of its Permit.
- B. Water quality monitoring data were collected by the Stormwater Monitoring Program during four wet weather and two dry weather events.
- C. All environmental and QA/QC water chemistry data thoroughly evaluated and accepted by VCWPD staff using *Data Quality Evaluation Plan* and *Data Quality Evaluation Standard Operating Procedures* guidance documents.
- D. Acute toxicity of *Ceriodaphnia dubia* was observed at the agriculture dominated Receiving Water sites W-3 (La Vista) and W-4 (Revolon Slough) for the samples collected during Event 1.
- E. No Chronic toxicity of *Strongylocentrotus purpuratus* (purple sea urchin) was observed at the Mass Emission station.
- F. Toxaphene concentrations exceeded applicable water quality objectives at multiple locations during one or more wet weather monitoring events.
- G. Elevated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events, as well as ME-CC and ME-SCR during one or more dry weather events. See Section 9 for details and an explanation of monitoring results.

Future Program Activities

The Permittees are aggressively moving forward with implementation of the new permit. Subcommittees are working on developing new forms, protocols and procedures to ensure compliance with each program. Already a Youth Outreach Plan has been submitted to the Regional Board and a new Pesticide Application Protocol has been drafted. Monitoring stations have been installed at the four new monitoring sites and are standing by for the first rain of the season. There are many challenges for the Program this next year including revising the Technical Guidance Manual for Land Development, writing and adopting new ordinances, implementing the Youth Outreach Plan and developing a new annual report format.

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The Watershed Protection District (Principal Co-permittee), the County of Ventura and the incorporated cities of Camarillo, Fillmore, Moorpark, Ojai, Oxnard, Port Hueneme, Ventura, Santa Paula, Simi Valley, Thousand Oaks, (each a Co-permittee and collectively known as Co-permittees) operate municipal storm drain systems and discharge stormwater and urban runoff pursuant to the countywide NPDES permit (Board Order No. 00-108). This permit, administered by the Los Angeles Regional Water Quality Control Board (RWQCB), requires an Annual Storm Water Report and Assessment (Annual Report) submitted by October 1 of each year.

The first permit was adopted in 1994, and on July 27, 2000 a second permit was adopted. That permit was on administrative extension until October 7, 2009 when the current permit (Board Order 09-0057, adopted May 7, 2009) became effective. This new permit was not in effect for any part of the permit year covered by this report, and this report only address compliance with Board Order 00-108.

1.1 Purpose and Organization of Report

In accordance with the requirements of the permit, the primary purpose of the report is to document:

- The status of the general program and individual tasks contained in the Stormwater Management Plan (SMP);
- Results of the monitoring and reporting program CI 7388; and
- Compliance status and effectiveness of the implementation of permit requirements.

The organization of the report reflects the organization of the Program's 2001 SMP. Each section contains a review of co-permittee program activities and detailed descriptions of the 2007-2008 permit year:

- Program management framework (committee and subcommittee structure) and a fiscal analysis report (**Section 2.0**)
- Status and effectiveness of the public information dissemination and pollution prevention outreach program (**Section 3.0**)
- Inspection and enforcement activities directed at effectively prohibiting non-stormwater discharges from businesses and industrial sites in order to reduce stormwater pollution to the maximum extent practicable. (**Section 4.0**)
- Efforts to minimize the impact of new development and significant redevelopment on stormwater quality. (**Section 5.0**)
- Construction site practices to ensure the protection of stormwater quality to the maximum extent practicable (**Section 6.0**)
- Efforts to reduce the adverse effects that municipal activities may have on water quality (**Section 7.0**)
- Status of the control measures established under the Illicit Discharge/Illegal Connections elimination program (**Section 8.0**)
- A summary and analysis of the monitoring results from the water quality monitoring program (**Section 9.0**) and (**Appendix 3**)

1.2 Major Program Accomplishments

Notable accomplishments that occurred during the reporting period include:

- Regional Board adoption of new NPDES MS4 Permit (Order No. 08-0057);
- Development and distribution of new BMPS posters for restaurants and auto shops;
- Implementation of a new public education campaign on horse manure management;
- Initiated development of new Youth Outreach Campaign by performing an awareness survey;
- Stormwater Quality Monitoring (6 events, 4 wet and 2 dry);
- Regional TMDL participation;
- Southern California Coastal Water Research Project (SCCWRP) Participation:

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- Cooperation and commitment to SCCWRP to aid in a hydromodification effects study;
- Cooperation and commitment to the Stormwater Monitoring Coalition of Southern California to a Low Impact Development Guidance and Training Project for Southern California;
- CASQA Participation;
- Calleguas Creek Watershed Management Plan Participation;
- Ventura River Watershed Council Participation;
- Integrated Regional Water Management Plan (IRWMP) Participation.

The Co-permittees have been working with Regional Board staff on the adoption of the new NPDES permit since 2005. Because it was reasonable to expect the new permit would substantially change program elements and strategies the Permittees have been conservative in starting and amending programs over the past years. This does not mean Co-permittees forestalled programs improvements or new programs, in fact the permittees have been proactively implementing some program elements found in the new permit.

1.3 Effectiveness Assessment Strategy

The SMP recognizes a number of separate, but nonetheless related, water quality planning processes. These processes are countywide, jurisdictional and watershed based water quality management tools. Each process is iterative and incorporates phases of assessment to determine whether programmatic goals are being achieved.

1.3.1 Measurable Goals

Measurable goals are a primary implementation tool of the SMP. They are described by USEPA as BMP design objectives or goals that quantify the progress of program implementation and the performance of BMPs. They are objective markers or milestones that track the progress of the co-permittees in implementing the provisions of the permit and the SMP to the Maximum Extent Practicable (MEP).

Measurable goals may be categorized in a variety of ways. In this report, two categories are acknowledged: (1) the shorter-term confirmation of BMP implementation (Implementation or Process Measures, also termed Programmatic Indicators) and (2) the longer-term verification of environmental improvement (Validation or Results Measures, typically actual indicators of environmental change). These two categories of measurable goals reflect two basic assessment questions:

- Are program elements being implemented correctly?
- Are desired outcomes (i.e. environmental improvements) being achieved?

Programmatic and environmental indicators may be constructed into a hierarchical relationship (See **Table 1.1 Hierarchy of Indicators**). This relationship helps to illustrate the fact that environmental outcomes rest on, or follow from, jurisdictional program implementation. Moreover, it points to the reality that scientific evidence of changing ecosystem quality will follow program implementation over time, and should not be expected to be evident concurrently.

Table 1.1 Hierarchy of Indicators (USEPA, 1998)

Environmental Indicators (Direct Measures)	6	Ultimate Impacts: Ecological Health Welfare
	5	Body Burden/Uptake
	4	Ambient Conditions
	3	Discharge/Emission
Programmatic Indicators (Indirect Measures)	2	Actions by Regulated Community
	1	Actions by Regulators

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In the context of evaluating stormwater management program implementation, the distinction is also often made between *direct* and *indirect* measures. Direct measures are typically environmental indicators such as determinations of water quality. Indirect measures are essentially non-water quality indicators, such as reductions in pesticide use, from which improvements in water quality can be inferred.

A number of Performance Measures have been identified based upon the following selection criteria:

- **Relevance:** It has demonstrable relation to the strategy and objectives;
- **Reliability:** The measure will help identify the strengths and weakness of the program area/process;
- **Clarity of Naming System:** It is readily understandable by its name; and
- **Availability of Data:** The data are available at reasonable cost.

These Performance Measures comprise process and result (direct and indirect) measures that are used to highlight the progress of the Co-permittees in implementing water quality management, protection and enhancement requirements of the Permit. The Performance Measures are defined in the SMP and presented in **Table 1.2**

Program Element	Performance Measure	Type of Performance Measure	
		Process Measure	Result Measure
Program Management	Participation in Management Committee	X	
	Participation in subcommittee meetings	X	
	Submittal of Co-permittee Self-Audit	X	
	Submittal of the Annual Report	X	
	Annually submittal of Co-permittee program evaluation results	X	
	Stormwater program budget updates	X	
	Review and adopt or amend legal authority to implement stormwater management plan	X	
Public Outreach	Identify program contact person(s)	X	
	Catch basin stenciling	X	
	Signs prohibiting illegal dumping at designated public access points to creeks and channels		X
	Educational activities and participation in countywide events		X
	Household Hazardous Waste Collected		X
	Used Oil Collected		X
	Educational material distribution		
	No. of outreach contacts	X	
Industrial/ Commercial Businesses	No. of site education/inspections to automotive, food service and other targeted businesses	X	

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Table 1.2 Performance Measures			
Program Element	Performance Measure	Type of Performance Measure	
		Process Measure	Result Measure
	No. of follow up inspections	X	
	No. of additional businesses targeted based on Pollutants of Concern (POCs) as appropriate	X	
	No. of facilities identified as potentially subject to the General Industrial Permit given educational materials	X	
	No. of targeted employees trained	X	
Planning & Land Development	No. of Projects reviewed and conditioned for stormwater	X	
	Area to which BMPs have been applied		X
	No. of BMPs implemented		X
	Stormwater quality conditions included in environmental checklists, initial studies or EIRs required by CEQA and/or NEPA	X	
	Watershed and stormwater management considerations in Co-permittees' General Plan	X	
	Technical Guidance Manual	X	
	Environmentally Sensitive Areas	X	
	Development Community Outreach		X
	No. of targeted employees trained	X	
Construction Sites	No. of SWPCPs/SWPPPs developed and implemented		X
	No. of NOIs filed with the State		X
	No. of sites inspected	X	
	No. of follow up inspections	X	
	No. of enforcement actions	X	
	Construction Community Outreach		X
	No. of targeted employees trained	X	
Municipal Activities	Co-permittee corporate yard SWPCP		X
	Drainage System Operation and Maintenance		X
	Roadway Operation and Maintenance		X
	No. of Facilities Inspected	X	
	Solid Waste Collected		X
	Pesticide, Herbicide and Fertilizer Protocols		X
	Reduction in Total Pesticide Application		X
	Reduction in Total Fertilizer (Nitrogen) Application		X
Reduction in Total Fertilizer (Phosphorus) Application		X	

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Program Element	Performance Measure	Type of Performance Measure	
		Process Measure	Result Measure
	No. of targeted employees trained	X	
Illicit Discharge/Illegal Connections	No. of complaints		X
	No. of enforcement actions	X	
	Educational material distribution		X
	No. of targeted employees trained	X	

1.3.2 Effectiveness Assessment

Effectiveness assessment requires the establishment of a set of baseline conditions. Thereafter, effectiveness can be evaluated by comparisons of indicator information against the baseline data over the years. Where the period of evaluation is characterized by the implementation of new program requirements, determinations of program effectiveness will initially be limited to confirmation of program implementation. Indeed, it must be recognized that direct measures of program effectiveness may not be available within the history of the Stormwater Quality Program. This challenge arises because:

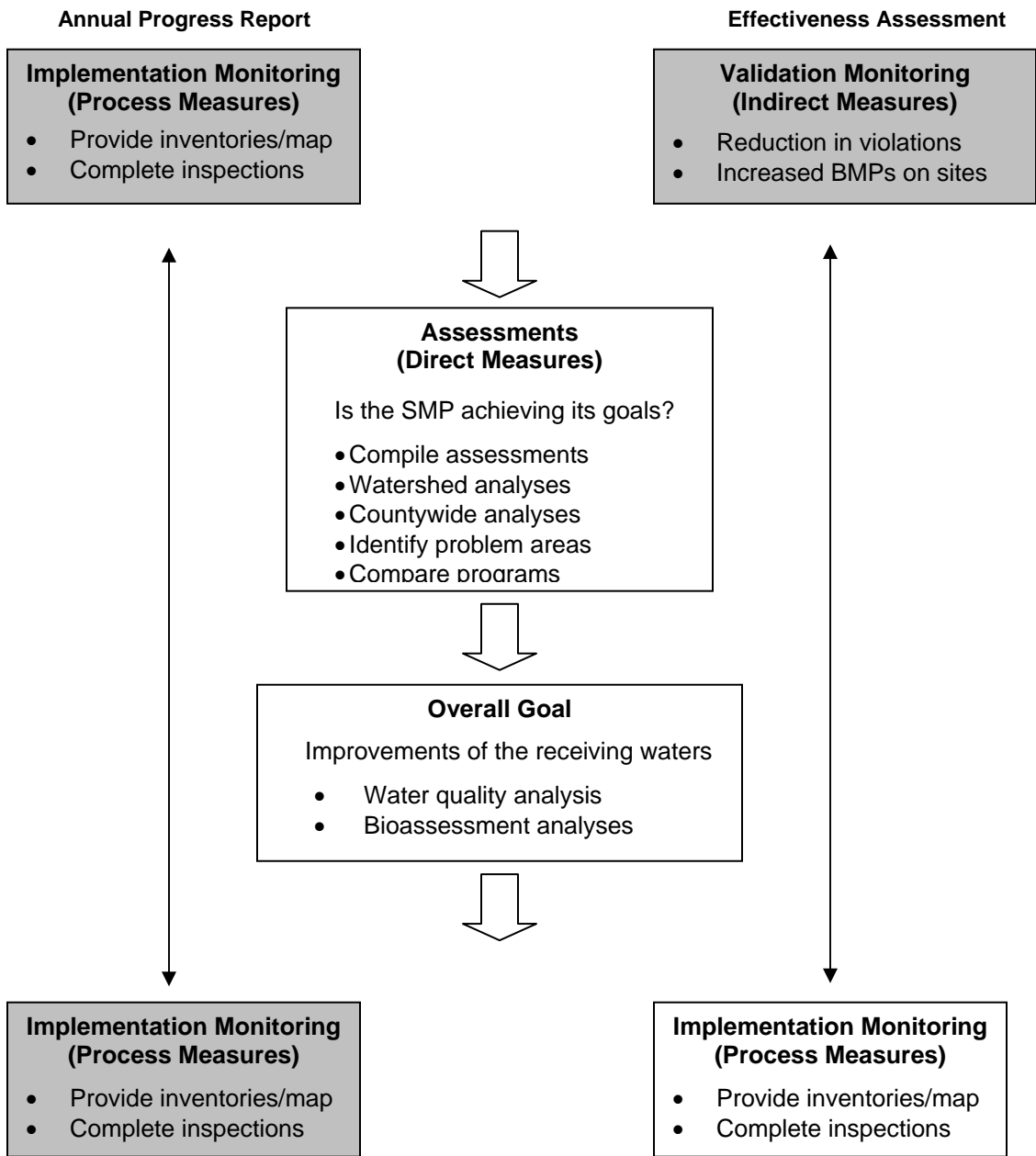
- Baseline water quality conditions are not readily established;
- Water quality changes in response to program implementation are likely to be slow and may be marked by changes due to extreme weather events;
- Establishing a link between receiving water condition and program activities is difficult at the watershed scale when program elements are being implemented incrementally with the development/redevelopment cycle;
- The watersheds of Ventura County are not predominantly urbanized, so in-stream measurements cannot isolate changes due to urban or other sources.

The evaluation of stormwater program effectiveness assessment is also conducted at two levels. At the jurisdictional or Co-permittee level, the assessment is conducted annually and focuses on program implementation. Inferences about the connection of management program elements to water quality improvements made in these assessments will be drawn from the assessment of programmatic indicators and indirect measures of progress. The Co-permittees' program assessments are presented in **Sections 3.0 – 8.0**.

At the countywide program level, the major assessment is done principally on a permit cycle basis with an emphasis on using indirect measures of progress. The Annual Progress Report strategy is illustrated in **Figure 1-1**.

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Figure 1-1 Annual Progress Report



SECTION 2.0 PROGRAM MANAGEMENT

2.1 Responsibilities

The responsibilities of the Principal Co-permittee and Co-permittees are defined within the Permit and the Implementation Agreement. These roles and responsibilities are outlined below.

2.1.1 *Principal Co-permittee*

The role of the Principal Co-permittee is similar to the other Co-permittees with the addition of certain overall programmatic and facilitation responsibilities. These responsibilities are not to ensure the compliance of the Co-permittees as the Principal Co-permittee has no regulatory authority over the Co-permittees. These responsibilities include the following:

- Coordinate Permit activities;
- Establish uniform data submittal format;
- Set time schedules;
- Prepare regulatory reports;
- Forward information to the Co-permittees;
- Arrange for public review;
- Secure services of consultants as necessary;
- Implement activities of common interest;
- Develop/prepare/generate all materials and data common to all Co-permittees;
- Update Co-permittees on RWQCB and US Environmental Protection Agency (USEPA) regulations;
- Convene all Management Committee and Subcommittee meetings;
- Manage the countywide educational outreach program; and
- Manage the countywide stormwater quality monitoring program.

2.1.2 *Co-permittees*

Each Co-permittee is responsible for implementing the NPDES Stormwater Program within their jurisdiction. The main responsibility of each Co-permittee includes:

- Review, approve and comment on budgets, plans, strategies, management programs and monitoring programs developed by the Principal Co-permittee or any subcommittee;
- Implement the various stormwater management programs outlined in the Permit and the Stormwater Management Plan (SMP) within its jurisdiction;
- Establish and maintain adequate legal authority;
- Take appropriate enforcement actions as necessary within its jurisdictions to ensure compliance with applicable ordinances;
- Coordinate among internal departments and agencies, as appropriate, to facilitate the implementation of the Permit and the SMP;
- Respond to/or arrange for response to emergency situations, such as accidental spills, leaks, illicit discharges/illegal connections, etc., to prevent or reduce the discharge of pollutants to the storm drain systems and waters of the U.S. within its jurisdiction;
- Conduct inspections of and perform maintenance on municipal infrastructure within its jurisdiction;
- Conduct and coordinate any surveys and source identification studies necessary to identify pollutant sources and drainage areas;
- Participate in the Management Committee meetings and subcommittee meetings as outlined in the SMP; and
- Prepare and submit all reports or requests of information to the Principal Co-permittee in a timely fashion.

SECTION 2.0 PROGRAM MANAGEMENT

2.2 Management Activities

2.2.1 Management Committee

The NPDES Management Committee is the Principal forum for directing the Program's development and implementation. This Committee is attended by senior staff from all Co-permittee agencies and meets monthly to assure Program continuity. In addition, this committee periodically evaluates the need to create ad hoc committees or workgroups as required in order to accomplish the objectives of the NPDES Stormwater Program. Participation in the NPDES Management Committee is a specific requirement of the Permit. Co-permittee participation in the NPDES Management Committee is noted in **Figure 2-1**.

12 Regular and 7 Special Management meetings were held.

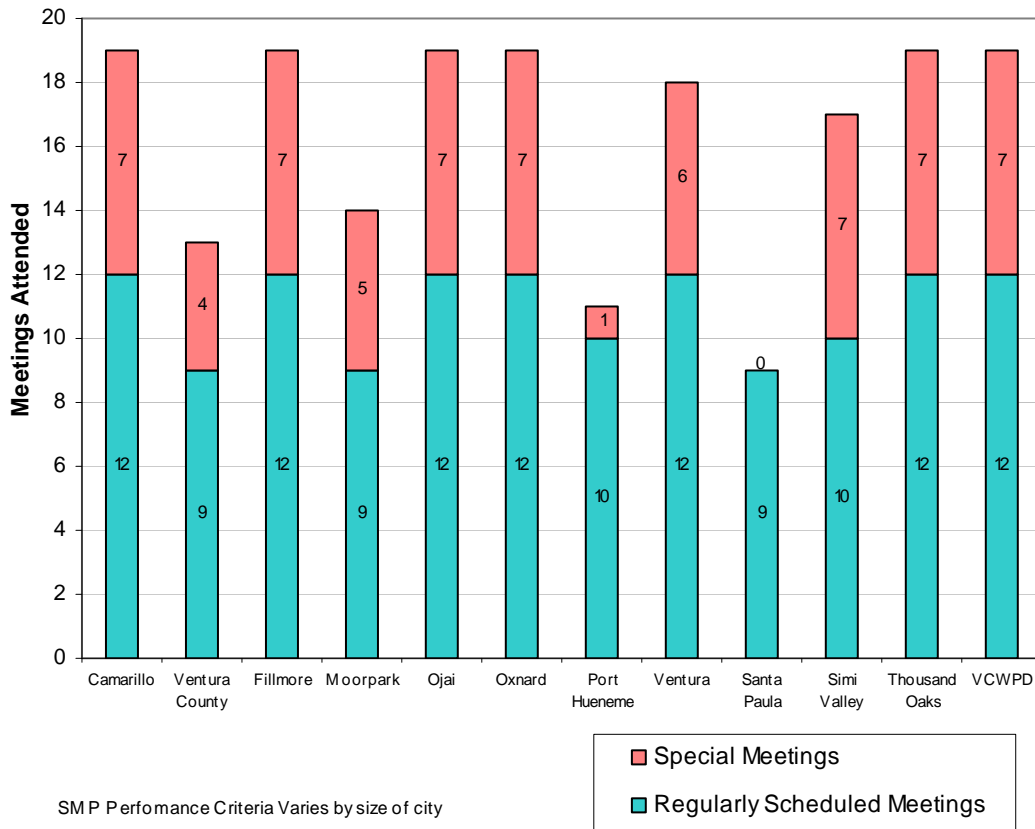


Figure 2-1 Co-Permittee Management Committee Meeting Attendance

2.2.2 Subcommittees

The Subcommittees provide a forum for discussion of particular program elements and are attended by the staff with the appropriate expertise from each Co-permittee. These meetings create a more uniform approach to program management countywide and allow the Co-permittees to learn from each other. The subcommittees are tasked principally with the following program material responsibilities

- Residential/Public Outreach Subcommittee**
 To help provide regional consistency and oversight for the stormwater public education program efforts. Select specific Pollutants of Concern in which public education can potentially make a difference.

SECTION 2.0 PROGRAM MANAGEMENT

- Business and Illicit Discharge Control Subcommittee**
 Oversee the development of the model industrial/commercial and illicit discharge/illegal connections programs. Create regional consistency to business inspections and reporting of discharges.
- Planning and Land Development Subcommittee**
 To help provide regional tools for design, review and conditioning of new development and redevelopment projects, and promote regional consistency in their application.
- Construction Subcommittee**
 To provide regional consistency to inspections, share solutions to common problems and the development of model new development and construction programs.
- Public Infrastructure**
 The development of the model municipal activities program, corporate yard inspections, and integrated pesticide management, pesticide and fertilizer programs.

Co-permittee participation in Subcommittees is noted in **Figure 2-2**.

2.2.3 Other Regional Committees/Work Groups

Many of the Co-permittees additionally participate in various watershed management advisory groups. These groups include: the Ventura County Integrated Resources Water Management Plan (IRWMP), Ventura River Watershed Planning Committee, Santa Clara River Enhancement and Management Committee, Wetlands Recovery Project, Calleguas Creek Watershed Management Committee, Matilija Dam Ecosystem Restoration Study, Channel Islands Beach Park Action Plan for Improving Water Quality, Malibu Creek Watershed Management Committee, Steelhead Restoration and Recovery Plan, Beach Erosion Authority for Clean Oceans and Nourishment (BEACON), Southern California Coastal Water Research Project (SCCWRP) and the Ormond Beach Task Force. These watershed and regional groups focus their activities and discussions on specific concerns such as water quality, habitat restoration and flood control, as well as short, medium and long-term solutions.

25 Subcommittee meetings were convened.

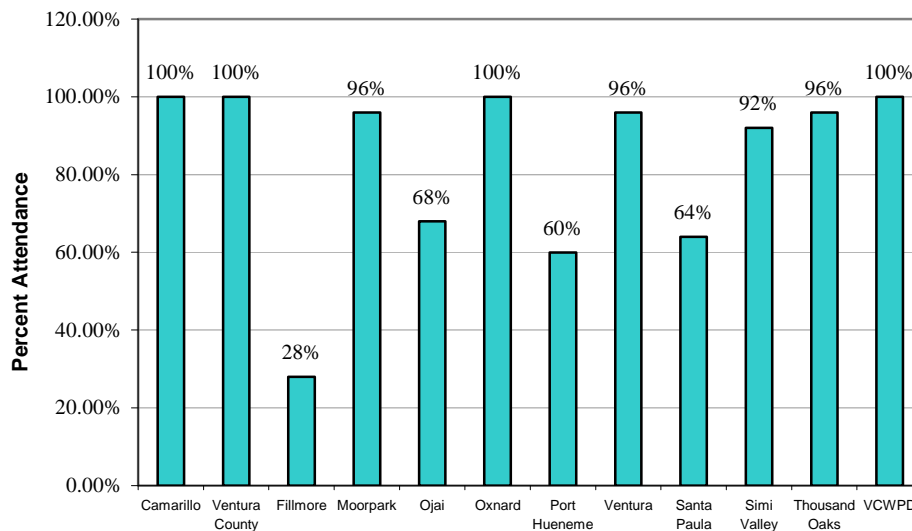


Figure 2-2 Co-Permittee Subcommittee Meeting Attendance
 SMP Performance Criteria Varies by size of city

SECTION 2.0 PROGRAM MANAGEMENT

2.2.4 Management Framework – Program Implementation

In addition to the countywide and watershed management frameworks for program development, the Co-permittees at a jurisdiction level have formally identified which departments and staff have responsibility for implementation of each program elements within their jurisdictions.

2.3 Legal Authority

Although adequate legal authority existed for most potential pollutant discharges at the inception of the stormwater program in 1994, the Co-permittees determined that a Model Stormwater Quality Ordinance should be developed to provide a more uniform countywide approach and to provide a legal underpinning to the entire Ventura Countywide NPDES Stormwater Program.

Subsequently, all of the Co-permittees adopted largely similar versions of the model Stormwater Quality Ordinance. In addition, each Co-permittee has designated Authorized Inspector(s) responsible for enforcing the Ordinance. The Authorized Inspector(s) is the person designated to investigate compliance with, detect violations of and/or take actions pursuant to the Ordinance. The detection, elimination and enforcement activities undertaken by the Co-permittees during 2008/09 are described further in **Section 8**. In addition to prohibiting un-permitted discharges, the Stormwater Quality Ordinance in conjunction with the SQUIMP also provides for requiring BMPs in new development and significant redevelopment. A Stormwater Quality Ordinance has been adopted in each Co-permittees' jurisdictions as indicated in **Table 2.1**

Co-permittee	Adopted Date	Amendment Date
Camarillo	3/25/1998	
County of Ventura	7/22/1997	
Fillmore	12/8/1998	
Moorpark	12/3/1997	
Ojai	2/9/1999	
Oxnard	3/24/1998	
Port Hueneme	4/1/1998	2/1/2001
San Buenaventura	1/11/1999	
Santa Paula	11/16/1998	
Simi Valley	7/23/2001	4/22/2002
Thousand Oaks	9/14/1999	

2.4 Watershed Protection Stormwater Program Representation

The Principal Co-permittee represents the Co-permittees participating in the following organizations and associations:

2.4.1 California Association for Stormwater Agencies (CASQA)

The California Association of Stormwater Quality Agencies (previously California Storm Water Quality Task Force) serves as advisory body to the State Water Resources Control Board (SWRCB) on stormwater quality program issues. CASQA is primarily comprised of agencies, organizations, businesses and individuals responsible for and/or interested in the implementation of municipal stormwater management programs in California. Since its inception in 1989, CASQA has evolved into the leading organization in California dealing with stormwater quality issues.

SECTION 2.0 PROGRAM MANAGEMENT

2.4.2 Southern California Coastal Water Research Project (SCCWRP)

The Southern California Coastal Water Research Project (SCCWRP) is a joint powers agency focusing on marine environmental research. SCCWRP's mission is to gather the necessary scientific information so that member agencies can effectively and cost-efficiently protect the Southern California marine environment. In addition, SCCWRP's mission is to ensure that the data it collects and synthesizes effectively reaches decision-makers, scientists and the public.

2.4.3 California Coalition for Clean Water (CCCW)

The California Coalition for Clean Water (CCCW) is an alliance of local governments and public agencies, labor, agriculture, business, housing and development interests working together towards the development and implementation of water quality standards that protect water quality while balancing economic and social needs of local communities and the State. CCCW's mission is to assist the California Regional Water Quality Control Boards and SWRCB to adopt and implement sound water quality standards that reflect the intent and spirit of state and federal clean water laws.

2.4.4 National and Global Organizations

As Principal co-permittee, the Watershed Protection District (District) participated jointly with SCCWRP and various other federal and international organizations such as the Society of Environmental Toxicology and Chemistry (SETAC). SETAC is a nonprofit, worldwide professional society comprised of individuals and institutions engaged in the study, analysis, and solution of environmental problems. SETAC's mission is to support the development of principles and practices for protection, enhancement and management of sustainable environmental quality and ecosystem integrity.

SETAC promotes the advancement and application of scientific research related to contaminants and other stressors in the environment, education in the environmental sciences, and the use of science in environmental policy and decision-making.

2.4.5 Southern California Agencies

Beginning in 2003, and continuing through 2008 the District began participating in the Storm Water Advisory Team (SWAT) meetings. SWAT was created by stormwater-regulated agencies who believed that coordination amongst the regulated community would be beneficial to not only providing a unified voice to the Regional Board but would also encourage regional consistency in pollution prevention efforts. Meetings are held to discussions various issues such as TMDL development and progress permit negotiations, and regional monitoring opportunities.

2.4.6 Local Involvement

Watershed Protection District staff participates in various watershed-specific local subcommittees and groups that are focused on water quality and TMDLs. For example, staff regularly attends Calleguas Creek water quality subcommittee meetings and is involved in developing appropriate methods for monitoring water quality. Similarly, in the Malibu Creek watershed, staff provides technical expertise for the water quality monitoring technical advisory committee, reference water quality study workgroup, and bacteria compliance monitoring workgroup.

2.5 Fiscal Analysis

This Section presents a summary of the costs incurred by the Co-permittees in developing, implementing and maintaining programs in order to comply with permit requirements and includes information on the funding sources used by the Co-permittees. The total cost to each Co-permittee is the sum of *shared* costs and *individual* costs.

SECTION 2.0 PROGRAM MANAGEMENT

2.5.1 Program Costs for Permit year 2008/09

In 2008/09 the projected cost of the activities undertaken by the Co-permittees implementing the stormwater program within their jurisdictions are estimated to be \$31,910,727. This is a large increase over previous years' budgets of \$15,365,736 in 2008/09, \$16,739,303 in 2007/08, \$19,158,359 in 2006/07, \$15,429,018 in 2005/06, and \$14,205,276 in 2004/05.

The Countywide budget for stormwater quality is \$31,910,727

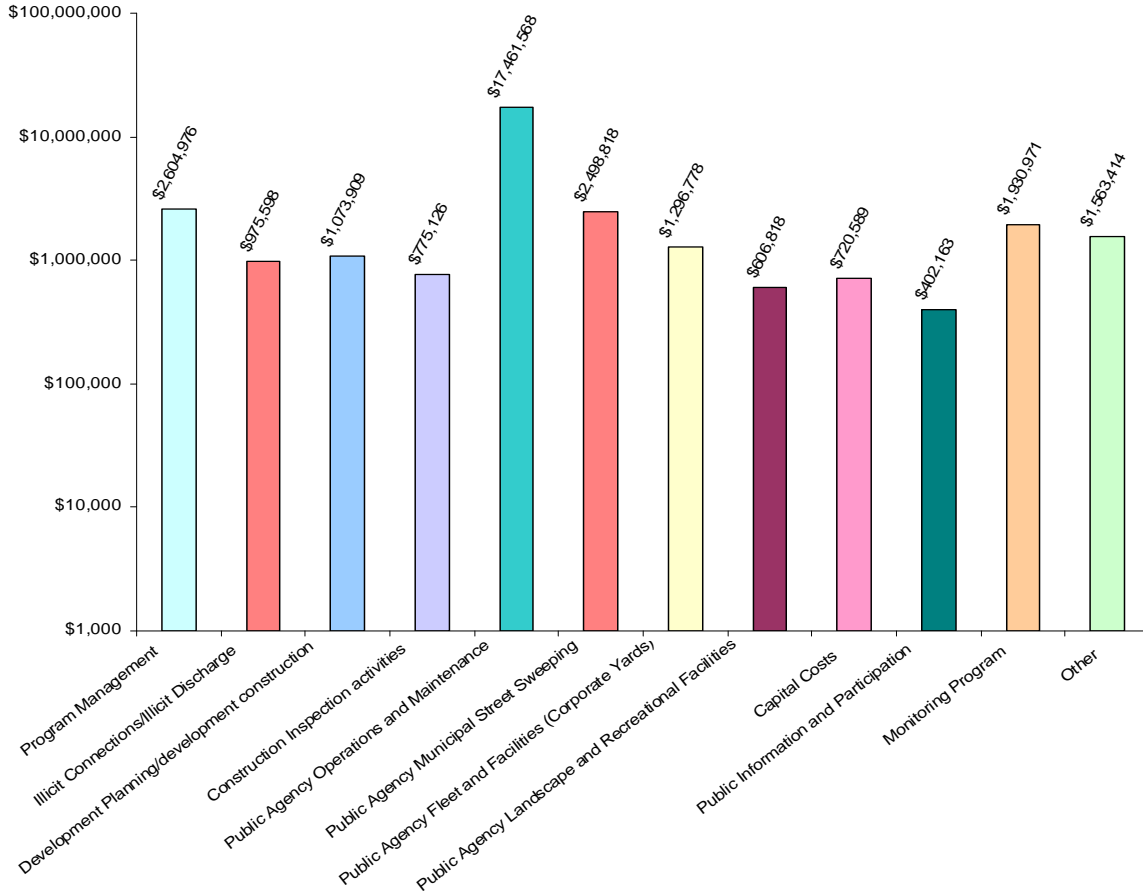


Figure 2-3 Countywide FY 2008-2009 Stormwater Program Budget

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	Item	Co-Permittee												
		Camarillo	County of Ventura	Fillmore	Moorpark	Ojai	Oxnard	Port Hueneme	Ventura	Santa Paula	Simi Valley	Thousand Oaks	VCWPD	Principal Co-Permittee
I.	Program Management	\$323,566	\$485,126	\$35,205	\$119,461	\$105,000	\$280,907	\$45,000	\$177,000	\$37,020	\$193,711	\$165,944	\$117,125	\$519,911
II.	Illicit Connections/ Illicit Discharge	\$50,201	\$182,655	\$29,495	\$3,000	\$0	\$85,058	\$5,000	\$222,000	\$84,713	\$232,051	\$68,528	\$5,631	\$7,266
III.	Development Planning	\$75,126	\$116,545	\$53,893	\$75,000	\$7,000	\$91,404	\$5,000	\$253,000	\$11,187	\$37,136	\$185,610	\$6,889	\$156,119
IV.	Construction Inspection Activities	\$68,167	\$79,945		\$75,000	\$5,000	\$180,894	\$5,000	\$40,000	\$8,762	\$95,843	\$196,030	\$17,345	\$3,140
V.	Public Agency Activities													
V.a.	Operations and Maintenance	\$258,317	\$800,000	\$92,865	\$39,000	\$4,000	\$467,809	\$15,000	\$225,000	\$159,187	\$165,472	\$232,848	\$15,000,000	\$2,070
V.b.	Municipal Street Sweeping	\$255,000	\$150,000		\$111,850	\$45,000	\$525,000	\$78,500	\$200,000	\$130,125	\$313,060	\$690,283	NA1	NA2
V.c.	Fleet and Public Agency Facilities (Corporate Yards)	\$5,194	\$3,000	\$101,791	\$1,000	\$4,000	\$33,581	\$5,000	\$0	\$4,116	\$1,067,759	\$2,231	\$69,106	\$0
V.d.	Landscape and Recreational Facilities	\$11,378	\$1,500		\$1,500	\$200,000	\$8,179	\$354,700	\$22,000	\$2,165	\$3,821	\$1,575	NA1	\$0
VI.	Capital Costs	\$144,000	\$0		\$10,000	\$6,000	\$390,000	\$10,000	\$95,000	\$0	\$65,589	\$0	0	\$0
VII.	Public Information and Participation	\$14,977	\$6,000	\$24,967	\$10,680	\$0	\$17,294	\$15,000	\$40,000	\$4,391	\$21,691	\$58,427	0	\$188,736
VIII.	Monitoring Program	\$149,625	\$10,000	\$15,000	\$0	\$0	\$29,144		\$331,000	\$0	\$6,502	\$0	0	\$1,389,700
IX.	Other (Business)	\$42,132	\$1,026,355		\$67,757	\$0	\$185,998	\$20,000	\$0	\$0	\$96,101	\$62,990	0	\$62,081
	Totals	\$1,397,683	\$2,861,126	\$353,216	\$514,248	\$376,000	\$2,295,268	\$558,200	\$1,605,000	\$441,666	\$2,298,736	\$1,664,466	\$15,216,095	\$2,329,023

Table 2.2 Agency Annual Budget Update for Stormwater Management Program - Fiscal Year 2008-2009

SECTION 2.0 PROGRAM MANAGEMENT

2.5.2 Fiscal Resources

Each Co-permittee prepares a stormwater budget annually and allocates resources to be applied to the stormwater program. **Table 2.2** presents the projected stormwater budget for each Co-permittee for Fiscal Year 2008/09 and **Figure 2-3** shows how the countywide budget is divided among the various programs. As expected, there is some variability between the stormwater program budgets reported by the Co-permittees. This variability is due in part to the accounting practices utilized by each Co-permittee and the allocation of activity costs amongst programs implemented by each Co-permittee.

In addition, the Co-permittees vary significantly in their jurisdictional area and population (**Table 2.3**), which may explain some differences in resources dedicated to various program areas. Yet, a review of the annual budgets produces some nominal findings. In general, Co-permittees with the largest populations tend to have budgets greater than the budgets reported by Co-permittees with the smallest populations. However, within the group of cities with the largest populations and within the group with the smallest populations, there is still variation in program budgets.

Co-permittee	Population	Area (Sq. Mi.)
Camarillo	62,498	19.6
County of Ventura	46,328	10.7
Fillmore	15,128	2.7
Moorpark	36,200	19.2
Ojai	8,687	4.4
Oxnard	197,067	25.3
Port Hueneme	22,137	4.3
Ventura	106,744	21.7
Santa Paula	29,121	4.6
Simi Valley	121,288	39.4
Thousand Oaks	128,650	57.2

2.5.3 Funding Sources

Funding sources to implement the stormwater program, including pre-existing programs that meet permit objectives, include both general and specific funds, taxes, maintenance and user fees and grants. Volunteer groups like Surfrider Foundation help implement some stormwater program elements and thus no fiscal value was attributed to these contributions.

The funding sources used by the Co-permittees include: Watershed Protection District Benefit Assessment Program, General Fund, Utility Tax, Separate Tax, Gas Tax, Special District Fund, Others (Developer Fees, Business Inspection Fees, Sanitation Fee, Fleet Maintenance, Community Services District, Water Fund, Grants and Used Oil Recycling Grants).

SECTION 3.0 PROGRAMS FOR RESIDENTS

3.0 Program Development

Public Education is an essential part of a municipal stormwater program because changing public behavior can create a real reduction in pollutants. When a community has a clear understanding of where the pollution comes from, how it can affect them and what they can do to stop it, they will be more likely to support the program, change their own practices and help educate others.

The Co-permittees are building upon the many successes of the current program. Early in the program, the Co-permittees identified key elements crucial to establishing a successful outreach campaign. These elements include:

- Watershed Awareness
- Public Awareness Surveys
- Identification of general and specific goals of the program
- Identification of target audiences and key messages for those audiences
- Development of program strategies and plan overview
- Pollution prevention program using a unified “brand name”
- Development of a watershed based outreach program
- Identification of opportunities to reach out to regulatory agencies
- Development of a model public education/public participation strategy for localization at the Co-permittee level
- Development and implementation of a school-aged children education outreach program
- Development and implementation of food facilities outreach program materials
- Development and implementation of automotive facilities outreach program materials
- Development and implementation of industrial facilities outreach program materials

3.1 Countywide Outreach Efforts

The **Community for a Clean Watershed** program was established in 2005 by the Ventura Countywide Stormwater Quality Management Program. Through the development of educational public outreach media campaigns, brochures and the Clean Watershed website, the Community for a Clean Watershed program has successfully raised awareness among Ventura County residents on the issues impacting the health of Ventura County’s watersheds.



3.2.1 Background

The **Community for a Clean Watershed** program was established in 2005 by the Program as a way to consistently brand our stormwater pollution message. Designed with the help of focus groups, the name was chosen to instill a sense of community and ownership.

Through the development of educational public outreach campaigns, brochures and the Clean Watershed website, the **Community for a Clean Watershed** program has successfully raised awareness among Ventura County residents on the issues impacting the health of Ventura County’s watersheds.

The co-permittees’ first step towards creating an effective public outreach campaign was to gain a better understanding of public perception of stormwater pollution, storm drains and watershed protection. The research data, collected through a series of English and Spanish focus groups,

SECTION 3.0 PROGRAMS FOR RESIDENTS

revealed a clear direction to take in order to obtain the behavioral changes desired from the community including:

- Clearly define the *watershed* and begin to bring it into the mainstream
- Differentiate the message from 'don't litter' and 'water pollution' ads
- Make an emotional, visual connection
- Appeal to the 'local pride' of Ventura County residents
- Provide enough information to empower residents to 'make a difference'
- Provide a place for residents to get informed and to act, i.e. a dedicated website

While it's been five years since this project started, the objectives of the Community for a Clean Watershed program continue to be to:

- Create and build awareness
- Educate residents
- Change negative behavior
- Develop a consistent message throughout all cities and areas in Ventura County
- Attempt a year-round effort to increase top-of-mind awareness of the watershed

Public Outreach Permit Year 08/09

New outreach objectives included in Permit Year 08/09 included:

- Extend outreach to more targeted audiences, including horse owners
- Prepare for new permit which will require outreach to school aged children.

Progress has been made toward the goals of educating the public and creating awareness of the watershed. Through a coordinated effort, the co-permittees are attempting to continue their long-term, multi-media countywide municipal NPDES public education outreach activities to increase the overall effectiveness of the program. In 2008-09, efforts were extended to additional target audiences in a variety of media.

Since 2005, the Countywide Program has utilized the marketing services of the Agency. A full service advertising and public relations agency located in Ventura County, the Agency continues to develop materials and implement Community for a Clean Watershed campaigns and related research. The 2008-09 year's efforts included the following key initiatives:

Target: Residents

- Coastal Cleanup Day, September 2008
Pollutant of Concern: Trash
 - Print
 - Public Access Cable
- December 2008 Public Outreach
Pollutants of Concern: Trash/Bacteria
 - Radio
 - Newspaper
 - Online banners
 - Outdoor bulletin
 - Transit Shelters
- May 2009 Public Outreach
Pollutant of Concern: Pesticides

SECTION 3.0 PROGRAMS FOR RESIDENTS

- Cable Television
- Radio
- Online Banners
- Transit Shelters

Target: Auto and Food Service Businesses

- Auto Services
Pollutants of concern: trash, automotive fluids, including grease, chemicals, solvents, detergents
 - BMP Posters
- Food Service
Pollutants of concern: illicit disposal of trash, cleaning products, FOG (fats, oils, grease), other solvents
 - BMP Posters

Target: Horse Owners

- Pollutant of Concern: Bacteria
- Educational Brochures
 - Direct Mail, May 2009

Por Favor Recoge Mi Pupu.



COMMUNITY FOR A
CLEAN WATERSHED



La Cuenca Hidrográfica Solamente Debería Transportar Agua...No Bacterias.

cleanwatershed.org

Spanish Newspaper Ad

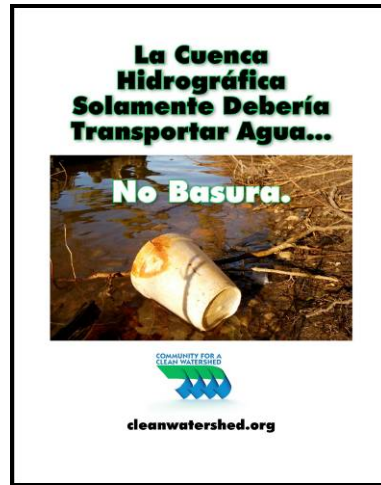
SECTION 3.0 PROGRAMS FOR RESIDENTS

December 2008:

In December, an existing radio spot with a broad watershed message and mention of several pollutants of concern provided an umbrella platform from which to launch new elements tackling two specific pollutants of concern. Newspaper ads utilized a familiar Watershed image of a dog, with the call to action "Please Pick up my Poop," while new outdoor signage suggested, "The Watershed Should Only Shed Water.....not Trash" showing a Styrofoam cup that ended up on a beach.



English Transit Shelter



Spanish Transit Shelter



Outdoor Billboard



Images from flash Web Banner

SECTION 3.0 PROGRAMS FOR RESIDENTS

Radio Interviews/Publicity: December 2008

As part of the negotiated value-add, radio Interviews were conducted on both radio stations on the December media buy. Each radio interview was at least five minutes, reviewing the concept of a Watershed as well as offering suggestions for how to keep it clean.

In addition, on December 7, 2008, a press release ran in the local newspaper's "Eye on the Environment" column, proclaiming "Follow these steps to cut pollutants flowing to the ocean." The article enumerated several pollutants, giving advice on how to keep each type of contaminant out of local watersheds.

May 2009:

Coinciding with the spring planting season, the Community for a Clean Watershed ran a four-week pesticide campaign utilizing television and radio campaign elements from the previous year's creative arsenal. The animated "More, Better" television commercial graphically demonstrated how using too much pesticide runs into the storm drains, eventually making it into the Watershed, adversely affecting plants and animals. The radio spot was a humorous adaptation of the television ad, featuring the two animated characters as they defend their house against garden pests and inadvertently poison the watershed. An animated web banner corresponded with both broadcast media while the transit shelters took a more direct approach showing a snail and telling residents "Don't kill an ocean just to keep pests out of your garden."



Frames from pesticide TV commercial

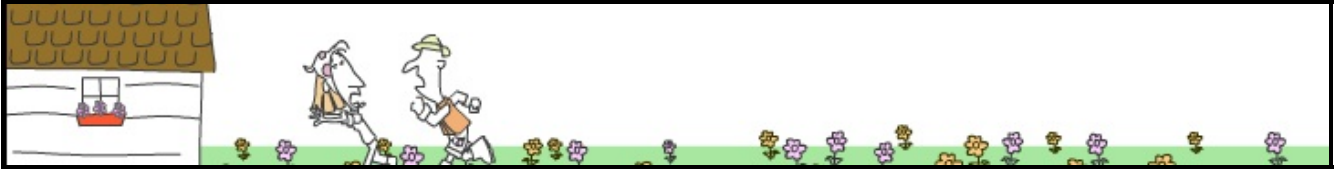


English Transit Shelter



Spanish Transit Shelter

SECTION 3.0 PROGRAMS FOR RESIDENTS



Frame from web banner

Media Outreach Strategy

As in the past, each media plan was negotiated with the goal to maximize target reach and frequency on a limited budget. In addition, attention was paid to geographical distribution throughout Ventura County as well as adequate coverage in the Latino market. The Agency was able to consistently obtain low rates and significant bonus elements, including bonus radio commercials, newspaper ads and outdoor billboards. Bonus impressions nearly doubled paid impressions.

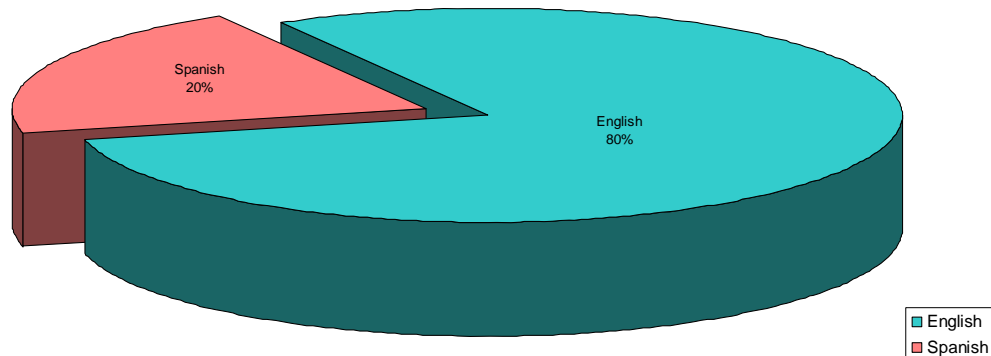
For the three campaigns in the 2008 – 2009 year, the Community for a Clean Watershed media plan achieved a total of 5,342,005 gross impressions broken out as follows:

Campaign	Gross Impressions
Coastal Cleanup Day	1,459,048
December Trash/Bacteria	2,761,613
May Pesticide	1,121,344
Website: cleanwatershed.org	3,724

Bilingual Public Outreach

To reach the significant Hispanic community in Ventura County, all elements of the campaign were created in Spanish. This included the newspaper, transit shelter and radio ads, each of which ran in Spanish media

20% of the Countywide Outreach Efforts were in Spanish



Spanish Media Outreach Using a media mix of Spanish newspaper, radio and transit shelters, Spanish language advertising accounted for 20% of total media impressions: 832,126.

SECTION 3.0 PROGRAMS FOR RESIDENTS

Community for a Clean Watershed

In its third year, the cleanwatershed.org website continues to reinforce the various public outreach messages as well as make available a network of resources to help the web viewer make informed decisions. The website is updated on a regular basis to add relevant campaign materials as well as educational materials. 2,101 unique visitors made 3,724 visits and read an average of 2.24 pages. Web visits peaked in May, coinciding with the public outreach campaign.

Horse Owners Best Management Practices (BMP) Direct Mailer

In May, the Watershed continued its best practices campaign with outreach to Ventura County horse owners, equestrians and horse property owners. This mailer, which was delivered twice to more than 6,000 relevant households and businesses, reminded this population of the key actions they can and should take to promote healthier, happier horses as well as to protect the watershed.



Outside of tri-fold mailer



Inside of tri-fold mailer

SECTION 3.0 PROGRAMS FOR RESIDENTS

Eye on the Environment

The Ventura County Star, a local daily newspaper serving all of Ventura County with a Sunday readership of over 240,000 people has generously offered space for a weekly 750-word column to the Ventura County Integrated Waste Management Division. The column is titled Eye on the Environment and runs every Sunday. Focused on all aspects of protecting the environment the column helps promote awareness of stormwater pollution directly and indirectly. Some topics don't discuss stormwater directly but the message is just as helpful to reducing stormwater pollution. For example several columns last year provided information on the hazards balloons and plastics bags can cause to the environment, the benefits of conserving water, or how to properly dispose of household hazardous materials. All clearly issues with a stormwater component. Four columns over the Permit year were written by District staff and directly addressed stormwater pollution pollutants of concern and what residents can do to prevent them from entering the environment.

Youth Survey

In anticipation for the upcoming permit which includes a component for K-12 outreach, the Community for a Clean Watershed wanted to establish a baseline of understanding before targeted outreach began. A web survey, implemented by Applied Research West, was used as the method for data collection, surveying a total of 330 participants between the ages of 5 and 18 with 30 participants from each city in Ventura County and attention paid to matching the ethnic composition of the area.

Key findings, which will help direct the messaging platform as well as media selection, include:


Awareness of Watershed and Storm-water

- Kids 13–18 have a greater awareness of the terms 'watershed' and 'storm water' with Kids 5–9 significantly lower.
- All age groups (79%) agree that the watershed includes land, rivers, lakes, creeks and beaches. However, 33-35% of Kids 5-9 are less certain it includes their house and yard.
- There is a high awareness that pollutants in their yards could end up miles away, although Kids 16–18 are less like to agree that it could happen.

Conservation Behavior

- Recycling of paper, plastic and cans are commonly practiced although Kids 5–9 are somewhat less likely.
- All age groups show a strong response to turning off water while brushing their teeth. A 10-minute shower is more challenging with an average of 67% complying.
- Most kids, 57%, will ask others to pick up litter or pick it up themselves.

Eye on the Environment: Police your own actions, halt negligent 'envirocide'



Eye on the Environment: Police your own actions, halt negligent 'envirocide'

By Arne Anselm
Guest writer
Sunday, February 22, 2009

The story you are about to read is true. The names have been changed to protect the innocent.

It's 10 a.m. Sunday, Feb. 22, 2009. The crime: Our watersheds are suffering from too much pollution. The evidence: unhealthy levels of pesticides, fertilizers, bacteria and litter. Possible suspects include any flow to a creek or storm drain that is not clean stormwater, aka Illicit Dischargers, and the illegal dumping of trash, aka Midnight Dumpers. The punishment: can be required to pay all cleanup costs and in some areas, expensive fines as well.

Your help is needed in apprehending these suspects. Ventura County and all its cities have ordinances making such activities illegal, and you if witness someone abusing the gutter, you should report it. Inspectors will investigate and enforce if necessary. The gutter is not for the disposal of soapy water or any other waste.

These scofflaws, however, aren't the only sources of pollutants to our watersheds. Just as the Midnight Dumper with a pickup full of trash harms the environment, so can the daily activities of people everywhere. All these pollutants add up to a big problem. We might all be guilty of negligent "envirocide."

Here are five of the "least wanted" pollutants and what you can do to prevent their escape into the environment:

Harboring a fugitive: In a can, it's called trash, but on the ground, it's litter. Putting wrappers from a fast-food meal in a pickup truck bed seems like the right thing to do. But at 50 mph, it becomes litter as it escapes onto the road (aka Fugitive Trash). Also, wind or hungry sea gulls can make a mess of a trash can or Dumpster that doesn't have a tight lid on it.

Maximum security: You could say pesticides and weedkillers were born to kill, and they, along with other landscape chemicals, are serious watershed pollutants. These should always be secured out of the elements, away from wind and rain. Use only the amounts recommended on the label, and try using a smaller amount or less-toxic alternatives (a 2-inch layer of mulch could keep weeds from breaking into your garden). Do not overwater after applying chemicals, or apply pesticides, weedkillers or fertilizers before a rain, or they might make their break for the environment.

Getaway car: Leaking automotive fluids will gang up on driveways and roads. This toxic grime will be washed off in one big slug during the first rains of the season, straight to the environment. Inspect your car for leaks regularly and get them fixed. Spent oil and other automotive fluids must be disposed of properly. Certified used-oil collection centers are available at some auto parts stores or repair shops, or use your city's household hazardous waste collection events.


Take that, you dirty copper: Dust from metallic brake pads, outside decorative copper and other metal displays is not usually thought of as water pollutants, but to aquatic life, it can be a killer. Some smaller cars can use nonmetallic brake pads. Ask your mechanic if your car qualifies. If decorative copper or other unpainted metals are outside your home, make sure any water runoff is contained in the landscaping instead of making a break for the gutter or street.

K-9 unit: Pet waste is a source of bacteria that can make people sick. Dirty diapers and discarded food are also known accomplices in this offense. Pick up after your dog and dispose of the waste properly in trash cans. The same is true for baby diapers and food waste.

There is no defense for harming the environment, but it is beyond a reasonable doubt that someone could contribute no pollution at all. With just the facts, a little self-policing and judicial action, we can make a big difference and avoid negligent envirocide.

— Arne Anselm is a water quality manager with the Ventura County Watershed Protection District. Representatives of government or nonprofit agencies who want to submit articles on environmental topics for this column should contact David Goldstein at 658-4312 or david.goldstein@ventura.org.

On the Net:
<http://www.cleawatershed.org>



© 2009 Ventura County Star

<http://www.venturacountystar.com/news/2009/feb/22/police-your-own-actions-halt-negligent/>?printer=1/[9/17/2009 10:33:55 AM]

SECTION 3.0 PROGRAMS FOR RESIDENTS

- Litter on the ground is largely ignored by Kids 16-18 whereas half of 5–15 year-olds will always pick it up.

Attitudes and Water Issue Understanding

- Young kids 5-9 and older kids 16-18 are less sure that sewer water is always cleaned and treated.
- 89% of all age groups agree that anything dropped in the gutter or storm drain might end up in the ocean.
- Kids 8-12 are more likely to believe it is okay to use the gutter to throw away trash.
- While almost 40% agreed that it was someone else's job to keep the environment clean, 88% agreed it is their family's job to do so.
- 87% understand that people cannot survive without water. Only half believe the world can run out of water.

Polluting Impact of Various Items

- Motor oil was perceived as the most polluting with garden pesticides and trash/litter next.
- Fertilizer and household cleaners are considered moderate polluters.
- Pet and Yard Waste were rated the lowest 'high level' of concern.

Summary of Effectiveness

This was the fourth year of the Community for a Clean Watershed public outreach efforts; and was a year of transition as the co-permittees anticipated the new permit requirements. Working within a reduced budget for outreach, the group was able to maintain awareness with Ventura County residents, extending the original message of "The Watershed Should Only Shed Water" to The Watershed Should Only Shed Water....not (trash/pesticides/bacteria)." Specifically, the following was achieved:

- Add to the arsenal of creative elements that cover the various pollutants of concern. These materials are available for collective or individual city use throughout Ventura County.
- Provide consistent messaging throughout the year to residents.
- Persuade the local media to extend the reach of the campaign through bonus placements, thus extending the repetition of the watershed message.
- Provide BMP materials to auto service dealers, food service and horse owners.
- Determine current understanding of watershed terms, conservation, water issues, and key pollutant concerns of children in grades K-12, to be used as a baseline for future outreach efforts to this population.

3.2.5 Public Reporting

Each Co-permittee has identified staff serving as the contact person(s) for public reporting of clogged catch basin inlets and illicit discharges/dumping. Designated staff is provided with relevant stormwater quality information, including program activities and preventative stormwater pollution control information. Contact information is updated as necessary and published in the government pages of the local phone book and other appropriate locations. In addition, this information is available on the Program's website at www.vcstormwater.org.

3.2.6 Curb Inlet Stenciling

As required by the Permit, Co-permittees have completed labeling or marking the curb inlets to their entire storm drain system. During the reporting period, some Co-permittees maintained their inlet signs by reapplying stencils/markers as they wore out and applying stencils/markers to new inlets as they were installed. **Figure 3-1** depicts the progress the Co-permittees have made in their efforts to install and maintain their curb markers.

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100% of Catch basins countywide are marked with a no dumping message

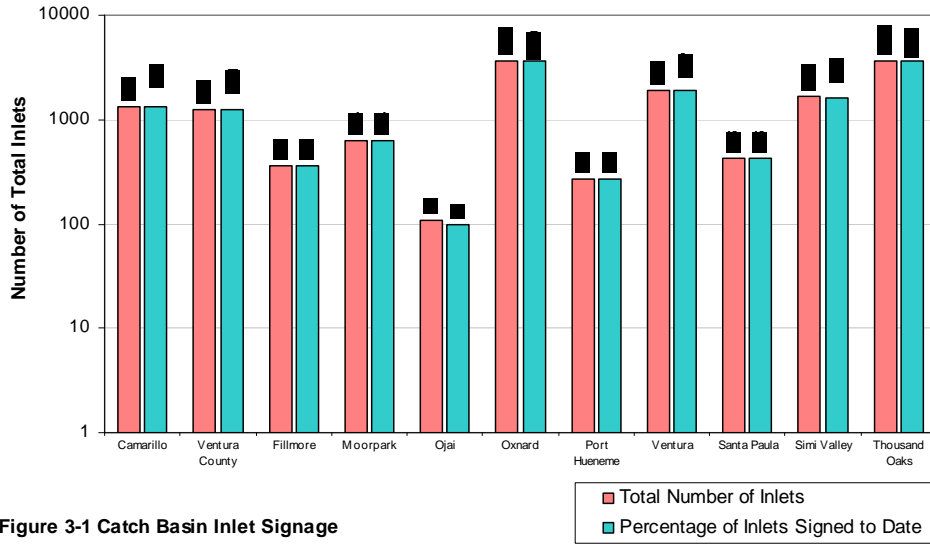


Figure 3-1 Catch Basin Inlet Signage

Table 3-2 Public Reporting Phone Numbers		
	General Information	Reporting Illicit Discharges
Ventura County Watershed Protection District	805/650-4064	805/650-4064
City of Camarillo	805/388-5338	805/388-5338
County of Ventura	805/650-4064	805/650-4064
City of Fillmore	805/524-1500x109	805/524-3701
City of Moorpark	805/517-6257	805/517-6257
City of Ojai	805/658-6611	805/640-2560
City of Oxnard	805/488-3517	805/271-2220
City of Port Hueneme	805/986-6556	805/986-6507
City of Ventura	805/652-4582	805/667-6510
City of Santa Paula	805/933-4212	805/933-4212
City of Simi Valley	805/583-6462	805/583-6400

SECTION 3.0 PROGRAMS FOR RESIDENTS

City of Thousand Oaks	805/449-2386	805/449-2400
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The percentage of inlets signed to date meets the performance criteria established in the SMP for all Co-permittees. Signs at curb inlets have varying useful lives due to the materials from which they are constructed (e.g., paint, thermoplastic), their position (e.g., on top of curb, on face of curb), and wear factors (e.g., traffic, street sweeping, sunlight). As a result, the Co-permittees have different programs to maintain curb inlet signage within their respective jurisdictions. Some Co-permittees replace a portion of their signs each year whereas others re-sign all inlets every few years. Regardless of the specific inlet signage practice, all Co-permittees understand the importance of signage to the education component of their program and are committed to installation and maintenance of signage that meets both the educational goal of the program as well as the 90% performance criteria set forth in the SMP.

3.2.7 Access Points to Designated Creeks & Other Water Bodies

In addition to the Storm Drain Inlet Stenciling Program, the Co-permittees are required to designate appropriate access points to the creeks and channels within their jurisdiction for the placement of signs with prohibitive language to discourage illegal dumping. Each Co-permittee is responsible for designating the appropriate access points to creeks and channels within their jurisdiction, which requires some field verification and mapping. This program element also required in some cases, the cooperation between the City and special districts outside the City's jurisdiction.

Figure 3-2 depicts the progress the Co-permittees have made in their efforts to post their signs at appropriate access points to creeks and channels. A review of **Figure 3-2** shows that all the Co-permittees met the performance criteria that 90% of the designated public access points be posted with signs regarding the prohibition of illegal dumping.

95% of all public access points to creeks and other waters have been posted with a no dumping message

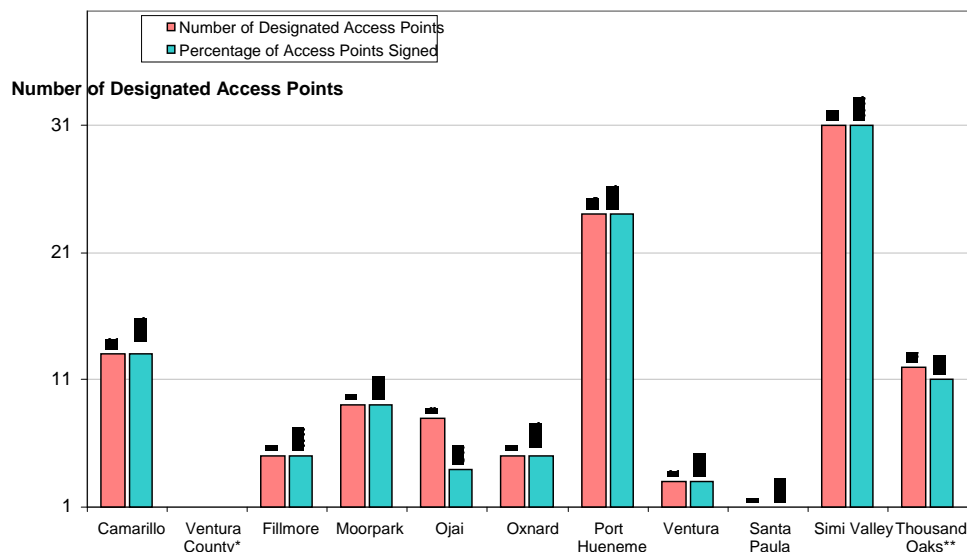


Figure 3-2 Signage of Public Access Points to Designated Creeks and Channels

* No updated information on this task for this year

** The designated public access areas to creeks within the City are under the jurisdiction of the Conejo Recreation and Parks District.

SECTION 3.0 PROGRAMS FOR RESIDENTS

3.2.8 Local Community Outreach Efforts

Each of the Co-permittees organized community-oriented outreach events, training and other activities on stormwater quality within their jurisdiction. The Co-permittees emphasized the importance of using environmentally safe practices at home and work to prevent stormwater pollution. Outreach efforts included community newsletters, small group learning activities and other media to deliver a stormwater message that educates and informs the general public.

One such effort is demonstrated by the City of Camarillo. The city regularly publishes *City Scene*, a newsletter for City of Camarillo residents, providing local community and neighborhood focused information. In a recent edition, readers were provided city specific information how to prepare for the rainy season through good housekeeping and proper slope maintenance. It communicated the message that not only can drainage failures damage property, but the sediment and various pollutants that erode from the slopes or that come out of private drains end up in the storm drain system and ultimately into our creeks and ocean without being treated. Reminding people that pollutants impair water bodies and can be harmful to aquatic life. The City of Thousand Oaks jointly sponsored a semi-annual publication and distribution of a solid waste newsletter. This newsletter was designed to educate readers in recycling and proper waste disposal methods. Distribution was estimated to be more than 33,000.


The City of Thousand Oaks worked with other local agencies, business and groups to promote awareness and education about stormwater pollution. Including:

What is Stormwater Pollution Prevention?

Stormwater and Urban Runoff Pollution
Stormwater and urban runoff result from rain and other water sources that do not soak into the ground. The runoff flows from rooftops, over-paved areas, impervious bare soil and sloped lawns, collecting and transporting pollutants in its path into the local storm drain system. Storm drain pipes transport the runoff and its pollutant load into creeks where it travels—untreated—into the ocean. Some of these harmful pollutants include:

- Pesticides and fertilizers
- Automotive fluids (oil, grease, gasoline, antifreeze)
- Dirt, sand, silt and construction spoils
- Pet waste
- Grass clippings, leaves, and other yard waste
- Metals
- Household chemicals such as paint & solvents
- Litter such as plastic bags, bottles, fast-food wrappers and cigarette butts

Preventing Stormwater and Urban Runoff Pollution
Since stormwater pollution is worsened by everyday activities and a suburban environment, we are all responsible for minimizing its harmful effects. Keep areas around homes and businesses clean and properly dispose of trash in refuse or recycling containers. Sweep sidewalks and driveways instead of hosing them down, and never wash debris into the storm drain. Clean up leaks, drips and other spills—especially from automotive fluids immediately and without using water, if possible. Never pour used motor oil or other chemicals into the gutter or storm drain.



Dispose of grass, tree and garden cuttings in the tan yard waste barrel; never blow or wash debris into the gutter, street or storm drain. Don't over water. Much of the water that runs into gutters comes from excessive irrigation. If using pesticides, apply strictly per manufacturer's instructions and never apply before sprinkling or predicted rain.

Take pride and action—simple precautions can protect and preserve our watersheds, streams, and beaches.

Pool Maintenance
It's that time of the year again when swimming pools are being prepared for summertime fun! Pool owners are urged to be aware of proper pool maintenance procedures and the environmental damage that may result from improperly discharged pool water.

Properly maintained pools should require draining no more than once every ten years. Prior to draining a pool, check the chlorine concentration. If the chlorine does not exceed the 0.1 part per million (ppm) level, it is safe to drain the water into the street, gutter or storm drain system.


Chlorine concentrations that exceed 0.1 ppm must be reduced before the water is safe to drain to the street. Dechlorinate the water using one of the following methods:

- Do not add additional chlorine for several days then reset water to determine if it is safe to discharge. Repeat as necessary to achieve a safe chlorine level.
- Add chlorine reducers available from pool supply stores.

Regardless of the method chosen, always discontinue pool use when no chlorine is present. The dechlorinated pool water must not pick up pollutants or cause a public nuisance while draining. City of Camarillo water customers should notify the Water Division at 388-5373 before draining a swimming pool.

Never drain acid washing or other waste water generated by pool cleaning or disposal of pool filter media into the street, gutter or storm drain system. If no harmful chemicals are present, diatomaceous earth filtered waste should be bagged and placed in the green trash container.

For information regarding urban runoff pollution, call the City's Stormwater Coordinator at 383-5659.



"The watershed should only shed water"

"The People Are The City"

Camarillo Government Channel



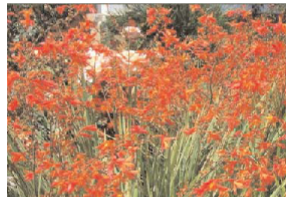
When live meetings or various types of programming are not being aired, the Camarillo Government Channel airs free cable advertisements about community organizations and events 24-hours a day. For Time Warner customers this is channel 10; and channel 29 for Verizon FIOS.

Live meetings are also broadcast on the Government Channel, including those of the Camarillo City Council, Planning Commission, Pleasant Valley School District Board, and other nonprofit organizations. The local talk show *CityScene TV* (pictured above) is also aired on the Government Channel, as are regular meetings of the County Board of Supervisors, and the Oxnard Union High School District Board.

Nonprofit community organizations, schools, and other groups are invited to submit advertisements for the Government Channel. Public service announcements (PSAs) can also be aired. For information, please call John Fraser at (805) 388-5349.

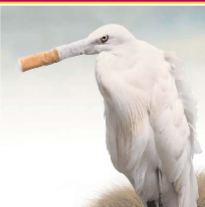
Water Wise Gardening Website

The City of Camarillo and other cities in the County are building an exciting and practical website to help homeowners design, maintain, and augment their gardens into beautiful water wise masterpieces. The most intriguing feature of the website is the ability to look through sample gardens and use links to determine which plants compose these gardens. You will have the capability of building your own private plant list on the website, and print it out to take to the local nursery. Furthermore, the website will include a plant database of more than a thousand available plants that you can search and sort through to find the right plant for the right place. The website will be available in late May 2009. For additional information, please call (805) 388-5338.



Keep Camarillo Beautiful - Properly Dispose of Cigarette Butts

The City of Camarillo would like to inform its residents of the increasing problem of littered cigarette butts. According to the California Coastal Commission, 5,406,890 cigarette butts have been found at the California Coastal Cleanup Day annual event since 1985. The cigarette filters take eighteen months to twelve years to biodegrade. Also, the used filters may have small pieces of tobacco in them as well as tar and other chemicals, which are damaging to our environment. Eighty percent of cigarette butts end up in the water system and within an hour of having contact, chemicals like arsenic, lead, and cadmium are released into our waterways. These chemicals can cause our marine life to become ill or die. Please take this into consideration when disposing of your cigarette butts and put them where they belong, in the waste receptacles that are meant for them!



Thank you for helping to keep our watershed clean! For more information on pollution prevention, please log on to the new countywide website at www.cleanwatershed.org or call the City of Camarillo Streets Division at (805) 383-5659.

According to the California Coastal Commission, 5,406,890 cigarette butts have been found via the California Coastal Cleanup Day since 1985.

- Conejo Open Space Planning Agency, COSCA, Trail Education Days—On April 30, 2009 about 25 fifth-grade students were given an informational tour through the Wildwood park natural area. During the hike, the children were taught about topics in ecology including urban stormwater impacts and the benefits of recycling.
- Amgen Earth Day and Energy Conservation Fair—On April 22, 2009, Amgen Corporation hosted this event to raise awareness about excessive energy use and surface water quality issues. About 2,500 Amgen employees attended the event. The City of Thousand Oaks gave participants recycled products and answered questions about informational poster displays. Participants were also given brochures on recycling and stormwater topics.

SECTION 3.0 PROGRAMS FOR RESIDENTS

- Baxter Bioscience Earth Day—On June 1, 2009, the City of Thousand Oaks’s staff presented a Power Point presentation focusing on residential activities that cause surface water pollution and how to reduce this contamination. Despite advertisement through internal memo from the company’s Health & Safety Division, only ten people attended.
- Whole Foods Market—City of Thousand Oaks representatives operated an educational outreach booth on September 20, 2008. The theme was “Going Green.” The estimated 300 participants learned about topics such as water conservation, recycling, and storm water quality by spinning a wheel and answering questions.
- Public Works Week—May 21,22, and 23, 2009—About 35 Conejo Valley schools brought more than 1,200 children and 150 adults to see examples of the activities and equipment that are used to by the City of Thousand Oaks to maintain its infrastructure. For stormwater quality management, a table-sized model depicting a watershed was sprinkled with simulated pollutants such as cinnamon (sediment) and food colorings (fertilizer and pesticide) in its residential section. Children participated by simulating rain with spray bottles and saw these suggestive pollutants contaminate the creeks and lake. A simulated curb drain receiving re-circulated water and a section of storm drain pipe were there for reference.
- Sports Pro Camp and Boy Scouts- staff gave presentations on recycling and proper disposal of waste materials to prevent surface water quality impacts. These events were held on July 1, 2008 and November 6, 2008, respectively. Combined attendance was 50 children.

Figure 3-3 indicates the number of educational contacts made by the Co-permittees at local community outreach events/activities during this reporting period.

Over 4.5 million impressions made through countywide public education

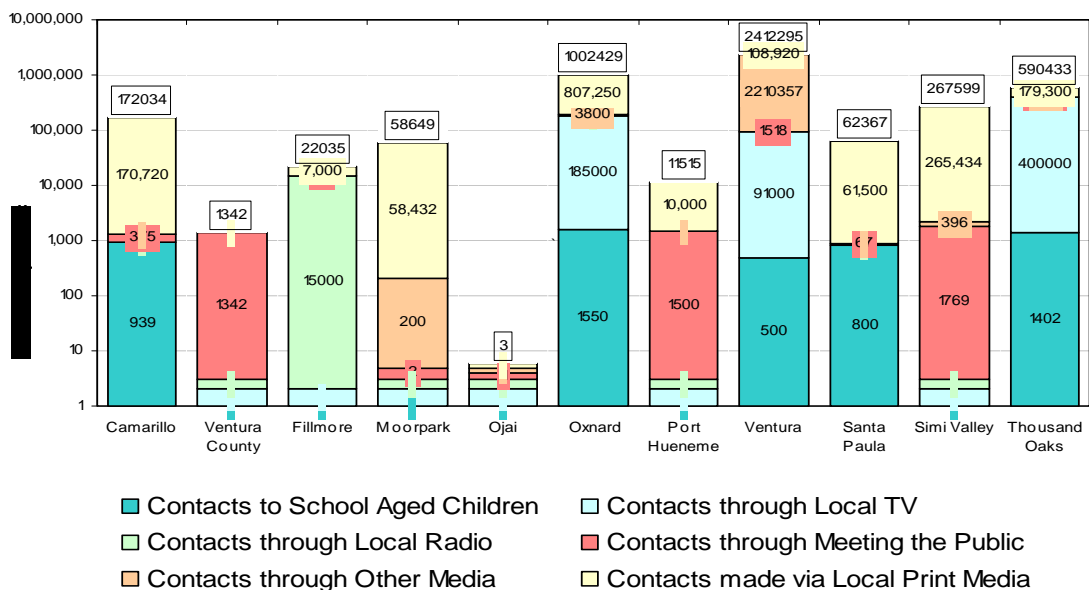


Figure 3-3 Local Community Outreach Efforts

SECTION 3.0 PROGRAMS FOR RESIDENTS

Coastal & Inland Waterways Cleanup Day

Saturday - September 20, 2008
9:00 am - 12 noon

The City of Camarillo is seeking volunteers to participate in this year's Coastal & Inland Waterways Cleanup Day. This is a great way to demonstrate community support for our shared natural resources and to have fun! Volunteers will collect litter from canyons and inland waterways including:

- The main Canyon off Mission Oaks Park (meet near tennis courts)
- Calleguas Creek (Call to confirm meeting location)

TO REGISTER: Call 805-388-5338 or email: akuhlman@ci.camarillo.ca.us

1,102,042 Bottle Caps
Removed Since 1985

California Coastal Cleanup Day

September 20, 2008
Saturday 9 am to Noon

Note: The terrain we'll be cleaning is not suitable for strollers or children under age 5. Wear sturdy shoes, a hat, long pants and sleeves, gloves and sunscreen.

The City of Oxnard provides residents with a quarterly newsletter called *City Works*, which includes articles on Storm Water Pollution Prevention and provides guidance to both the public and private sectors as to how best to reduce storm water pollution. Articles have featured Coastal Clean up Day, Water Conservation, Recycling Household Hazardous Waste, Trapping Trash Before It Reaches the Beach, and Only Rain Should Go Down the Storm Drain. The City of Oxnard will continue to use the quarterly newsletter (*City Works*) to provide the public with the latest stormwater pollution prevention methods.

3.3 Ongoing Program Accomplishments

3.3.3 Community Cleanups

California Coastal Cleanup Day is a premier volunteer event focused on the cleanup of beaches and creeks throughout the country. On this day, more than 50,000 volunteers turn out to over 700 cleanup sites statewide to conduct what has been hailed by the Guinness Book of World Records as “the largest garbage collection.” Since the program started in 1985, over 552,000 Californians have removed more than 8.5 million pounds of debris from our state’s shorelines and coast. When combined with the International Coastal Cleanup organized by the Ocean Conservancy and taking place on the same day, California Coastal Cleanup Day is one of the largest volunteer events of the year.

Coastal Cleanup Day is also the highlight of the California Coastal Commission’s year round “Adopt-a-Beach” program and takes place every year on the third Saturday of September, the end of the summer beach season and right near the start of the school year. Coastal Cleanup Day is a great way for families, students, service groups and neighbors to join together and take care of our fragile water environments Together they show community support for our shared natural resources, learn about the impacts of marine debris and how we can prevent them.



Beginning in 1996, the Co-permittees have participated in this extremely successful statewide event. This annual event has been an excellent opportunity for volunteers to help clean and beautify local beaches and inland waterways. Over the past ten years, the Co-permittees have worked hard to encourage more volunteer participation in addition to targeting additional beach and inland areas for cleanup. This volunteer program continues to be a huge success, not only in cleaning local sensitive environments but also in creating a heightened awareness on proper trash disposal and its benefit to stormwater quality. This permit

year, a record high of 2,772 volunteers removed over 13,900 pounds of trash and recyclables from close to 50 miles of inland and coastal shorelines in Ventura County. While the number of volunteers was high the amount of trash wasn't, indicating that there is less trash getting out into the environment.

SECTION 3.0 PROGRAMS FOR RESIDENTS

Community Cleanup Day—The City of Thousand Oaks sponsored a collection event of waste materials on May 16, 2009. At the event, about 1794 residents brought 236 tons of trash and green waste; 25,579 pounds of miscellaneous electronic components; 25,882 pounds of video monitors; 9.2 tons of paper from document shredding; and four semi-trailer loads of assorted computer components that were donated to the Goodwill for re-use.



Freeway Ramp and Interchange Collection Program (Adopt-A-Highway)—From July 1, 2007 to June 30, 2008, about 14,625 pounds of trash and debris were removed from 13 freeway on-ramps and exits and one freeway interchange in the City of Thousand Oaks

3.3.2 Pet Waste Program

Pollution Prevention and Your Pets

The City of Camarillo would like to remind pet owners to please pick up after their pets. Pet waste contains bacteria, viruses and parasites that can threaten the health of people and wildlife. If the waste is not picked up, rain and irrigation runoff water can carry it into the streets and gutters, down the storm drain, and directly out to our creeks and the ocean. Please remember that anything entering our storm drain system is not treated to remove pollutants such as bacteria before emptying into the creeks and ocean. Not only does pet waste create problems in our environment, but section 7.32.010 of the Camarillo municipal code stipulates that pet waste be disposed of properly in a trash receptacle, and the deposit of pet waste on public property (including sidewalks, parks, and streets) maybe punishable by fine.



Please clean up after your dog, it's the law!

Tips for Bagging Pet Waste

- Reuse plastic newspaper bags, bread bags, sandwich bags or grocery bags.
- Take advantage of the free pet waste bags provided at all city parks by the Pleasant Valley Recreation & Parks District and the City of Camarillo.
- When walking your pet, bring the bags with you to retrieve the pet waste, tie the bag closed and dispose of it in the trash.

Thank you for helping to keep our watershed clean! For more information on pollution prevention, please visit our new countywide web site at www.clearwatershed.org or call the City of Camarillo at (805) 383-5659.

Interested in Joining the City Watch Program?

City Watch is an exciting program brought to you by the Camarillo Police Department. This program was designed to utilize email as an avenue to disseminate important information to the community regarding current crimes and crime trends. The goal of the program is to increase public awareness about the existing crime trends so that residents can be better prepared to identify suspicious criminal activity and immediately report to the police by calling 911.

This program was designed as a means to receive feedback on particular crimes, and not designed to ask routine questions, or make general complaints regarding traffic problems, neighborhood disputes, etc. Since the email account is not monitored 24-hours a day, residents are encouraged to reply to the emails only if they have questions about the information that was disseminated.

Anyone interested in joining the program can send an email request to camcity.watch@ventura.org. If you have questions about the program, or need additional information, please call the Crime Prevention Officer, Robert Maclean at (805) 388-5130.



"Las Personas Son La Ciudad"

The Pet Waste Program began in 1999 by the Co-permittees to educate pet owners on bacterial contamination to our ocean and streams from pet waste. The program began by installing dispensers for pet waste pickup bags at beaches, parks and trail heads. This program has grown to giving out over 2 million pet waste bags a year at a cost of about \$150,000. There are now close to 400 pet waste bag dispensers throughout the county encouraging pet owners to pick up after their pets. This program has been a huge success with the demand for more dispensers and pet waste bags growing annually.

The City of Ventura also replaced the plastic pet waste bags with biodegradable bags. The City made this change to reduce plastic litter. Once plastic enters the rivers and ocean, it poses a significant threat to marine animals. Additionally, plastic does not biodegrade and any plastic that becomes litter will remain in our environment indefinitely. The new biodegradable pet waste bags, made by BioBag, will

SECTION 3.0 PROGRAMS FOR RESIDENTS

completely degrade over time.

3.3.3 *TidePool Cruiser*

The City of Camarillo sponsors the Tide Pool Cruiser to perform educational visits to eight local schools and at their local Coastal Cleanup Day event. This mobile unit shows an up-close view of the inside of a storm drain and dramatically demonstrates how anything that enters it will drain straight to the environment. The environment is represented by an interactive marine touch tank with live organisms; and our dependence on the ocean is shown through a “general store” that makes the connection between what is placed in the storm drain and its



impact on marine life.

This program is designed to teach children (and by extension their parents) about the hazards of non-point source stormwater pollution. In an innovative, hands-on and exciting manner participants learn of the connection between the introduction of pollutants through the storm drain system and their impact on the marine environment.



Presentations to Young People

The Watershed Protection District, Camarillo and Thousand Oaks also provided the hands on watershed educational tool the EnviroScape® to local schools. The EnviroScape® is a portable table-top model that provides unique, interactive learning experiences, the EnviroScape® makes the connection between what we do on earth and environmental quality. Stormwater pollution and runoff are visually apparent when rain falling over the landscape top carries soil (cocoa), chemicals (colored drink mixes) and oil (cocoa and water mixture) through a watershed to a body of water. Stormwater runoff and storm drain function are also addressed.

Best management practices demonstrated include felt buffer strips as vegetation, clay to create berms and other methods to show conservation and water pollution prevention measures at work.

SECTION 3.0 PROGRAMS FOR RESIDENTS

The model shows nonpoint source pollution and the steps everyone can take to help prevent environmental contamination.

SECTION 3.0 PROGRAMS FOR RESIDENTS

3.3.4 Solid Waste Collection/Recycling

The Co-permittees have solid waste collection programs for public, residential, commercial and industrial areas. The Co-permittees recognize the public needs education and encouragement to properly dispose of their trash in order to reduce the chance storm drains will be used as waste receptacles. The Co-permittees promote these events through a variety of methods including community newsletters, radio and television public service announcements, brochures and utility bill inserts. Many Co-permittees have combined recycling, litter control and hazardous materials disposal messages.



The City of Thousand Oaks' sponsored eleven household hazardous waste collection days over the 2008-2009 fiscal year. On average, each month 359 residents brought in an about 917 pounds of waste materials including household chemicals such as fertilizers, cleaning chemicals, paints, insecticides, electronics, used motor oil, and unused pharmaceuticals to each collection event. Proper disposal of these materials ensures that they won't end up in the environment.

3.3.5 Earth Day and Arbor Day

Most Co-Permittees celebrated Earth Day by hosting festivals with educational presentations and environmentally conscience vendors. The City of Thousand Oaks sponsored an Arbor Earth Day on April 25, 2009. Representatives from the City's Resource Division offered attendees a chance to spin a wheel and answer questions about water conservation, solid waste control and storm water impacts. Correct answers were rewarded with a gift. Freebies and informational brochures on these topics were available to all. More than 5,000 people attended this event.



SECTION 3.0 PROGRAMS FOR RESIDENTS

3.3.6 Mobile Satellite City Hall Event

In 2009, the City of Oxnard hosted their Helen Putnam award-winning Mobile Satellite City Hall events in centralized city locations in an ongoing effort to educate a greater number of local residents in stormwater pollution prevention methods, and in the importance of taking ownership of their local environment. These events provide Oxnard residents with the opportunity to voice their water quality concerns to the city's department/division appointed representatives. This innovative approach of providing educational outreach to the general public has been extremely successful in promoting a positive environmental awareness, sound stormwater pollution prevention practices, and illicit

discharge
identification/
abatement
throughout the city's
targeted
demographic areas.



SECTION 4.0 PROGRAMS FOR BUSINESSES

The daily activities of many businesses create a potential for pollutants to enter a storm drain system. The Co-permittees have developed programs to address this source of pollutants through inspections of targeted businesses providing educational outreach and enforcement if needed. These efforts include providing information on the potential for illicit discharges and illegal connections from businesses, the selection and use of proper BMPs, and the potential for enforcement action and fines if environmental rules are ignored.

The Co-permittees use the Business and Illicit Discharge/Illegal Connection Subcommittee meeting to coordinate and implement a comprehensive program to control pollutants in stormwater discharges to municipal systems from targeted commercial facilities. The Subcommittee is comprised of representatives of the Co-permittee cities and other municipal staff from various departments (Environmental Health, Environmental Services and Wastewater Services). Each Co-permittee has implemented an Industrial/Commercial Business Program, which includes the following components to meet the goals and objectives of the program:

- Tracking Critical Sources
- Inspecting Critical Sources
- Ensuring Compliance of Critical Sources

4.1 Program Implementation

The Business Program provides a framework and a process for each Co-permittee to develop its own commercial/industrial program consistent with Permit and SMP requirements. Key program components include:

- Pollution Prevention
- Source Identification and Facility Inventory
- Prioritization for Inspection
- Implementation of Best Management Practices
- Site Education/Inspections
- Enforcement
- Non-compliant Industrial Site Identification and Regional Board Notification Procedures
- Program Reporting

4.1.1 Business Community Site Education/Inspection Program

The goal of the site education/inspection program is to confirm that stormwater Best Management Practices (BMPs) are effectively implemented in compliance with state law, county and municipal ordinances. During site visits, the Co-permittees:

- Consulted with a representative of the facility to explain applicable stormwater regulations;
- Distributed and discussed applicable BMP fact sheets and educational materials; and
- Conducted a site walk-through to inspect for evidence of illicit discharges and illegal connections, appropriate stormwater BMPs, and stormwater quality management education programs for employees.

In addition, the Co-permittees maintain a database of inspected automotive and food service facilities that includes the following information for each facility:

- Name of Facility
- Site Address

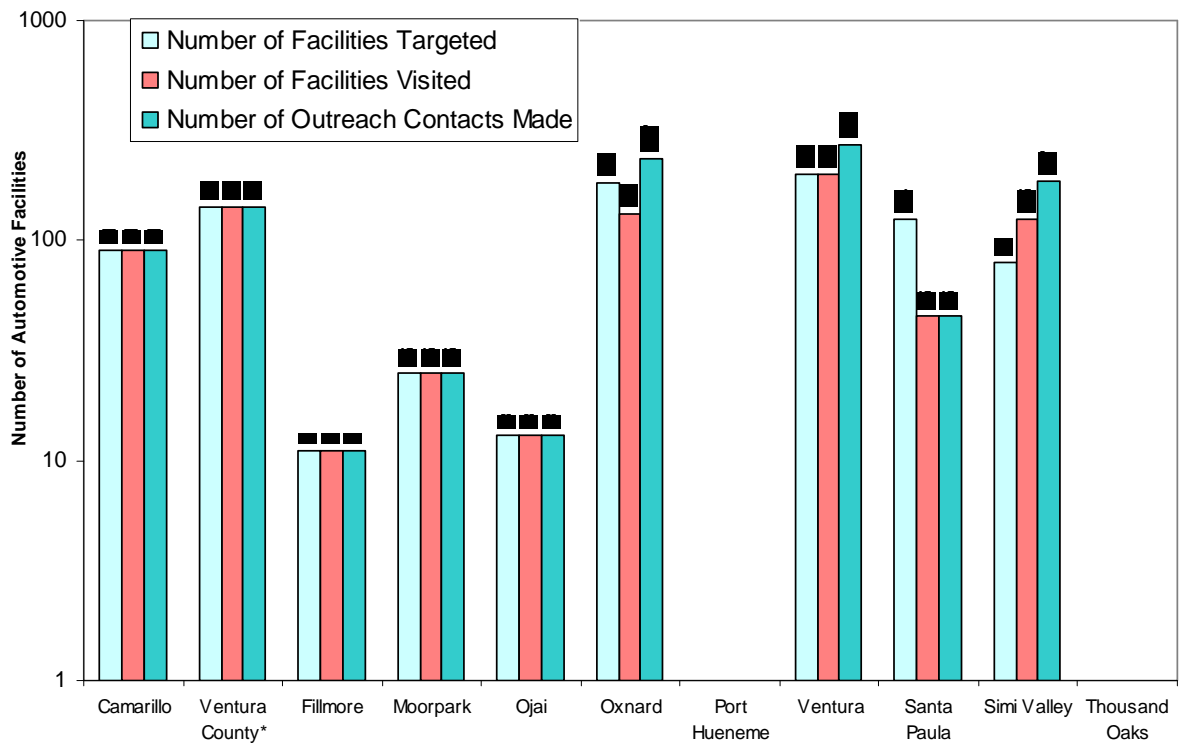
SECTION 4.0 PROGRAMS FOR BUSINESSES

- Applicable SIC Code(s)
- NPDES Permit Coverage
- SWPPP Availability
- Facility Contact

A print out of the Co-permittees' database is attached in Appendix 1. The Co-permittees annually update the database with their activities for the current reporting period and provide a copy as part of this Annual Report.

Figure 4-1 shows the total number of targeted automotive service facilities and the total number visited within each Co-permittee's jurisdiction. **Figure 4-2** shows the total number of food service facilities targeted and the total number visited within each Co-permittee's jurisdiction. In some cases the number of facilities visited exceeded the number of targeted for inspection. This situation may result from changes in facility ownership, businesses that move requiring site visits to a facilities new location as well as the one vacated. In many cases the Co-permittees were exceeding their targets in order to assure compliance with the permit requirement to inspect all these facilities once every two years.

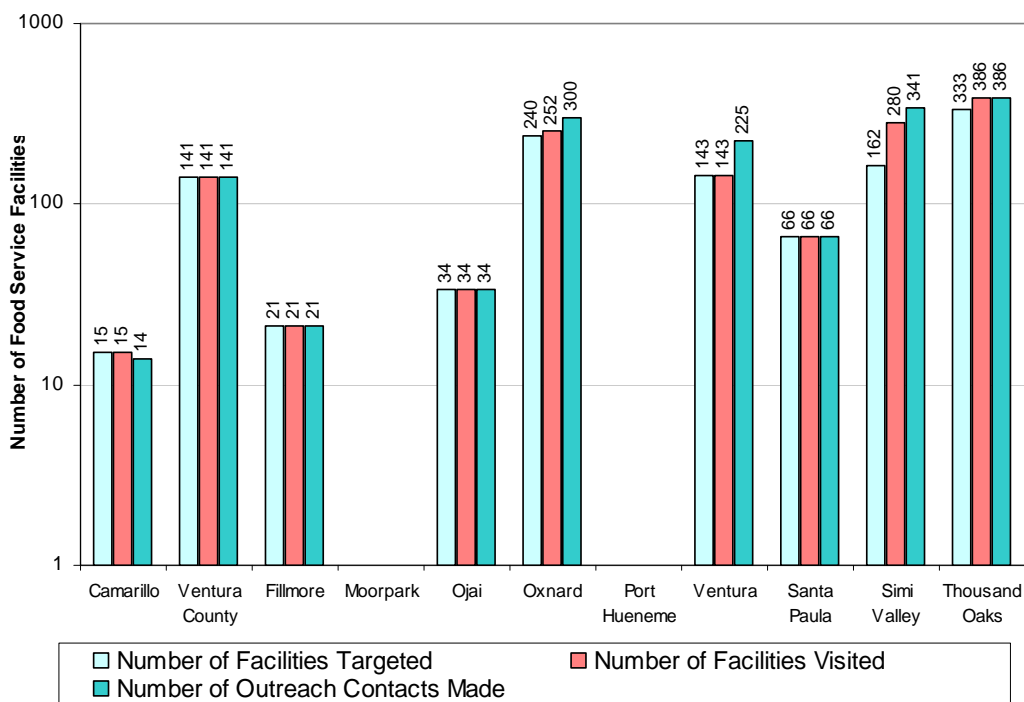
Over 600 automotive service facilities were inspected countywide.*



* Data reflects the number of facilities visited in this reporting period only; which is the first year of a two-year reporting period.

SECTION 4.0 PROGRAMS FOR BUSINESSES

**Over 100% of targeted restaurants were inspected,
1100 total countywide.**



The vast majority of site visits were unannounced providing the inspectors with an honest look at daily activities of the facility. During these site visits, Co-permittee inspection staff would meet with the business owner/manager to review the objectives of the inspection. After performing a walk-through of the facility, inspection results were discussed with the business owner/manager. In the event a Co-permittee determined a facility's stormwater BMPs were insufficient, the Co-permittee provided their recommendations to the facility owner/manager. Source control BMPs were recommended as a first step in BMP implementation before requiring the facility to implement costly structural BMPs. In addition, inspection staff informed facilities' owners/managers that BMP implementation does not guarantee compliance nor relieve them from additional regulations.

Whenever evidence of an illicit discharge was found, facilities were scheduled for follow-up visits within six months of the inspection. If continued stormwater violations were found, another visit was scheduled and/or enforcement actions initiated. Enforcement actions may include any of the following: Warning Notice, Notice of Violation(s), Administrative Civil Liability actions and monetary fines. These actions are reported in Section 8 - Programs for Illicit Discharges.



Site Inspection of a Commercial Facility

SECTION 4.0 PROGRAMS FOR BUSINESSES

4.1.2 New Educational Materials

To facilitate educating business owners and their employees on proper stormwater BMPs the program developed and distributed bmp posters. The posters targeted automotive shops and restaurants and highlighted the most common sources of pollution from each industry. With narrative text describing the problem and solutions to stormwater pollution, the message of what not to do was graphically demonstrated through a series of drawings of a cartoonish oaf doing everything wrong. Printed on both sides with English on one and Spanish on the other the posters became useful tools during inspections. The business community was receptive to the posters as well because it made their job of training staff and communicating proper best management practices easier.

CLEAN WORKING IN OUR WATERSHED

The watershed is the total land area from which rainwater drains into a stream, river or body of water. The watershed includes all of the natural terrain and developed lands, including your business, except for the major water bodies. Rain or melted snow runoff from your facility can carry contaminants including oil, dirt, oil, grease (FOG), and cleaning fluids directly into our watershed.

Nothing but rain water may be discharged to a storm drain. It is illegal, as well as harmful, to allow wastes, wash water, cleaning agents, or materials of any kind into the storm drain system.

Make your business part of the clean watershed equation with these simple Best Management Practices:

DO!	DON'T!
Cleaning Equipment When cleaning floors, mats, tires, waste cans and other cooking equipment, only do so indoors in a mop sink or near a drain that is connected to the sanitary sewer system where the resulting wastewater will be treated. Do not hose them down in a parking lot or alley.	
Cleaning Surfaces Nonhazardous wastewater from floor and window washing must be collected and disposed of into sanitary sewer system drains like sinks and toilets. Use the least toxic cleaning product available. Look for "non-toxic" or "non-petroleum based" on the label.	
Used Grease & Oil Used fats, oil, and grease (FOG) should be separated according to your local yellow bin or sealed cans and saved for recycling. Never dispose of FOG into a sink, floor drain, storm drain or dumpster. Clean grease traps or interceptors often to prevent overflow or malfunction.	
Dry Cleaning Methods Sweep sidewalks, parking lots and other surfaces regularly instead of hosing them down. Hose runoff out of the street. Use paper towels to clean up small spills of oil, grease, and solids out of the storm drain system. Rinsing cloth traps will send oil and grease down the drain.	
Storage & Disposal of Waste Never put liquid wastes into a dumpster. Regularly sweep around dumpsters to remove spilled trash and food waste. Store waste receptacles under cover and keep lids closed to reduce exposure to rain that could wash pollutants into the storm drain system.	

COMMUNITY FOR A CLEAN WATERSHED

THE WATERSHED SHOULD ONLY SHED WATER
cleanwatershed.org

CLEAN WORKING IN OUR WATERSHED

The watershed is the total land area from which rainwater drains into a stream, river or body of water. The watershed includes all of the natural terrain and developed lands, including your business, except for the major water bodies. Rain or melted snow runoff from your facility can carry contaminants including oil, dirt, oil, grease (FOG), and cleaning fluids directly into our watershed.

Nothing but rain water may be discharged to a storm drain. It is illegal, as well as harmful, to allow wastes, wash water, cleaning agents, or materials of any kind into the storm drain system.

Make your business part of the clean watershed equation with these simple Best Management Practices:

DO!	DON'T!
Preventing Leaks & Spills Consider maintenance work such as fluid changes in shops in a properly designated area. Position drip pans under wash to capture automotive fluids. Properly drain gas, oil, brake and radiator fluids from stored vehicles to prevent leaks.	
Cleaning Auto Parts Use self-contained sinks and tanks when cleaning parts with degreasing solvents. If possible, switch to a water-based cleaning solution. Use rags or absorbent mats or work in a contained bay to prevent storm drain runoff when washing engine or machinery.	
Shop Maintenance Regularly sweeping your shop and parking lot areas prevents pollution from entering the storm drain system. Cleaning solvents even if labeled "nontoxic" can harm wildlife. Dispose of non-hazardous wash water into sanitary sewer system drains like sinks and toilets.	
Spill Clean Up Keep spill kits near related chemicals. Clean up spills immediately using rags, absorbent mats, socks or kitty litter to prevent accidental spills from reaching the storm drain system. Spills are not considered cleaned up until the absorbent is also picked up.	
Storage & Disposal of Waste Store waste receptacles under cover with lids closed to reduce exposure to rain that could wash pollutants into the storm drain system. Never put liquid waste into a dumpster. Store used auto fluids with secondary containment and recycle or dispose of as hazardous waste.	

COMMUNITY FOR A CLEAN WATERSHED

THE WATERSHED SHOULD ONLY SHED WATER
cleanwatershed.org

4.1.2 Targeted Business Outreach Program based on Pollutants of Concern

Individually, the Co-permittees have concentrated their efforts on businesses with the greatest potential to contribute known Pollutants of Concern (ammonia, bacteria, etc.). Businesses that have been targeted for education and outreach include agriculture-related facilities, commercial equestrian stable facilities, car washes, and mobile businesses such as vehicle detailers and concrete pumpers.

- In every jurisdiction a business licence must be obtained before a business begins to operate. This provides an opportunity for Permittees to educate the business on proper BMPs and allows them to easily track new businesses for future inspections.

SECTION 4.0 PROGRAMS FOR BUSINESSES

- The Cities of Camarillo and Thousand Oaks both educate and inspect mobile businesses identified in the field as time permits during their normal inspection duties.
- The City of Simi Valley concentrated their efforts this year on requiring Stormwater Pollution Prevention Plans (SWPCPs) from their major industrial, food, and auto services facilities (160 SWPCPs were received and approved this year). They also perform geographically concentrated pretreatment inspections and issue permits to restaurants to reduce the POCs associated with sanitary sewer overflows (SSOs.)
- The City of Ventura educates and inspects mobile businesses as part of their program, concentrating efforts to make sure that mobile businesses do not discharge to storm drains. They also have established a hotline for illicit discharge reporting that has enabled easy reporting and improved response. Through this they have experienced a drop in reported illicit discharges from mobile businesses this year. Also, as part of their pretreatment inspections they require pumping records for grease traps and interceptors from each restaurant inspected, and hand out educational materials on problems with improperly maintained grease trap/interceptor and sanitary sewer overflows. In addition, Ventura is using educational materials to target the residential community in regards to discharging fats, oils, or grease from their kitchens to the sanitary sewer.
- The cities of Moorpark and Ventura have begun invoicing business for the required inspections. The inspection fees run from \$40 to \$137 an inspection and vary by city and the type of business. The City of Ventura has been able to recoup approximately \$100,000 that would have otherwise come from the general fund.

4.1.3 General Industrial Permit Facility Site Visit Program

The Permit requires each Co-permittee to identify industrial/commercial facilities potentially subject to the General Industrial Permit and target these facilities for education and outreach. Targeted facilities include wastewater treatment plants, landfills, large transportation yards and airports that may be publicly-owned by Co-permittees. However, this does not include public facilities such as municipal maintenance yards that may contain industrial types of activity. Co-permittee-owned facilities are not subject to the Industrial/Commercial Business Program (with the exception of the City of Thousand Oaks' Municipal Service Center). Requirements for these public facilities are discussed in the Section 7 - Program for Public Agency Activities. Inspection and enforcement of the General Industrial Permit is accomplished by the permitting agency, either the SWRCB or the RWQCB.

Co-permittees use a variety of methods to create their lists of facilities subject to this program element. Some of the resources used to facilitate identifying facilities included:

- State Water Resources Control Board (SWRCB) database of facilities covered by the General Industrial Permit;
- Hazardous materials inventories maintained by fire or environmental health departments;
- List of facilities subject to local wastewater utility's industrial pretreatment programs;
- City business license records;
- Commercially available business listings (e.g., the Dun & Bradstreet database);
- Telephone book business listings;
- Non-filers database; and
- Letters/Use surveys/Mailer with response requested/checklist, etc.

Once the list of facilities was compiled, the Co-permittees implemented an education outreach effort that provided an introduction of stormwater pollution prevention to those business owners/operators.

SECTION 4.0 PROGRAMS FOR BUSINESSES

The Co-permittees strongly believe most business representatives are conscientious and want to do the “right thing” after they are made aware of what they need to do and how easy compliance can be achieved with simple changes. An informational site visit, in which an agency representative walks the site with the facility owner/operator, provides useful information about stormwater requirements and BMPs. These efforts have proven to be an effective approach for education and outreach.

In addition to the Co-permittees’ efforts, the RWQCB has performed a number of industrial site inspections in Ventura County. This has greatly increased the number of facilities educated about stormwater regulations and requirements. The RWQCB has also indicated an interest in coordinating with VCWPD to host an training workshop on the General Industrial Permit and its requirements. The Co-permittees look forward to this opportunity to work with RWQCB staff.

Over 400 industrial industrial facilities were visited countywide.

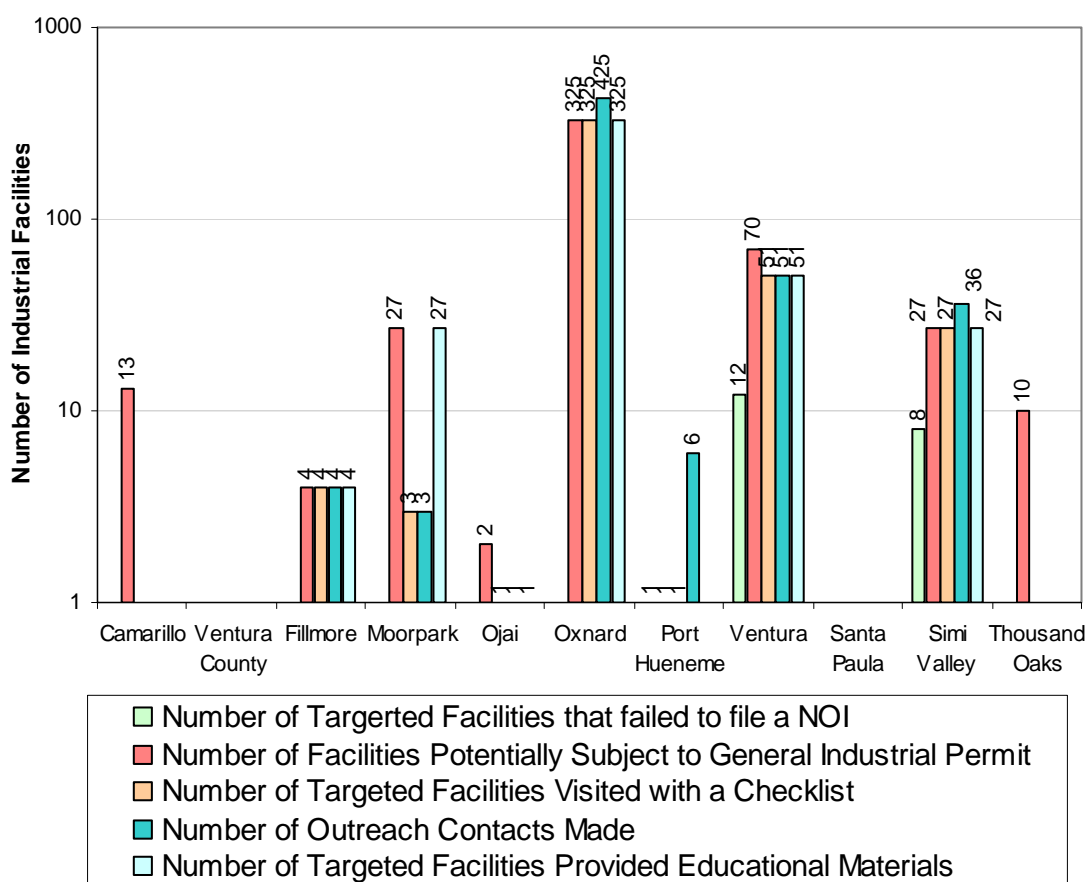


Figure 4-3 Targeted Business facilities subject to General Industrial Permitting

Due to the efforts of the Co-permittees during the last reporting period, many of the facilities targeted through this program have applied for permit coverage and have developed and implemented Storm Water Pollution Prevention Plans (SWPPPs).

Figure 4-3 shows the total number of facilities targeted for an outreach contact and how many were provided educational materials within each Co-permittee’s jurisdiction. Note that the data reflect the

SECTION 4.0 PROGRAMS FOR BUSINESSES

number of facilities contacted in this reporting period only, the first year of a two-year performance criterion.

4.1.4 Stormwater Quality Staff Training

Each Co-permittee identified inspection staff and other personnel for training based on the type of stormwater quality management and pollution issues that they might encounter during the performance of their regular inspections or daily activities. Targeted staff may include those who perform inspection activities as part of the HAZMAT, and wastewater pretreatment programs as well as staff who may respond to questions from the public or industrial/commercial businesses.

Staff was trained in a manner that provided adequate knowledge for effective business inspections, enforcement, and answering questions from the public or industrial/commercial operators. Training included a variety of forums, ranging from informal “tailgate” meetings, to formal classroom training, and self-guided training methods. When appropriate, staff training included information about the prevention, detection and investigation of illicit discharges and illegal connections (ID/IC). See **Section 8** for more information regarding ID/IC training.

During this reporting period, the Co-permittees trained 58 inspection staff in stormwater pollution prevention. **Figure 4-4** depicts the number of staff trained in the program area for each Co-permittee. All eleven Co-permittees exceeded the performance criterion established in the SMP and by training more than the required 90% of targeted employees. Some cities such as Santa Paula uses the County Environmental Health Department for their inspections and therefore did not target any of their employees.

52 staff members were trained on business inspections.

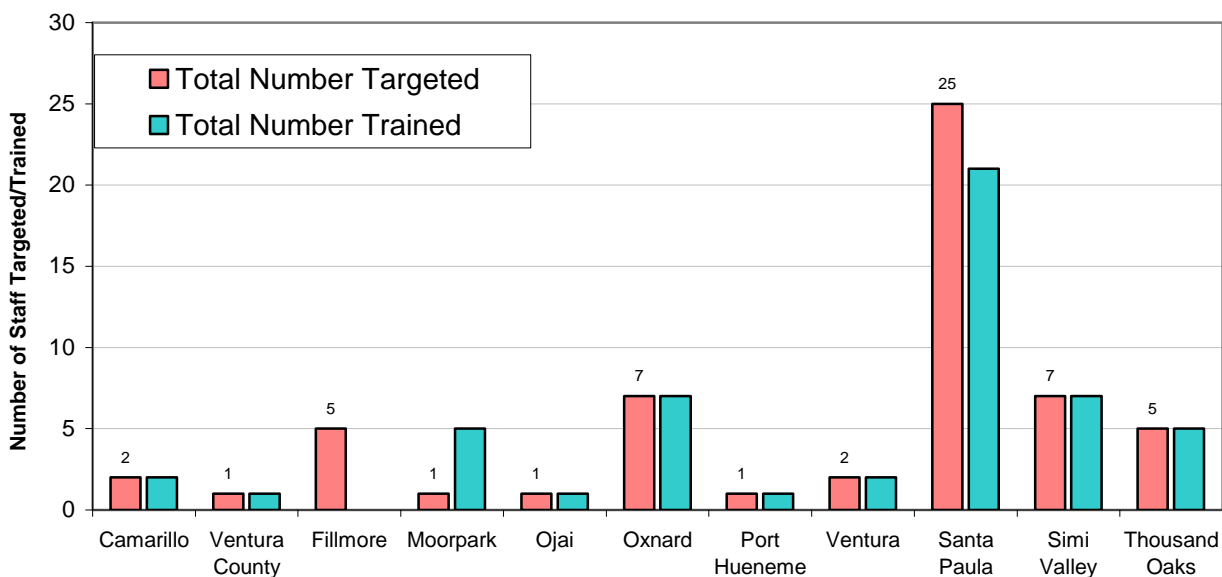


Figure 4-4 Business Inspection Staff Trained

The Co-permittees continued to emphasize consistency among inspection programs, both in terms of stormwater requirements and inspection procedures countywide. The Co-permittees realize the importance of providing a “level playing field” for the business community and of requiring compliance

SECTION 4.0 PROGRAMS FOR BUSINESSES

in a similar and clear manner. In order to facilitate countywide consistency, the Co-permittees met regularly to coordinate efforts and devise strategies for the inspection program at the Business & Illicit Discharge/Illegal Connection Subcommittee. As a part of this effort the Co-permittees encouraged the participation of the County of Ventura Environmental Health Department (EHD) in these discussions and to provide comments and guidance in the development of educational materials.

EHD continues to play an important role in the Co-permittees' efforts to inspect and assure compliance with stormwater regulations in the business community. EHD conducts stormwater inspections of automotive service facilities on the behalf of several Co-permittees, and also performs inspections for the County unincorporated program for food service facilities. Implementation of these program elements required the Co-permittees to spend significant time and resources on communication, coordination and comprehensive training, both for Co-permittee staff as well as EHD inspection staff.

Although the Co-permittees need the flexibility to develop inspection programs that are appropriate for local conditions, the Co-permittees have worked hard to incorporate similar baseline elements in their individual programs.

The Co-permittees will continue to work on coordination and providing the business community of Ventura County a fair, but effective, inspection program.

4.1.5 Educational Brochure for Industrial Facilities

Early on, during the 2001-02 reporting period, the Business & Illicit Discharge/Illegal Connection Subcommittee formed a small work group to develop an educational brochure for the General Industrial Permit Facility Site Visit Program. The work group spent considerable time and effort collecting information on the state's permit and closely examined what other municipalities have done to educate industrial facilities.

The work group consolidated this information and developed a tri-fold brochure that still has valuable use today. It includes the following specific requirements of the General Industrial Permit:

- Facilities subject to the General Industrial Permit must file a Notice of Intent (NOI) with the SWRCB; and
- A Storm Water Pollution Prevention Plan (SWPPP) must be developed and available on site.

4.1.6 Watershed Protection Tips for Business

The Co-permittees revamped a brochure in early 2008 aimed at businesses to provided information on prohibited illicit discharges. Printed in both English and Spanish they detailed preventative methods for controlling illicit discharges, what to do in the event of an illicit discharge and penalties that can be assessed for non-compliance. These brochures were created as part of the *Community for a Clean Watershed* campaign and are distributed during site visits.

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Table 4.1 Permit Required Activities Industrial/Commercial Business Program	
Required Activity	Performance Criteria
Site Education/Inspection	Each Co-permittee will conduct site education/inspections of 90% of automotive, food service and other targeted businesses in their jurisdiction every two years.
	Businesses will be scheduled for a follow-up visit whenever evidence of an illicit discharge is found, within six months of the education site inspection.
Targeted Businesses/POCs	Co-permittees will target additional businesses based on Pollutants of Concern (POCs) as appropriate.
General Industrial Permit Facility Visits	Co-permittees will distribute educational materials to 90% of facilities identified as potentially subject to the General Industrial Permit and perform site visits as locally determined necessary to complete a checklist every two years.
	The checklist will include the SIC Code of the industrial user; indicate whether an identified site has obtained coverage under the State General Industrial Permit, and if a SWPPP is available on site.
Stormwater Quality Staff Training	Co-permittees will train 90% of targeted employees by January 27, 2001 and annually thereafter.

SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

5.1 Program Description

The Co-permittees have developed and implemented a Program for Planning and Land Development to address stormwater quality in the planning and design of development and redevelopment projects. This program, outlined in the Stormwater Quality Management Plan (SMP), describes the minimum standards the Co-permittees are to follow to implement their own development planning programs in compliance with the Permit. The term “development project” as used in this Program encompasses those projects subject to a planning and permitting review/process by a Co-permittee. A development project includes any construction, rehabilitation, redevelopment or reconstruction of any public and private residential project, industrial, commercial, retail and other non-residential projects, including qualifying public agency projects.

To meet the goals and objectives of the Program, the Co-permittees attend Planning and Land Development Subcommittee meetings to coordinate and implement a comprehensive and consistent program to mitigate impacts on water quality from development projects to the maximum extent practicable (MEP). However, the Co-permittees may modify their programs to address particular issues, concerns or constraints unique to a particular watershed such as local geology or known water quality impairments.



Predevelopment Meeting

5.2 Program Implementation

5.2.1 *Project Review and Conditioning*

Development and redevelopment projects have the potential to discharge pollutants through stormwater runoff. Recognizing this potential and addressing it throughout the development process can reduce these impacts. The Co-permittees approach stormwater concerns early in the project development process when the options for pollution control are greatest and the cost to incorporate these controls into new development and redevelopment projects is least.

In planning and reviewing a development project, the Co-permittees consider three key questions with respect to stormwater quality control: 1. what kind of water quality controls are needed?; 2. where should controls be implemented?; 3. what level of control is appropriate? During the planning and review process, the Co-permittees identify potential stormwater quality problems, communicate design objectives, and evaluate the plan for the most appropriate alternatives and design.

5.2.2 *Stormwater Quality Urban Impact Mitigation Plan (SQUIMP)*

The Permit requires the implementation of the Stormwater Quality Urban Impact Mitigation Plan (SQUIMP) for new development projects that fall into one or more of the following categories:

- Single-family hillside residences;
- 100,000 square foot commercial development;
- Automotive repair shops;
- Retail gasoline outlets;

SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

- Restaurants;
- Home subdivisions with 10 or more housing units;
- Locations within, or directly adjacent to or discharging to an identified Environmentally Sensitive Area (ESA); and
- Parking lots of 5,000 square feet or more with 25 or more parking spaces and potentially exposed to stormwater runoff.

In addition, redevelopment projects of one of the SQUIMP categories that result in the creation, addition or replacement of 5,000 square feet or more of impervious surfaces, not a part of routine maintenance, are subject to SQUIMP requirements. If a redevelopment project creates or adds 50% or more impervious surface area to the existing impervious surfaces, then stormwater runoff from the entire area (existing and redeveloped) must be conditioned for stormwater quality mitigation. Otherwise, only the affected area of the redevelopment project requires mitigation.

The SQUIMP lists the minimum required BMPs that must be implemented for new development and redevelopment projects subject to the SQUIMP. The minimum requirements include the following BMPs:

- Control peak stormwater runoff discharge rates
- Conserve natural areas
- Minimize stormwater pollutants of concern
- Protect slopes and channels
- Provide storm drain stenciling and signage
- Properly design outdoor material storage areas
- Properly design trash storage areas
- Provide proof of ongoing BMP maintenance
- Meet design standards for structural or treatment control BMPs
- Comply with specific provisions applicable to individual priority project categories, which include the following: 100,000 square foot commercial development; restaurants; retail gasoline outlets; automotive repair shops; and parking lots.

5.2.3 *BMP Selection and Design Criteria*

The Co-permittees require project proponents to follow the countywide Technical Guidance Manual for Stormwater Quality Control Measures. This manual addresses the SQUIMP requirements of the NPDES permit, specifying design storm volumes and flows to be treated. Also, it identifies Pollutants of Concern from certain types of projects and provides various site, source and treatment control BMPs applicable to Ventura County and the SQUIMP project.

The Co-permittees consider site-specific conditions of development projects when determining which BMPs are most appropriate for a site. Prior to approving BMPs, the staff conditioning the project evaluates post-construction activities and potential sources of stormwater pollutants. The project proponent is required to consider BMPs that would address the potential pollutants reasonably expected to be present at the site once occupied. BMPs to protect stormwater during the construction phase are not a part of this conditioning process and are addressed through the grading permit process through the Construction Program.

SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

In order to achieve appropriate stormwater quality controls, the Co-permittees use the following common criteria in screening and selecting, or rejecting BMPs during the planning stage with a priority given to non-proprietary designed BMPs:

- Project characteristics;
- Site factors (e.g., slope, high water table, soils, etc.);
- Pollutant removal capability;
- Short term and long term costs;
- Responsibility for maintenance;
- Contributing watershed area; and
- Environmental impact and enhancement.

The BMP selection criteria listed above is applied by the Co-permittees in accordance with the overall objective of the Planning and Land Development Program, i.e., to reduce pollutants in discharges to the MEP. Some BMPs will clearly be more appropriate and effective in some site-specific situations than others, and BMP selections reflect this variability.



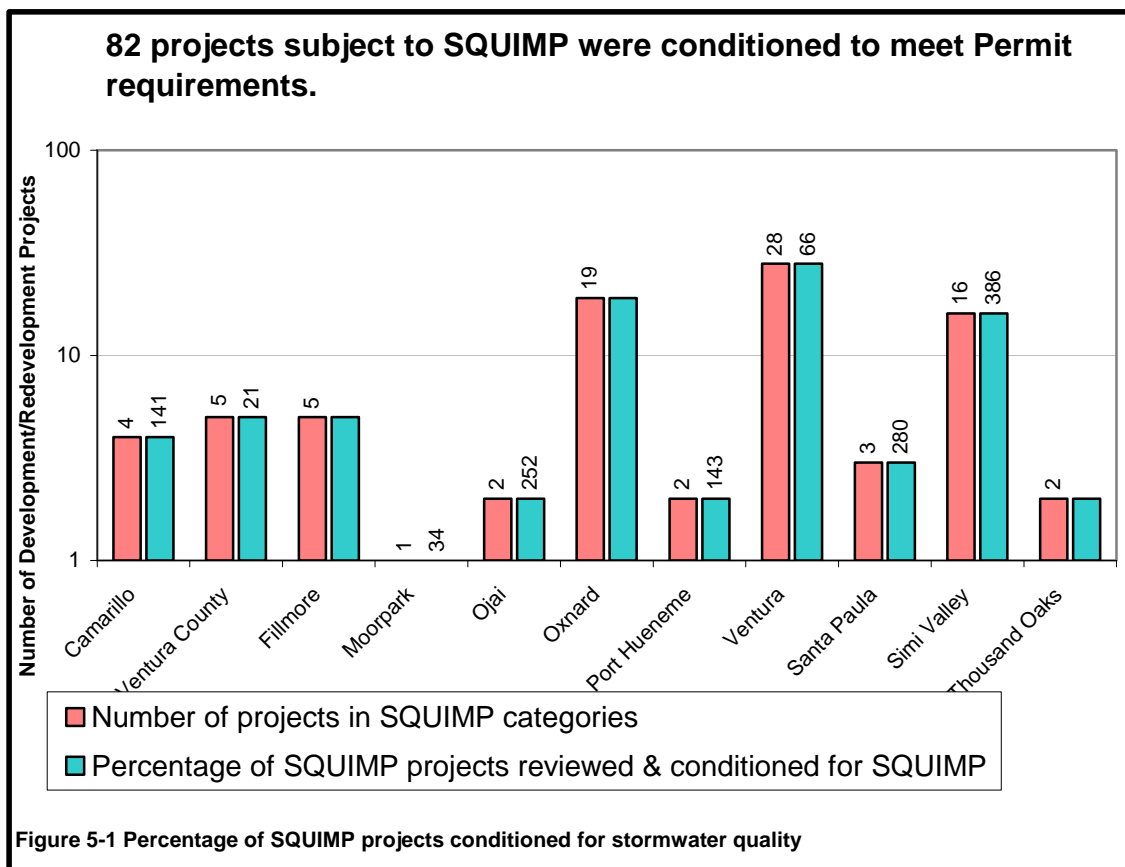
Low Impact Development Grass Swale at an Industrial Site in Oxnard

SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

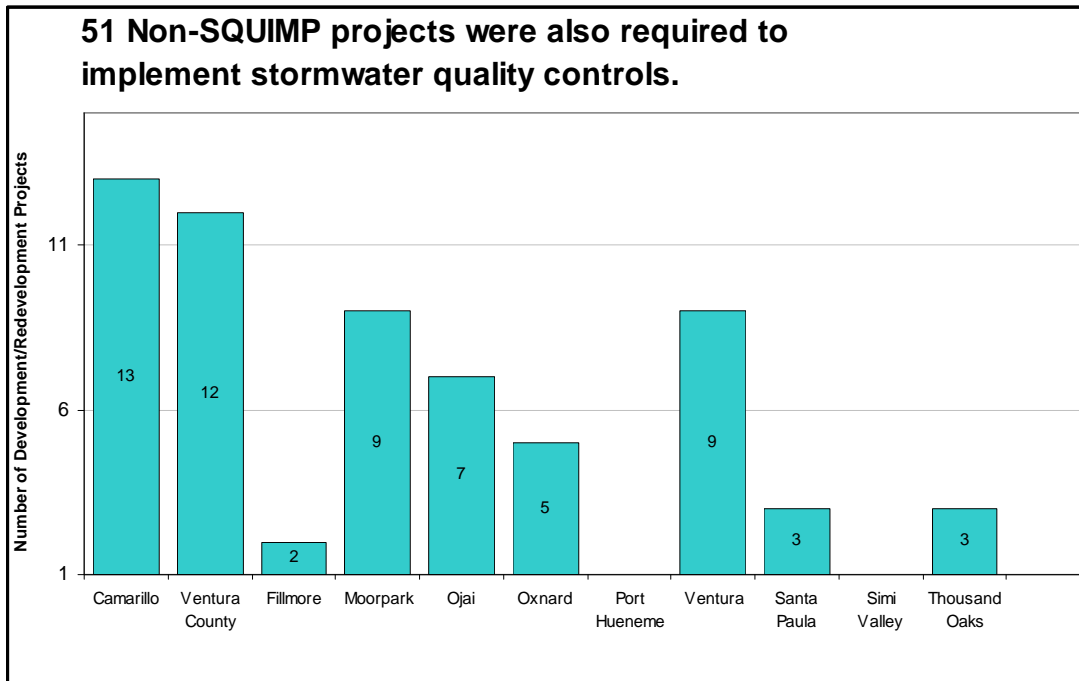
5.2.4 SQUIMP Implementation

Figure 5-1 indicates the number of SQUIMP category projects that were reviewed and conditioned to meet stormwater and SQUIMP requirements by each Co-permittee. 100% of all development and redevelopment subject to SQUIMP requirements were appropriately conditioned. These results exceed the performance criterion of 90% established in the SMP.

Besides the projects subject to SQUIMP requirements, the Co-permittees reviewed and conditioned 77 additional development projects for stormwater quality. These projects included structural improvement projects that did not qualify as one of the SQUIMP categories, but the Co-Permittees saw a need to protect stormwater quality through the design of the projects. **Figure 5-2** illustrates the total number of projects reviewed by each Co-permittee and how many were conditioned for stormwater quality as SQUIMP or non-SQUIMP.



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Although not a permit requirement under the order 00-108, some permittees have begun programs to ensure that permanent BMPs are adequately maintained. This requires cataloging and tracking the BMPs that have been required and an understanding of the proper maintenance necessary. Methods used range from letters and educational visits to property owners and/or management explaining the purpose of the BMPs and the specific maintenance requirements to visual inspections to ensure that proper maintenance is being performed. In many instances, Permittees have found improperly maintained BMPs and followed through with enforcement action to correct the deficiencies.

5.2.5 *Environmental Review*

The California Environmental Quality Act (CEQA) sets forth requirements for the processing and environmental review of many projects. The Co-permittees use the CEQA processing and review as an excellent opportunity to address stormwater quality issues related to proposed projects early in the planning stages. The National Environmental Quality Act (NEPA) comes into play less often than CEQA, but may be included on projects involving Federal funding. Like CEQA, NEPA processing and review provides opportunities to address stormwater quality issues related to proposed projects early in the planning stages.

Each Co-permittee has reviewed their internal planning procedures for preparing and reviewing CEQA (and NEPA when applicable) documents and has linked stormwater quality mitigation conditions to legal discretionary project approvals. In addition, when appropriate, the Co-permittees consider stormwater quality issues when processing environmental checklists, initial studies and environmental impact reports.

5.2.6 *General Plan Revisions*

The Co-permittees' General Plans provide the foundation and the framework for land use planning and development. Therefore, the General Plan is a useful tool to promote the policies for protection of stormwater quality. The Co-permittees have included watershed and stormwater management considerations in the appropriate elements of their General Plans whenever these elements are significantly rewritten. **Table 5.1** indicates the scheduled date of a significant rewrite to the Co-permittees' General Plan. Note that some Co-permittees have already modified their General Plan to include stormwater requirements and thus no date is provided.

SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

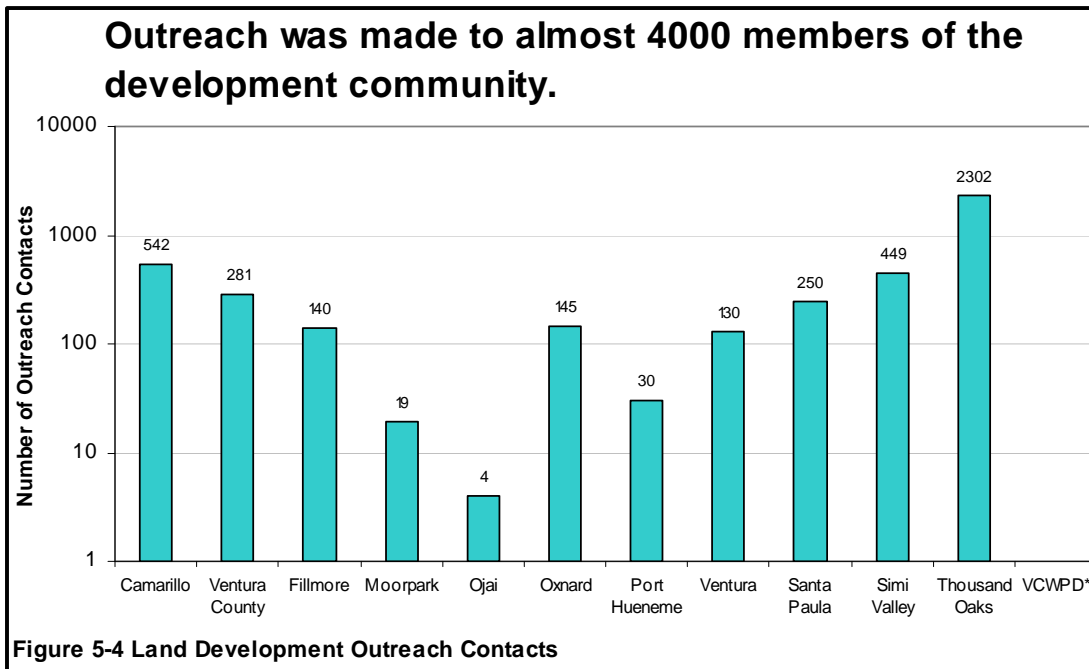
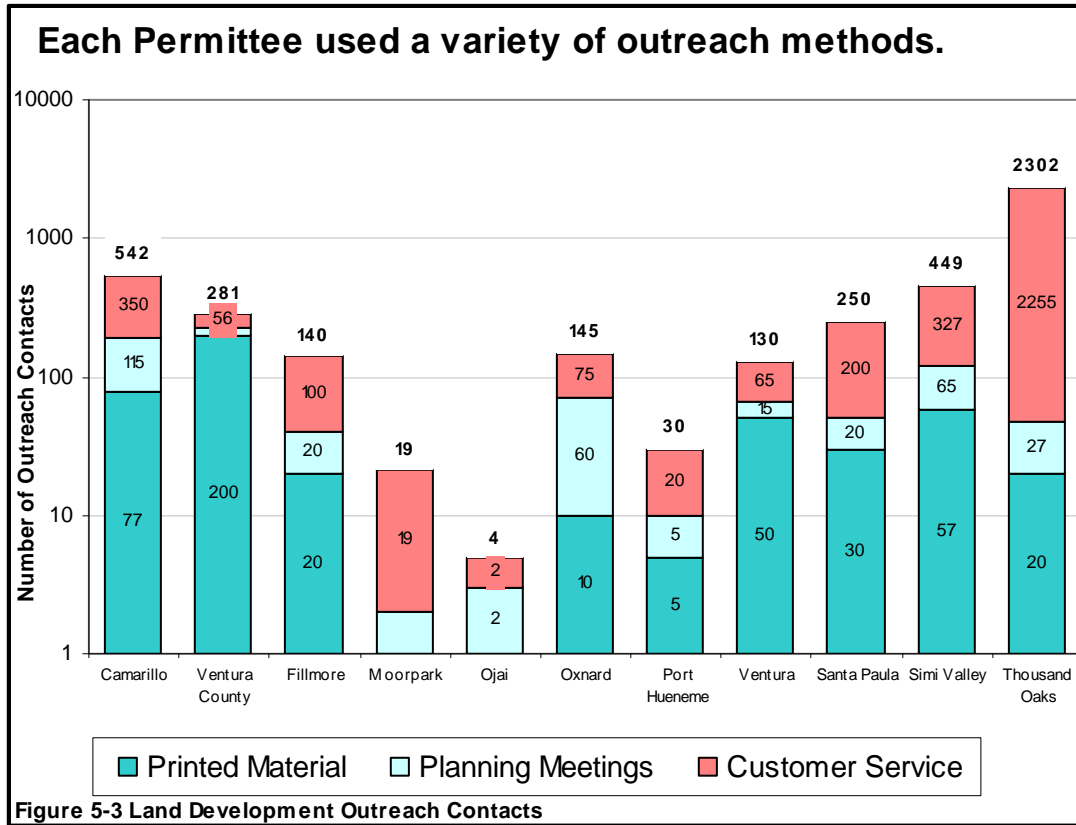
Co-permittee	Date of General Plan	Scheduled date for significant rewrite of General Plan
Camarillo	10/2003	Plan already updated to include stormwater
County of Ventura	10/1997	
Fillmore	4/2003	Plan already updated to include stormwater
Moorpark	1/1984	N/A
Ojai	5/1997	Plan already updated to include stormwater
Oxnard	1/1990	2009
Port Hueneme	8/1997	2015
Ventura	8/2005	Plan already updated to include stormwater
Santa Paula	1/1998	2009
Simi Valley	10/1988	12/1/2009
Thousand Oaks	7/1996	2019 - Plan already updated to include stormwater

Table 5.1 Co-permittees' General Plan

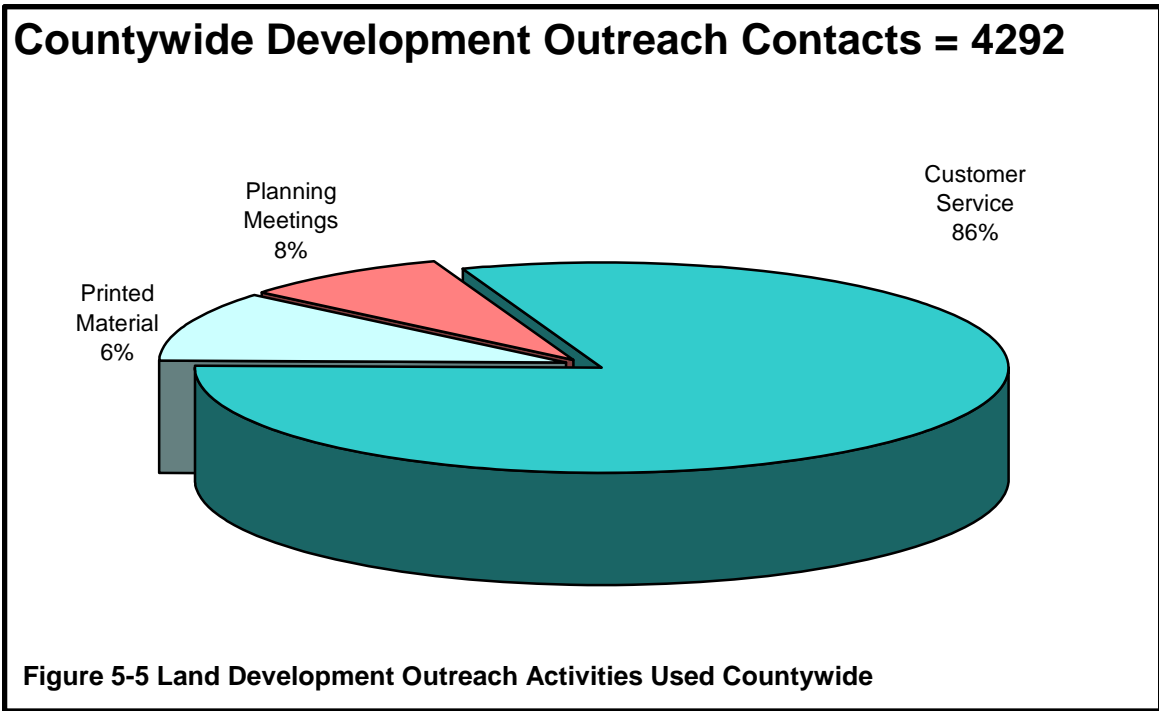
5.2.7 *Community Outreach Development*

During the reporting period, the Co-permittees made 3292 contacts to development community representatives through customer service (counter assistance, phone conversations, discussions, etc.), professional society presentations, community group presentations, workshops/seminars, and educational outreach materials. These numbers are reflected in **Figure 5-3** which indicates the percentage of outreach methods used, and **Figure 5-4** show the number of contacts made by each Co-permittee.

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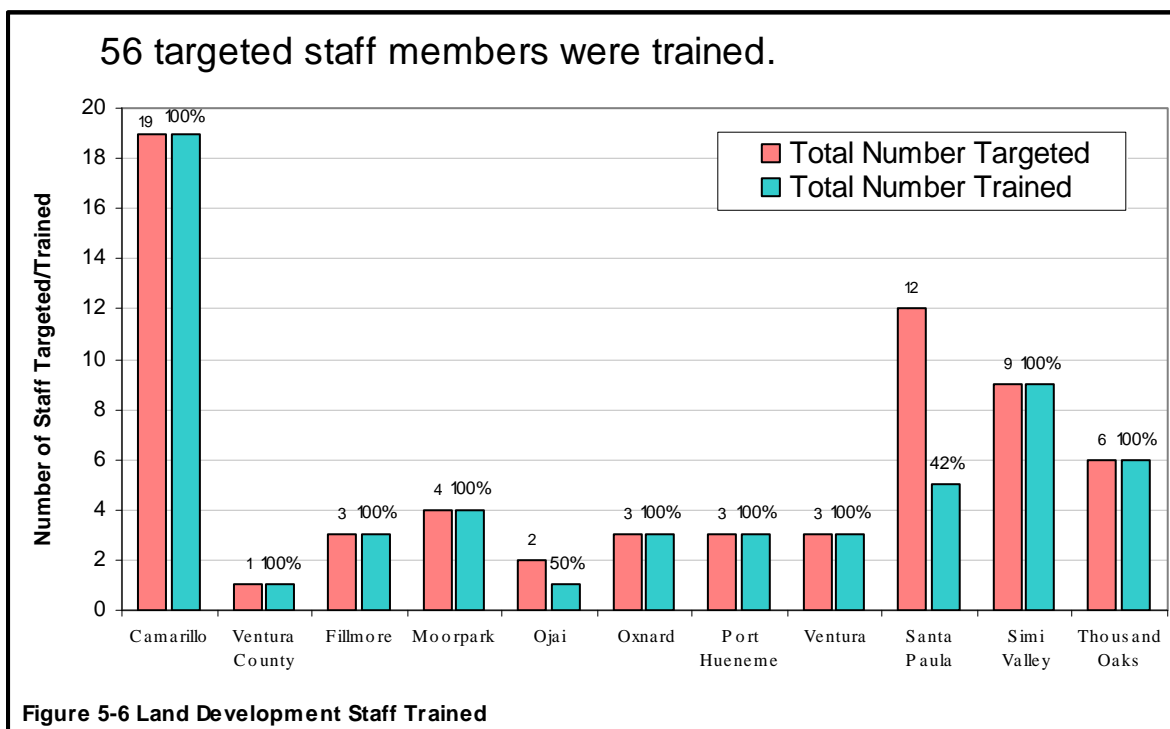


SECTION 5.0 PROGRAM FOR PLANNING & LAND DEVELOPMENT

5.2.8 Stormwater Quality Staff Training

The Co-permittees identified employees for training regarding the requirements of the Planning and Land Development Program and SQUIMP requirements. Targeted employees include staff involved with planning, review, conditioning, permitting of development projects and administration of departments that conduct these activities.

Training methods varied amongst the Co-permittees and ranged from informal meetings to formal classroom training or self-guided training. During the reporting period, the Co-permittees trained over 75 development staff in stormwater management, plan review and SQUIMP requirements. **Figure 5-6** depicts the number of staff trained in the program area for each Co-permittee. The majority of the Co-permittees exceeded the performance criterion established in the SMP and trained more than the required 90% of targeted employees.



SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

6.1 Program Implementation

Reducing pollutants from construction activities has been a focus of the Co-permittees' compliance program since the permit's inception. The Co-permittees regulate construction activities and also have responsibility for the construction and renovation of municipal facilities and infrastructure. Major components of the Co-permittee's Construction Program include:

- Inspect sites required to submit SWPPPs for stormwater quality requirements a minimum of once during the wet season;
- Develop and implement a checklist for inspecting stormwater quality control measures at construction sites;
- Require proof of filing a Notice of Intent (NOI) for coverage under the State General Construction Permit prior to issuing a grading permit for all projects requiring coverage.

Additionally, the Construction Program provides construction site owners, developers, contractors and other responsible parties information on the requirements and guidelines for pollution prevention/BMP methods. To ensure construction sites are implementing the SWPPPs properly, each jurisdiction conducts inspections during the rainy season to verify the appropriateness and implementation of BMPs, taking enforcement action as necessary. Furthermore, training and outreach is done regularly to make certain implementation occurs consistently throughout Ventura County.

The Co-permittees attend Construction Subcommittee meetings to coordinate and implement a comprehensive program to mitigate impacts on water quality from construction sites to the maximum extent practicable (MEP). In order to facilitate effective inspections and to document compliance with this requirement the Construction Subcommittee developed a Stormwater Quality Checklist for Co-permittee use. The checklist and the meetings create countywide consistency in the programs, however, the Co-permittees may modify their programs to address particular issues, concerns or constraints that are unique to a particular watershed or to an individual municipality. The Subcommittee is comprised of representatives of the Co-permittees cities and other municipal staff from various departments (Engineering Services, Planning and Land Development and Inspection Services).

6.1.1 SWPCP/SWPPP Preparation, Certification and Implementation

Prior to receiving a grading permit, the Co-permittees require a Storm Water Pollution Prevention Plan (SWPPP) be submitted for projects greater than one acre. Additionally, as is mandatory for all construction related activity disturbing one or more acres, Co-permittees require proof of filing an NOI for projects subject to the General Construction Permit. The SWPPP remains in effect until the construction site is stabilized and all construction activity is completed. The SWPPP includes identification of potential pollutant sources and the design, placement and maintenance of BMPs to effectively prevent the entry of pollutants from the construction site to the storm drain system. In addition, the Co-permittees require construction projects to include the following requirements:

- Erosion from slopes and channels will be eliminated by implementing BMPs, including but not limited to, limiting grading during the wet season, inspecting graded areas during rain events, planting and maintaining vegetation on slopes and covering erosion susceptible slopes.
- Sediments generated on the project site shall be retained using structural drainage controls
- No construction-related materials, wastes, spills or residues shall be discharged from the project site to streets, drainage facilities or adjacent properties by wind or runoff;
- Non-stormwater runoff from equipment and vehicle washing and any other activity shall be contained at the project site;

The Co-permittees have also incorporated SWPCP provisions in their own construction projects resulting in soil disturbance of one acre or more, located in hillside areas, or directly discharging to an

SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

ESA. The Co-permittees include provisions delineating contractor responsibilities for SWPCP preparation, implementation and for performance of the work and ancillary activities in accordance with the SWPCP approved by the Co-permittee for the project. In some jurisdictions, SWPCPs were required and submitted for nearly all projects including those not exceeding Permit thresholds. This conservative approach underlines the importance the Co-permittees place on ensuring implementation of stormwater controls at construction sites.

Figure 6-1 indicates the number of construction projects required to submit a SWPCP/SWPPP and the number of projects that submitted a SWPCP/SWPPP. This figure reflects the number of grading permits issued during this reporting period and does not necessarily reflect the number of active construction projects. The Co-permittees have consistently required projects to submit SWPCPs (and SWPPPs when required) with most Co-permittees exceeding the 90% performance criteria established in the SMP. This figure also details the number of inspections conducted at construction sites with a SWPCP during the wet season. The number of active projects requiring inspection does not always match the number of grading permits granted. A project may be operating under a grading permit granted the previous year, or the grading permits may have been granted after the wet season so there was no opportunity for a wet season inspection. Most of the Co-permittees met or exceeded the 90% performance criterion established in the SMP. Most Co-permittees inspect more construction sites than were required to submit a SWPCP, and inspect them more frequently for stormwater compliance than the permit requires.

Many construction projects were inspected much more than once per wet season.

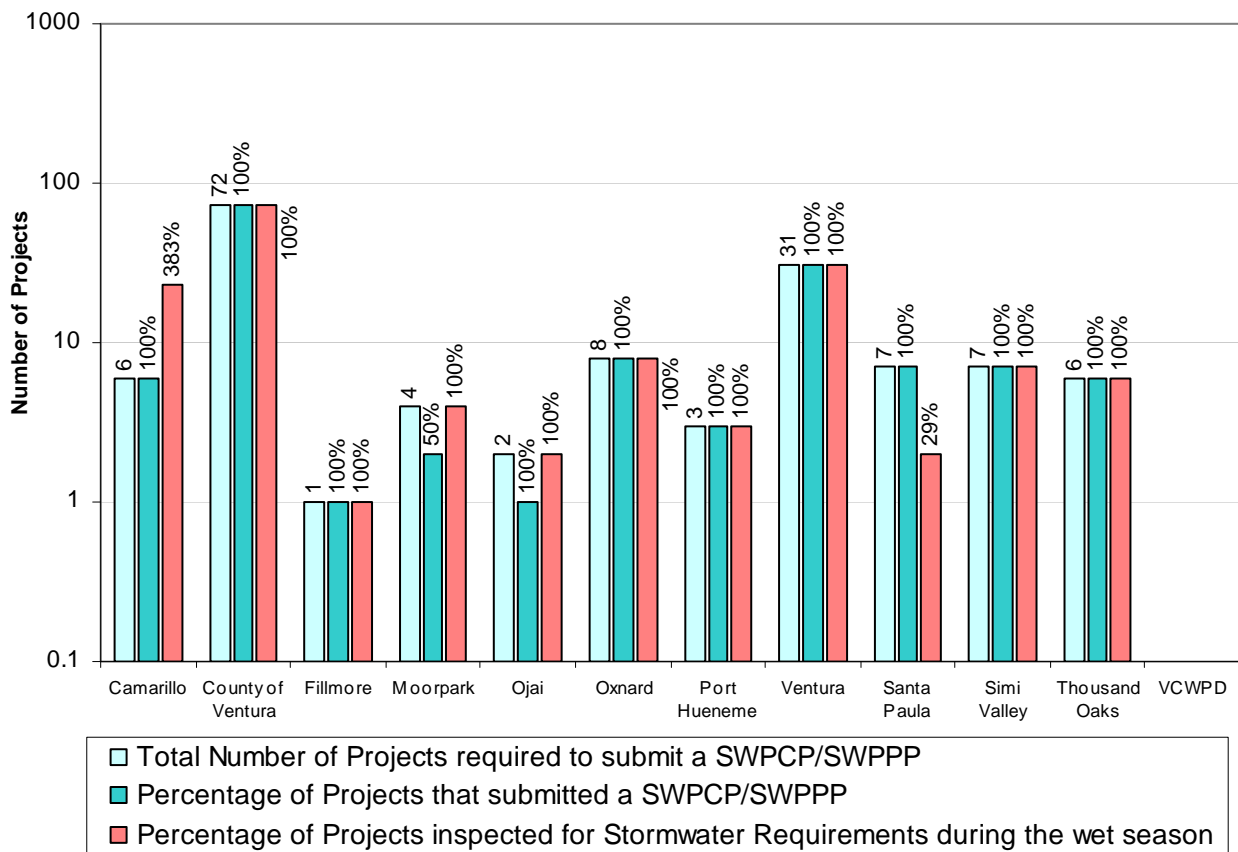


Figure 6-1 Construction Projects Required to Submit a SWPCP

SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

6.1.2 General Construction Permit

As mentioned above, the Co-permittees require all construction projects subject to the General Stormwater Permit for Construction Activities to submit proof of filing a Notice of Intent (NOI) prior to issuing a grading permit. Proof of filing a NOI may include a copy of the completed NOI form and a copy of the check sent to the State Water Resources Control Board (SWRCB) or a copy of the letter from the SWRCB with the Waste Discharge Identification Number (WDID) for the project.

In addition, the Co-permittees files NOIs with the SWRCB and pay the appropriate fees whenever Co-permittee construction projects qualify for coverage under the General Construction Permit. The NOIs and appropriate fees are filed prior to the commencement of any construction activity covered by the General Construction Permit. A copy of the NOI is kept with the project files and in the SWPPP for the project.

Projects subject to the requirements of the General Construction Permit currently include those involving clearing, grading, or excavation resulting in soil disturbances of at least one acre. Co-permittee emergency work and routine Co-permittee maintenance projects do not require preparation of a SWPCP/SWPPP, but are instead performed in accordance with the Program for Public Agency Activities.

100% compliance for projects required to file an NOI and submit an SWPPP.

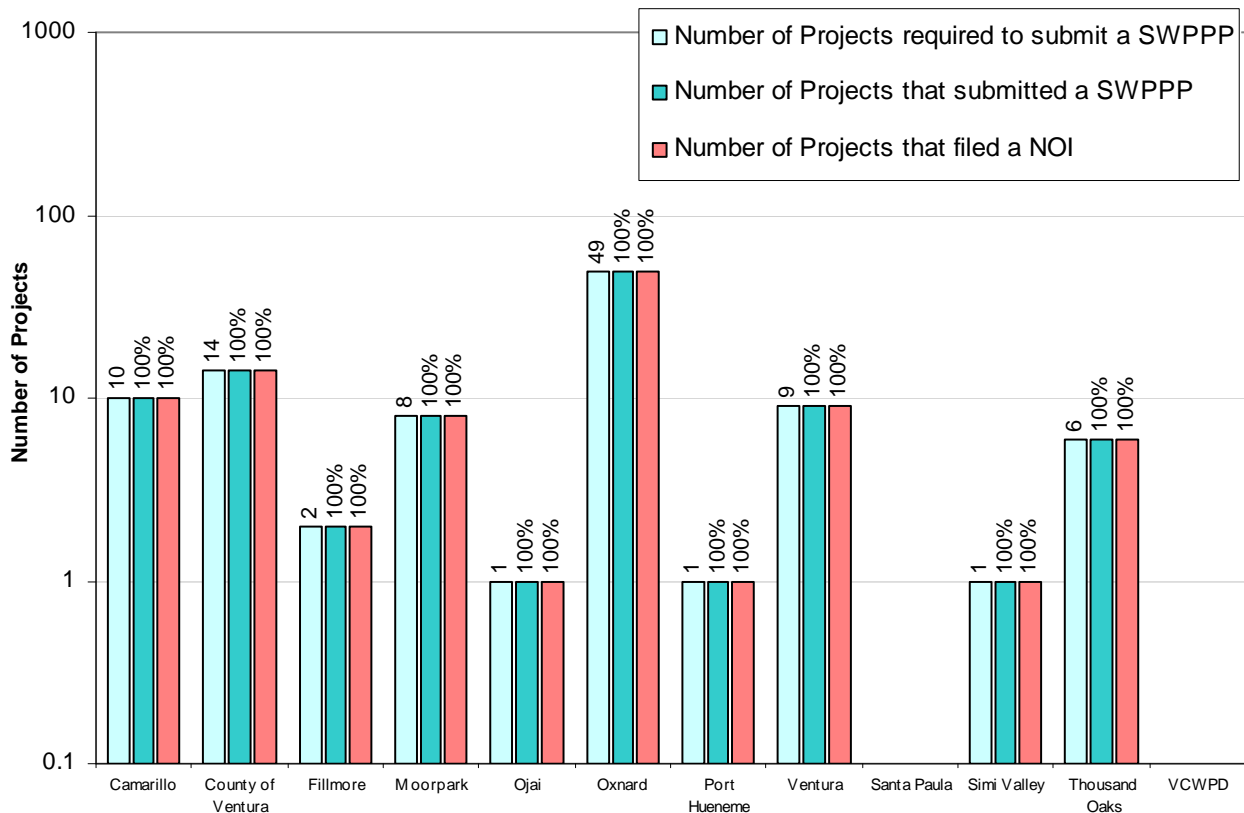


Figure 6-2 Construction Projects Required to Submit a SWPPP

* No projects that required an NOI this permit year.

Figure 6-2 presents the number of construction projects that required coverage under the General Stormwater Permit for Construction Activities and prepared a SWPPP. All co-permittees exceeded the 90% performance criterion for verifying the filing of a NOI established in the SMP.

SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

6.1.3 Construction Site Inspection Program

The Co-permittees inspect all construction sites with SWPPPs a minimum of once during the wet season to determine if the SWPPP is adequately implemented. During this site inspection, a checklist is completed to document inspection results. If it is determined the SWPPP is not adequately implemented, or when there is evidence of a reasonable potential for sediment, construction materials, wastes, or non-stormwater runoff to be discharged from the project site, the Co-permittees will conduct a follow-up inspection within two weeks. But most often it is much sooner.

When a construction site fails to comply with the SWPCP/SWPPP, a Co-permittee implements the appropriate notification and enforcement procedures. There are five general levels of notification and enforcement for most stormwater related problems for construction projects. These are: Verbal Notification, Job Memorandum, Notice of Violation, Administrative Compliance Order, Stop Work Order. Sites that are permitted under the construction activities general permit are also referred to the RWQCB if they fail to achieve compliance in two weeks. The decision to use any level of compliance control is based upon the severity of the violation(s). Severe violation may result in all construction activities being stopped at the job site and not allowed to proceed until compliance is achieved.

Figure 6-3 indicates the number and types of enforcement actions taken by the Co-permittees countywide. A single construction project can be issued multiple violations, ranging from written notices to RWQCB referrals. There were 294 total enforcement actions countywide this year, overall that is significantly less than in previous years, but the use of notices of violation has increased as percentage of enforcement actions from 7% to 40%.

268 Enforcement Actions at Construction Site Were Taken This Year.

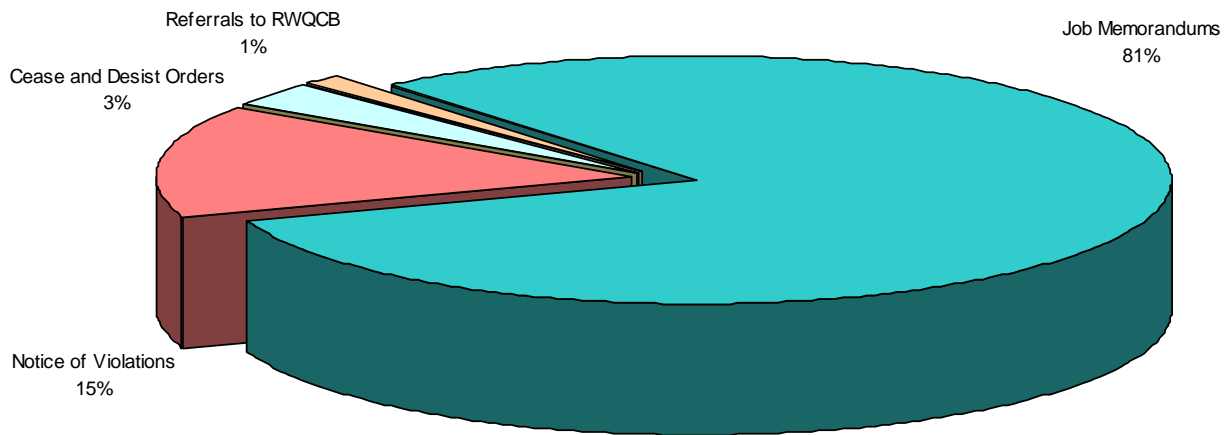


Figure 6.3 Enforcement Actions

SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

Total Number of Outreach Contacts = 3978

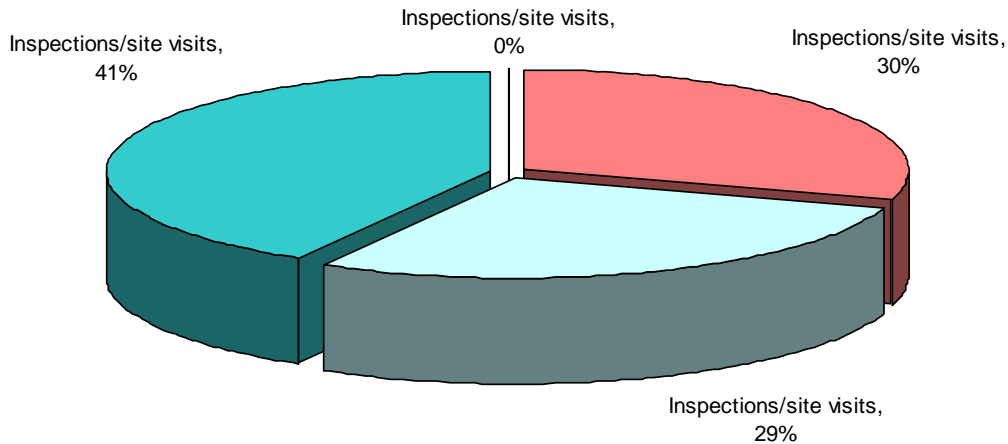


Figure 6-4 Construction Outreach Methods Used Countywide

6.1.5 Stormwater Quality Staff Training

The Co-permittees targeted employees involved with construction engineering and inspection for training regarding the requirements of the Program for Construction Sites. Training methods varied amongst the Co-permittees and ranged from informal meetings, to formal classroom training or self-guided training. The Co-permittees also trained staff on the prevention, detection and investigation of illicit discharges and illegal connections (ID/IC) associated with construction activities. See **Chapter 8** for more information regarding ID/IC training.

During this reporting period, the Co-permittees trained 66 construction inspection staff in stormwater management, construction inspections, SWPCPs, SWPPPs, illicit discharge response, and non-stormwater discharges. **Figure 6-5** depicts the number of staff trained in the program areas for each Co-permittee. All of the Co-permittees exceeded the performance criterion established in the SMP and trained more than the required 90% of the targeted employees.

SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

100% of targeted employees received training on construction BMPs.

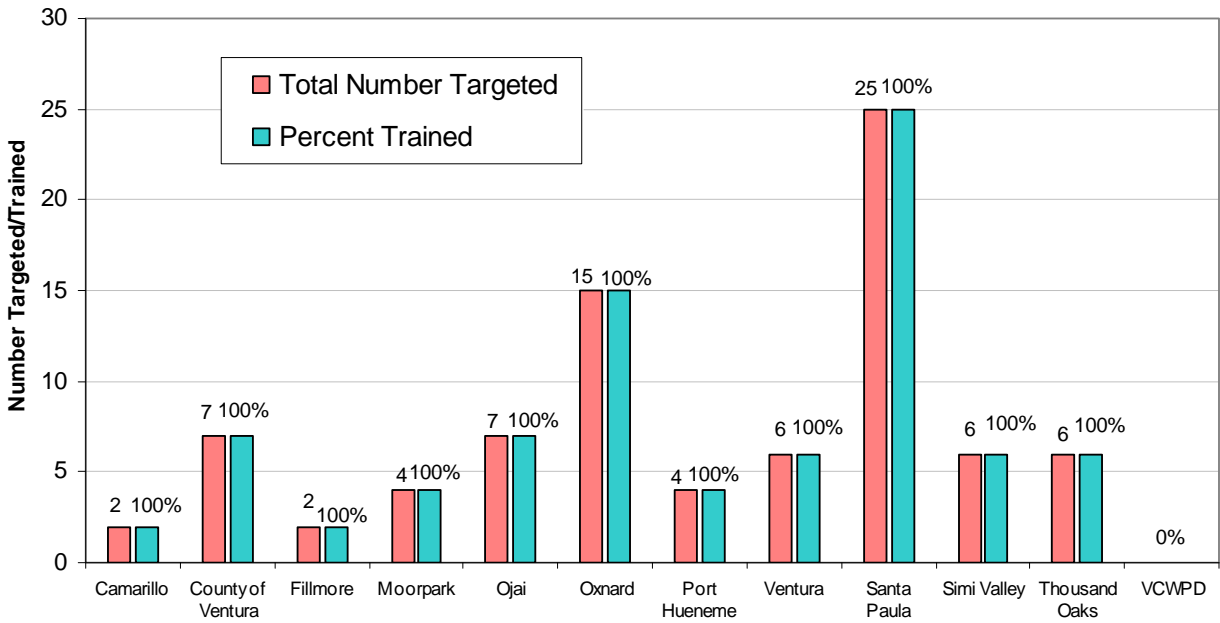


Figure 6-5 Construction Inspection Staff Trained

SECTION 6.0 PROGRAM FOR CONSTRUCTION SITES

Table 6.1 Permit Required Activities Construction Site Program	
Required Activity	Performance Criteria
SWPCP Preparation, Certification & Implementation	<p>Co-permittees will require 90% of construction projects meet the permit requirements, and submit a SWPCP prior to issuing a grading permit.</p> <p>For construction projects that prepare a SWPCP under this program, require implementation of the SWPCP during the entire course of construction.</p>
Incorporating Best Management Practices (BMPs)	<p>For construction sites requiring a SWPCP, Co-permittees will require the inclusion of the statement specified in the Permit from the project architect, or engineer of record, or authorized qualified designee and the certification specified in the Permit from the landowner.</p> <p>For Co-permittee construction projects requiring a SWPCP, Co-permittees will include the statement specified in the Permit from the project architect, or engineer of record, or authorized qualified designee and the Co-permittees certification specified in the Permit from an elected official, ranking management official or the manager of the construction activity.</p>
Notice of Intent Requirement	<p>For construction projects subject to the General Construction Permit, Co-permittees will require proof a NOI has been filed prior to issuance of a grading permit for 90% of all such projects.</p>
Construction Site Inspection Program	<p>Develop and implement a checklist for inspecting stormwater quality control measures at construction sites by January 27, 2001.</p> <p>For construction projects that required a SWPCP, inspect sites a minimum of once during the wet season for stormwater quality requirements and complete a stormwater quality control site inspection checklist.</p> <p>For sites having not adequately implemented the SWPCP or where there is evidence of or a reasonable potential for sediment, construction materials or wastes, or non-stormwater runoff to be discharged from the project site, a written notice (Job Memorandum, Notice of Violation, Administrative Compliance Order, Cease and Desist Order) shall be prepared and delivered to the owner or person responsible for implementing the SWPCP.</p> <p>For sites having not adequately implemented the SWPCP, conduct a follow-up inspection within two weeks to ensure compliance and complete a stormwater quality control site inspection checklist.</p> <p>For sites having not achieved compliance after the follow-up inspection and are covered by the General Construction Permit, Co-permittees will notify the RWQCB.</p>
Construction Community Outreach	<p>During meetings and inspections with developers, contractors, construction workers and others involved in construction projects and activities, discuss stormwater quality controls as appropriate.</p> <p>Notify developers of their responsibility for all discharges from the project site, including discharges from streets and storm drains, until final acceptance of the project by the Co-permittee.</p> <p>Notify developers of their responsibility includes discharges resulting from activities at owner occupied facilities.</p> <p>Co-permittees will develop a "New Owner" brochure and upon request provide these to developers, Home Owner Associations (HOAs), and residents to assist them with their efforts to prevent discharges from owner occupied portions of the project site.</p>
Stormwater Quality Staff Training	<p>Co-permittees will train 90% of targeted employees by January 27, 2001 and annually thereafter.</p>

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

7.1 Introduction

The Co-permittees own and operate public facilities, and build and maintain much of the infrastructure of the urban and suburban environment throughout their jurisdictions. Public agencies have a dual role in preventing pollution in the operation and maintenance of these facilities. Some programs help remove pollutants before they reach receiving waters, e.g. street sweeping, and others are source control ensuring all the activities performed do not contribute to stormwater pollution to the maximum extent practicable.

Programs the Co-permittees have that remove pollutants are:

- Drainage facilities inspection and maintenance
 - Catch basin inlets
 - Open channels
 - Detention basins
- Roadway Operation and Maintenance
- Emergency Spill Response
- Solid waste and hazardous waste collection

All the other field activities have a potential to contribute to stormwater pollution if they are not performed appropriately. With the adoption of the second term permit, the Co-permittees were required to formally evaluate and revise the municipal activities program to prevent stormwater pollution to the MEP. This evaluation was accomplished through the development and implementation of the Model Municipal Activities Program outlined in the SMP. This program covered all aspects of public agency activities from Corporate Yard SWPCP, infrastructure maintenance and staff training. The objective of this model program is to provide the Co-permittees with:

- A program framework for reducing to the maximum extent practicable the adverse impacts that municipal activities may have on water quality;
- An iterative process by which they can effectively monitor and respond to problems as they are discovered; and
- Methodologies to meet permit requirements.

7.2 Pollutant Removal Programs

All Co-permittees routinely conduct preventive maintenance activities widely recognized as effective BMPs for pollutant control. These activities include solid waste collection/recycling, drainage facility maintenance, catch basin stenciling and emergency spill response. These efforts work at both removing pollutants from the storm drain system and prevent them from entering it in the first place.

7.2.1 Drainage Facility Maintenance

As required by the Permit, Co-permittees inspect catch basins and other drainage facilities that are a part of their system. These inspections are scheduled and completed at least once each year before the wet season (Permit-defined wet season begins October 1). Inspections include the visual observation of each catch basin, and open channels to determine if the facility has accumulated trash, sediment or debris requiring removal. All debris removed from the system is disposed of properly and therefore represents pollutants that would have likely been washed downstream to a receiving water.

Co-permittees also routinely inspect and clean their drainage facilities during the year on an as-needed basis. "Routine cleaning" for these facilities, means the removal of accumulations of trash, sediment and debris likely be washed downstream with the next runoff event or cause a loss of

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

hydraulic capacity and result in potential flooding. For catch basins, “as-needed cleaning” occurs whenever trash, sediment or debris accumulation is found to be at least 40% of capacity.

Figure 7-1 depicts the number of catch basins/inlets inspected and/or cleaned by Co-permittees this reporting period in relation to the total number of facilities. Most of the Co-permittees achieved the 90% performance criteria established in the SMP. The major type of material removed by the Co-permittees is depicted in **Figure 7-2** and the source of this material is depicted in **Figure 7-3**.

99% of catch basins were inspected and cleaned, if necessary before the wet season.

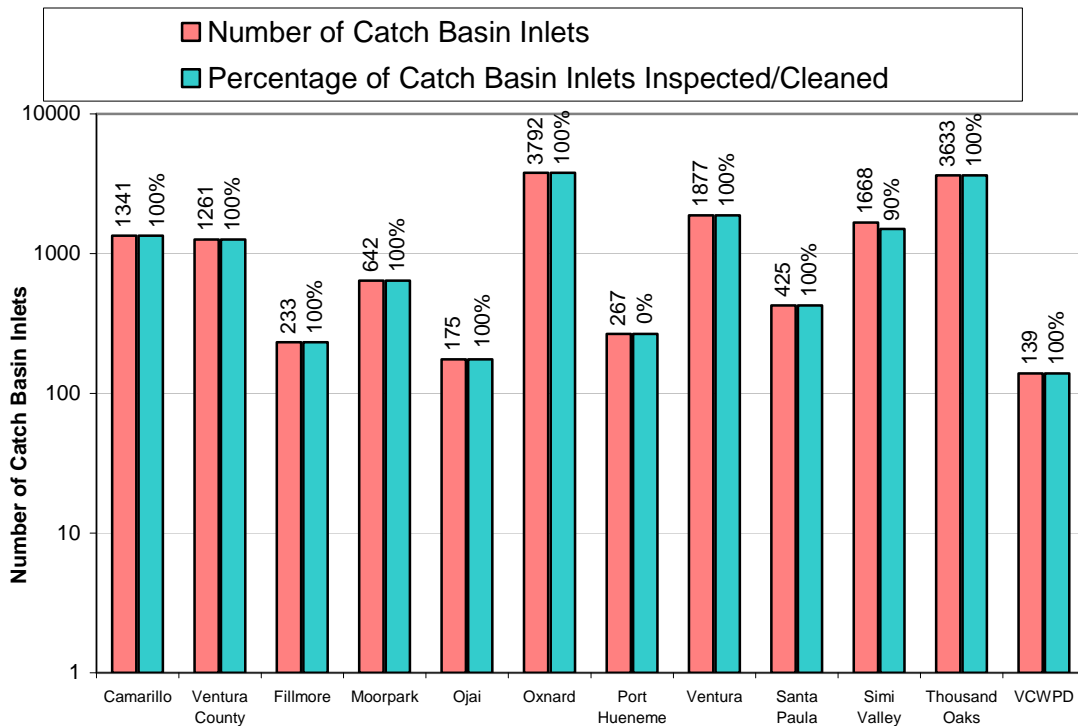


Figure 7-1 Drainage Facilities Cleaned - Catch Basins/Inlets

When performing cleaning activities, Co-permittees implement appropriate BMPs to prevent sediments and debris from being washed downstream. By removing this amount of material from the catch basin inlets, open channels and detention basins the Co-permittees make a significant contribution in preventing the passage of these materials in downstream receiving waters. During the reporting period, the Co-permittees tallied the collection of over 780 tons of solid debris from drainage facility maintenance activities.

76% of the debris removed from catch basins was sediment and organic material.

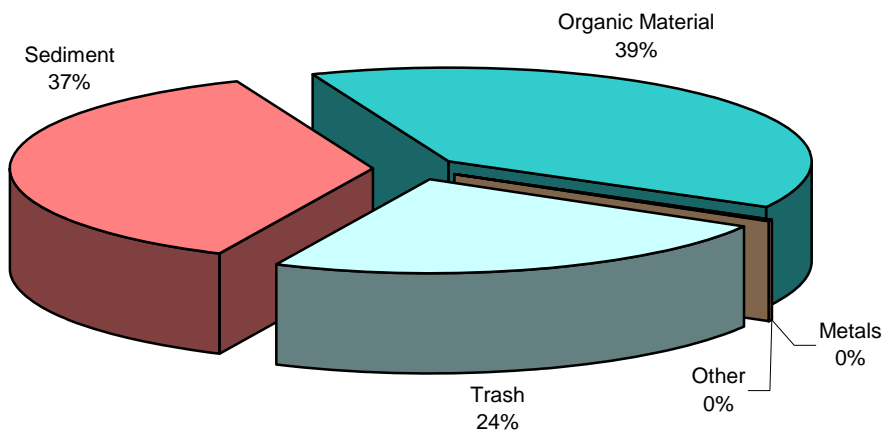


Figure 7-2 Countywide Catch Basin Debris by Material

Because the design of detention and retention basins includes the accommodation of multi-year accumulations of debris and sediment, “routine cleaning” of these facilities, means the removal of barriers from the inlet/outlet of the facility to restore the operational design and efficiency of the facility. The debris/sediment is cleaned whenever the basin has filled to target levels established in the facility design or subsequently adopted operation and maintenance protocols for the facility. In addition, debris basins designed to capture debris in flows upstream of urban areas are not considered to be detention or retention basins for this report as there are no MS4s draining to them. Debris basins are inspected and maintained in accordance with applicable local policies and procedures appropriate for these facilities. Removal of accumulated debris and sediment is carried out either manually or by mechanical methods and in some cases such as large detention basins require special permits from the Department of Fish and Game and the Regional Water Quality Control Board.

Residential sources make up the majority of the debris collected.

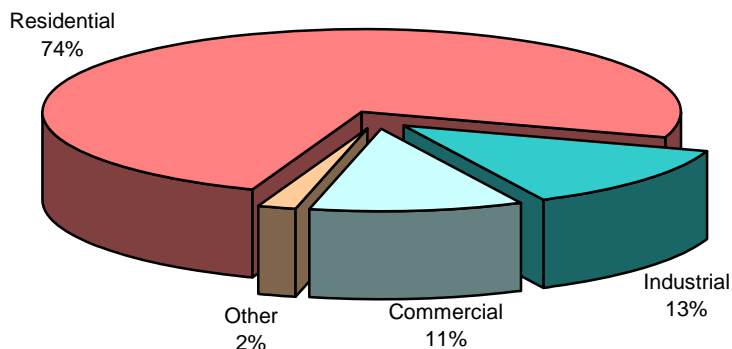


Figure 7-3 Countywide Catch Basin Debris by Source

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

Over 16,000 Tons of Debris Were Removed from Channels and Ditches Countywide

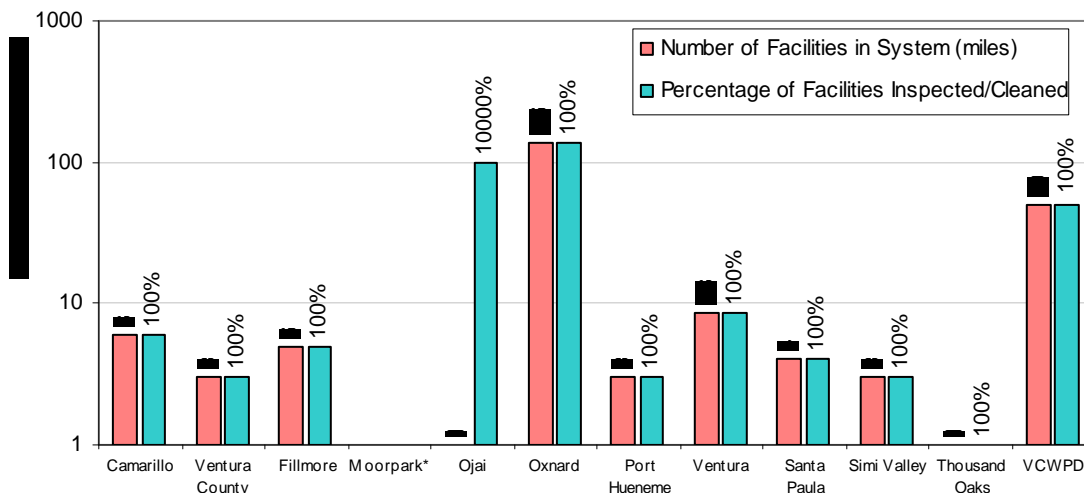


Figure 7-4 Drainage Facilities Cleaned - Channels/Ditches

* Note that all channels and/or ditches within the City of Moorpark's jurisdiction are maintained by VCWPD.

This reporting period the Co-permittees removed 3500 tons of debris from their detention/retention basins. Year to year variation in debris removal is due to the differing multi-year cleaning and maintenance schedules for each Co-permittee.

In addition to the debris removed from catch basin inlets, Co-permittees removed approximately 16,000 tons of debris from their channels/ditches. Variations in the amount of debris removed are to be expected from year to year as storm patterns, population and plant coverage differs from year to year. **Figure 7-4** depicts the number of channels/ditches inspected and/or cleaned by Co-permittees this reporting period in relation to the total number of facilities. All of the Co-permittees achieved the 90% performance criteria established in the SMP. **Figure 7-5** depicts the number of facilities inspected and/or cleaned by Co-permittees this reporting year in relation to the total number of facilities. All of the Co-permittees achieved the 90% performance criteria established in the SMP.

Over 26000 Tons of Debris was Removed from Detention Basins

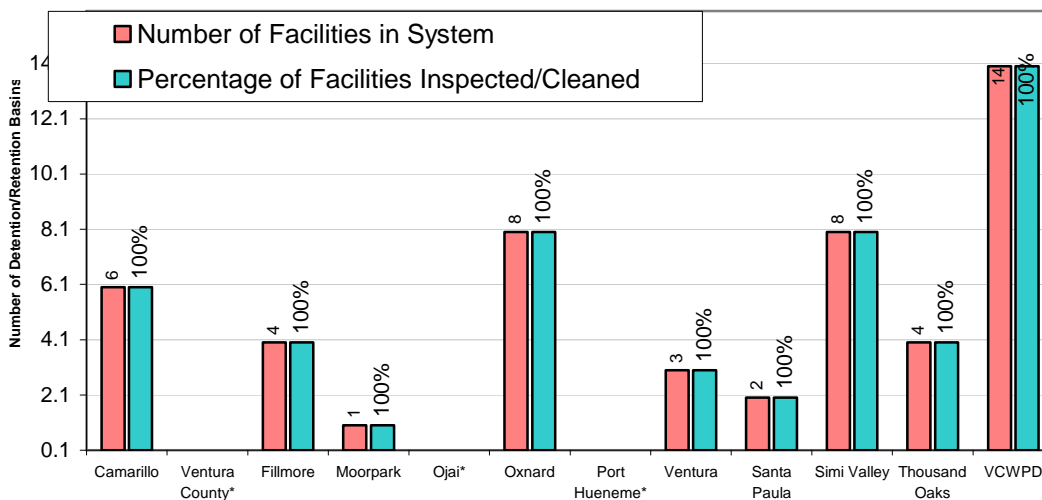


Figure 7-5 Drainage Facilities Cleaned - Detention/Retention Basins

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

7.2.2 Roadway Operation and Maintenance

Co-permittees have identified curbed streets within their jurisdiction and have implemented a sweeping program for these streets. At a minimum the streets are swept by the Co-permittees in accordance with the following classifications:

- High traffic downtown areas: sweep at least four times per month
- Moderate traffic collector streets and residential areas: sweep at least six times per year
- Other continuously bermed public streets: sweep at least one time per year prior to wet season

Over 115,000 curb miles swept countywide.

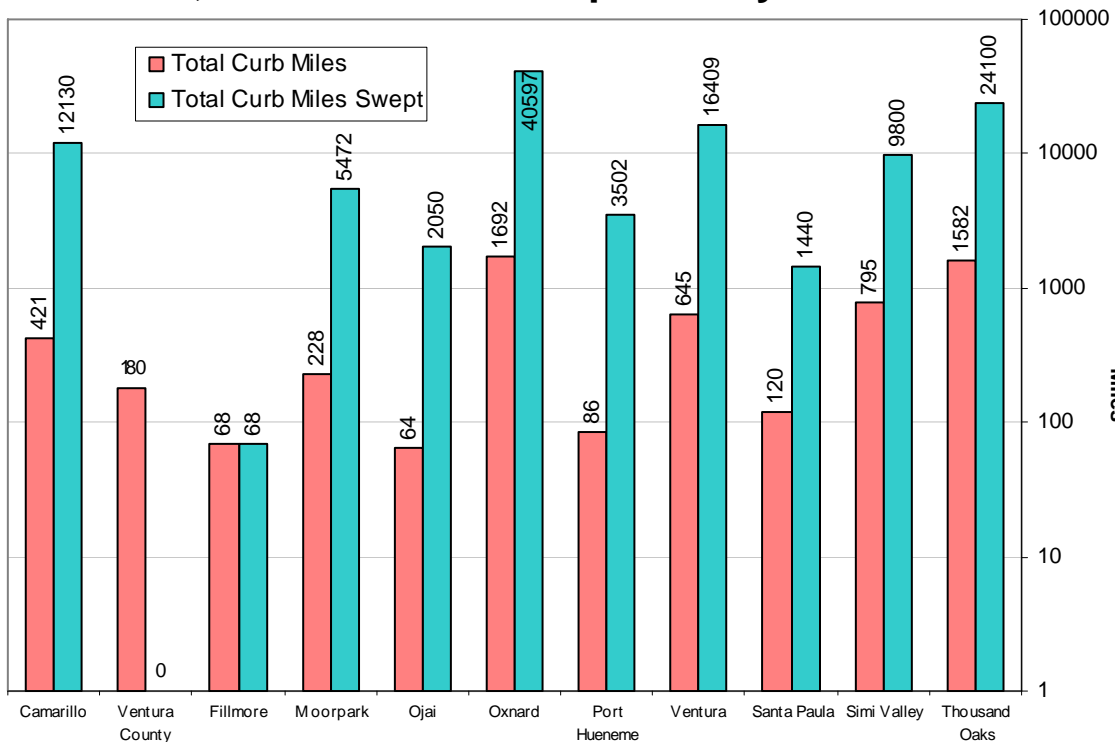


Figure 7-6 Street Cleaning Effort

* Note: Total miles swept included sections swept more than once

Figure 7-6 indicates the street cleaning effort in total miles cleaned. Co-permittees have made excellent progress in their street cleaning efforts, with most Co-permittees exceeding the performance criteria established in the SMP.

For the purpose of streets “prior to the wet season” means sweeping the street at least once during the three-month period immediately prior to the wet season (July, August, September). “Continuously bermed” means a street in the permitted area where a berm exists on both sides of the street without breaks.

To increase the efficiency of the street sweeping, Co-permittees have made an effort to encourage voluntary relocation of street-parked vehicles on scheduled sweeping days. This has been achieved by placing temporary “no stopping” and “no parking” signs, posting permanent street sweeping signs and/or distributing street sweeping schedules to residents and businesses. Many of the Permittees have coordinated street sweeping to follow the routine trash collection days in order to remove any litter left in the streets by the trash removal service.

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

7.2.3 Emergency Spill Response

All Co-permittees have the authority to control releases to the storm drain system through their individual Water Quality Ordinances and each Co-permittee has designated appropriate staff for enforcing their ordinance. Unfortunately, even with the ordinances in place there are occasions where a spill or release will need to be cleaned up. Cleanup can be as simple as dispatching a crew to pick up dumped trash, or a street sweeper or vacuum truck to clean an area or catch basin and storm drain after a known spill. It could also become a major multi-agency operation if hazardous or unknown materials are involved.



Emergency responses to water pollution incidents are routinely undertaken by Co-permittee designated staff, and other municipal departments and emergency responders may become involved if the material is a suspected hazard. Although each Co-permittee is responsible for responding to complaints and incidents within their jurisdiction, very often neighboring Co-permittees will coordinate their efforts with either very large events and/or spills that cross jurisdictional boundaries. The Co-permittees focus on responding quickly and efficiently to emergency spills with priority on mitigating the spills that have a potential to adversely impact the environment.

7.2.4 Solid Waste Collection/Recycling

The Co-permittees each have solid waste collection programs for public, residential, commercial and industrial areas. Special programs for bulky items and hazardous waste provide the public with legal and economical disposal options and therefore help prevent the illicit disposals that can lead to pollution. The Co-permittees conduct public education outreach on these programs through a variety of methods including community newsletters, radio and television public service announcements, brochures and utility bill inserts. (For more information on solid waste collection/recycling programs see **Section 3**).

7.2.5 Dry Weather Diversions

The City of Ventura, with the support of environmental and regulatory partners, obtained Clean Beaches Initiative funding from the State Water Resources Control Board to improve beach water quality at Surfers Point through the design and construction of two dry weather runoff diversions. Dry weather runoff from the City of Ventura's Figueroa Street and California Street storm drain systems continue to be successfully diverted into the sanitary sewer system, for treatment at the City's wastewater treatment plant, rather than flow directly into the ocean untreated. These diversions have operated year round since 2006, being turned on and off by rain gauges and computers.



The City of Ventura's Figueroa storm drain diversion with educational signage.

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

7.3 Municipal Activities Program Implementation

A significant portion of the Co-permittees' activities includes the operation and maintenance of municipal infrastructure. These activities have the potential to impact stormwater quality and as such the Co-permittees have implemented a Program for Public Agency Activities. This program addresses the implementation of BMPs to control pollutant discharges to the maximum extent practicable (MEP).

In order to address the Co-permittees' potential impacts on stormwater, the following activities have been targeted:

- Activities at Co-permittee Corporation Yards
- Drainage System Operation and Maintenance Activities
- Roadway Operation and Maintenance Activities
- Pesticide, Herbicide and Fertilizer Application and Use
- Municipal Staff Training

7.3.1 Corporation Yards

The Co-permittees utilize corporation yards to support operation and maintenance activities within their jurisdiction. Corporation yards are operated and maintained by the Co-permittees for the following activities or facilities:

- Vehicle and equipment
 - Storage and parking
 - Maintenance
 - Fueling
 - Washing and cleaning
- Sign painting activities
- Bulk material storage areas
- Employee support facilities, such as offices, locker rooms and meeting rooms

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

Table 7.1 Co-permittee Corporation Yards

Co-permittee	Corporation Yard Name	Location	SWPCP Developed & Implemented	SWPCP available on site
Camarillo	Camarillo Corporate Yard	283 South Glenn Drive	Yes	Yes
County of Ventura	El Rio Corporate Yard	682 El Rio Drive	Yes	Yes
	Moorpark Yard	7150 Walnut Cyn. Road	Yes	Yes
	Saticoy Public Works Corporate Yard	11251-A Riverbank Drive Saticoy, CA	Yes	Yes
Fillmore	Fillmore Public Works Yard	711 Sespe Avenue	Yes	Yes
Moorpark	Public Works/Parks Yard	675 Moorpark Avenue	Yes	Yes
Ojai	Ojai Corporate Yard	Signal Street	Yes	Yes
Oxnard	Oxnard Corporate Yard	1060 Pacific Avenue	Yes	Yes
	Regional Recycling Center	111 S. Del Norte Blvd.	Yes	Yes
	Oxnard Water Treatment Yard	251 S. Hayes Avenue	Yes	Yes
Port Hueneme	Municipal Service Center	700B E. Port Hueneme Road	Yes	Yes
	Service Yard Annex	746 Industrial Avenue	Yes	Yes
Ventura	SanJon Corporate Yard	336 SanJon Road	Yes	Yes
Santa Paula	Corporation Street Yard	903 Corporation Street	Yes	Yes
	Palm Avenue Yard	180 South Palm Avenue	Yes	Yes
Simi Valley	Simi Public Service Center	500 W. Los Angeles Avenue	Yes	Yes
Thousand Oaks	Municipal Service Center	1993 Rancho Conejo Blvd.	Yes	Yes
VCWPD	El Rio Corporate Yard	682 El Rio Drive	Yes	Yes
	Moorpark Yard	7150 Walnut Cyn. Road	Yes	Yes
	Saticoy Public Works Corporate Yard	11251-B Riverbank Drive Saticoy, CA	Yes	Yes

7.3.2 Storm Water Pollution Control Plan Development

The Permit required the Co-permittees to develop and implement a SWPCP at designated corporation yards by July 27, 2002. As the Principal Co-permittee, VCWPD developed a SWPCP template to be used as a guide by the Co-permittees in the development of their plans for each of the designated corporate yard facilities.

As shown in **Table 7.1 Co-permittee Corporation Yards**, all of the Co-permittees have modified and implemented the model SWPCP to suit their specific site's activities at their corporate yards.



Construction of Wash Rack Area

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

The Co-permittees keep a copy of the SWPCP at the facility site and review it annually to see that information is current and accurate. BMPs that have been implemented are assessed to determine if they are working as planned, and any required changes are noted in the SWPCP.

As specified in the permit and reflected in the SWPCPs all hazardous and toxic waste storage areas are prohibited from discharging untreated stormwater runoff to the storm drain system. Fueling areas, vehicle maintenance and repair areas and temporary street maintenance material and waste areas are also prohibited from discharging untreated stormwater. All vehicle and equipment wash areas are to be self-contained and covered, or equipped with a clarifier and properly connected to the sanitary sewer. These specific site BMP requirements and associated deadlines were discussed and reviewed frequently by the Co-permittees during Public Infrastructure Subcommittee meetings. All of the Co-permittees have met the performance criteria established in the SMP, and have implemented appropriate BMPs to their hazardous and toxic waste storage areas, fueling areas, vehicle maintenance and repair areas, street maintenance material and waste areas.

Once implemented, the SWPCP requires annual inspections of the corporate yards to evaluate the implementation and effectiveness of the SWPCP. In order to facilitate this process, the Public Infrastructure Subcommittee began discussions on what components of the SWPCP should be evaluated and how best to conduct inspections. As a product of these discussions, the Subcommittee developed a model inspection form Co-permittees could implement at their yards. The Co-permittees plan to continue to address SWPCP implementation and annual inspections at the Public Infrastructure Subcommittee and utilize the lessons learned for improvement and inclusion in future inspection activities.

7.3.3 *Field Maintenance Activities*

Street maintenance activities and underground utility work have the potential to discharge pollutants to the storm drain system if appropriate protective measures are not implemented. Therefore, Co-permittees require roadway maintenance staff, roadway maintenance contractors and others to implement BMPs to control discharge of pollutants to the storm drain system as a result of roadway and utility maintenance activities. At a minimum, Co-permittees have included the following BMPs:

- Prohibit saw-cutting during a storm event of 0.25 inches or greater;
- Prohibit the discharge of untreated runoff from temporary or permanent street maintenance material and waste storage areas from entering the storm drain system.

Some Co-permittees contract for their street maintenance work and most issue street cut or similar permits for private work done in their streets. Co-permittees have addressed work under these contracts or permits by including contract provisions and/or permit conditions requiring street maintenance or repair work comply with the minimum requirements shown above and other BMPs required for protection of water quality. In the event of an emergency and roadway maintenance work must be conducted immediately in order to protect lives or property, Co-permittees make every effort to work in a manner protective of water quality, but public safety is a priority.

7.3.4 *Pesticide, Herbicide and Fertilizer Application and Use*

The Permit required the Co-permittees to develop and adopt a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents) and fertilizers by July 27, 2001. The standardized protocol includes the following minimum requirements to control the discharge of pollutants to stormwater due to pesticide, herbicide and fertilizer application:

- Prohibit the application of pesticides, herbicides and fertilizers during rain events;
- Prohibit the application of pesticide, herbicides and fertilizers within one day of a rain event forecasted to be greater than 0.25 inches except for application of pre-emergents;

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

- Prohibit the application of pesticides, herbicides and fertilizers after a rain event where water is leaching or running from the application area; and
- Prohibit the application of pesticides, herbicides and fertilizers when water is running off-site from the application site.

In addition, Co-permittees require all staff applying pesticides to be either certified by the California Department of Food and Agriculture, or under the direct on-site supervision of a certified pesticide applicator, as defined in the standardized protocol. Co-permittees have also restricted the purchase and use of pesticides and herbicides to certified staff.

Co-permittees that contract out for pesticide applications have included contract provisions requiring the contract applicator meet all requirements of this program, including compliance with the standardized protocol, the prohibitions and requirements for certification and supervision of pesticide applicators.

7.3.5 Pilot Trash Excluder Programs

The City of Ventura started installing trash excluders in known problem areas near the end of the permit term last year. This permit term it has completed its first yearly cycle, with positive results. The five vertical excluders, all located inside of the catch basins and within high trash areas, retained large amounts of trash and added no additional costs to the annual catch basin cleaning. One excluder became fully clogged by grass clippings and caused flooding during a rain event. The source of the one-time, sudden accumulation of grass clippings was investigated, but is not known.



A trash excluder in the City of Ventura.

7.3.6 Stormwater Quality Staff Training

Each Co-permittee targets staff based on the type of stormwater quality and pollution issues they typically encounter during the performance of their regular maintenance activities. Targeted staff included those who perform activities in the following areas: stormwater maintenance, drainage and flood control systems, streets and roads, parks and public landscaping and corporation yards.

Training methods vary amongst Co-permittees and range from informal meetings, to formal classroom training or self-guided training. The Co-permittees also train staff on the prevention, detection and investigation of illicit discharges and illegal connections (ID/IC). (See **Section 8** for more information regarding ID/IC training).

SECTION 7.0 PROGRAM FOR PUBLIC AGENCY ACTIVITIES

100 percent of targeted staff received stormwater training.

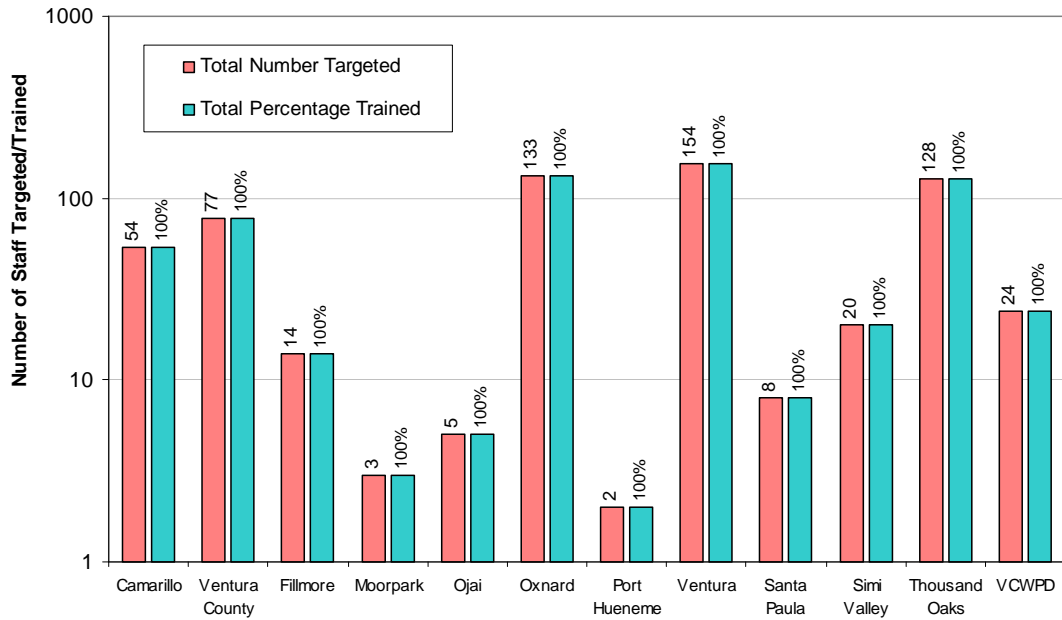


Figure 7-7 Public Agency Staff Trained

During the reporting period, the Co-permittees trained 619 municipal staff in stormwater management, SWPCPs, illicit discharge, response and non-stormwater discharges, this is almost a hundred more employees than last reporting year. **Figure 7-7** depicts the number of staff trained in the program area for each Co-permittee.

SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

8.1 Program Description

Illicit discharges and illegal connections can be concentrated sources of contamination to municipal storm drain systems. An illicit discharge is any intentional or unintentional discharge to a municipal storm drain that is either not composed entirely of stormwater, prohibited in our NPDES permit (Part 1,A,2,b), or not covered by a NPDES Permit. To reduce this source of pollution the Permittees have developed and implemented programs for the identification and elimination of illicit discharges and illegal connections to the municipal separate stormwater sewer system (MS4). Key components of these programs are public reporting, incidence response and enforcement actions. Some areas even have a cooperative effort with Police and Sheriffs to catch perpetrators by installing hidden security cameras in areas of frequent illegal dumping.



Example of an Illegal Connection

An illegal connection to the storm drain system is an undocumented and/or un-permitted physical connection from a facility to the storm drain system. An illicit discharge refers to the disposal of non-stormwater materials such as paint or waste oil into the storm drain or the discharge of waste streams containing pollutants to the storm drain system. Categories of non-stormwater discharges not prohibited (exempted or conditionally exempted) under the Permit (and detailed in the SMP) are listed in **Table 8.1**.

Table 8.1 **Conditionally Exempt Non-Storm Water Discharges**

Non-stormwater Discharges
Water line Flushing
Discharges from potable water sources
Foundation drains
Air conditioning condensate
Water from crawl space pumps
Reclaimed and potable irrigation water
De-chlorinated swimming pool discharges
Individual residential car washing
Sidewalk washing
Discharges or flows from emergency fire fighting activities

The term “illicit discharges” used in this program includes several categories as follows:

- Incidental spills or disposal of wastes or non-stormwater. These may be intentional, unintentional or accidental and would typically enter the storm drain system directly through drain inlets, catch basins;
- Discharges of sanitary sewage due to overflows or leaks; usually incidental but may be continuous;
- Discharges of prohibited non-stormwater other than through an illegal connection. These typically occur as surface runoff from outside the public right-of-way (e.g., area washdown from an industrial site).

SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

To meet the goals and objectives of this program, the Co-permittees have developed a comprehensive illicit discharge/illegal connection program, which includes the following components:

- Public Reporting
- Incidence Response
- Inspections
- Enforcement
- Illicit Discharges/Illegal Connections Staff Training

8.1.1 Public Reporting

Many illicit discharges are identified through public reporting of the situation. The goal of this component, in tandem with the Public Outreach component, is to educate the public and facilitate public reporting of illicit discharges and illegal connections. The baseline objectives are:

- Implement a program to receive calls from the public regarding potential illicit discharges and illegal connections, communicate and coordinate a timely response, perform all necessary follow up to the complaint, and maintain documentation.
- Provide educational material on non-stormwater discharges and why they are harmful to streams, and oceans and how to report them;
- Target the land development/construction community with educational material and provide workshops on stormwater quality regulations and illicit discharge prevention response; and
- Target the industrial/commercial community with educational material and provide workshops on stormwater quality regulations and illicit discharge prevention and response.
-

Illicit discharges have continually decreased for the last five years.

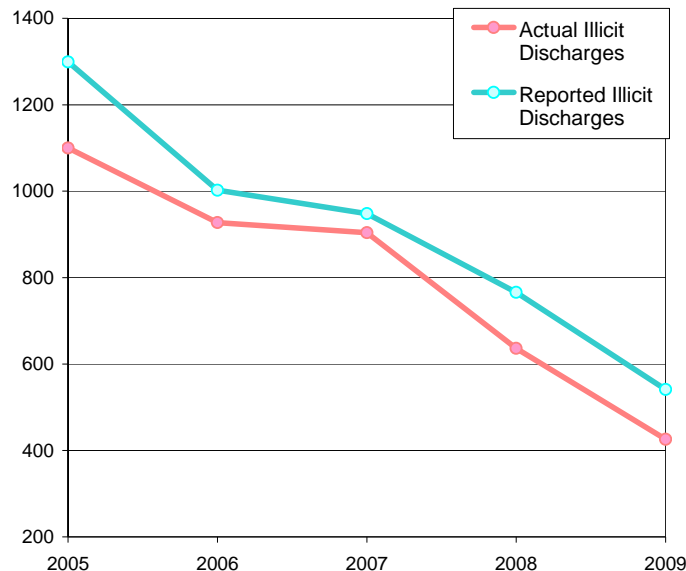


Figure 8-1 Illicit Discharge/Dumping Response

SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

8.1.2 Incidence Response

Timely responses to reports of illicit discharges are necessary to have the opportunity to determine the source, identify the responsible party and initiate any cleanup to reduce pollutants from such discharge to the MEP. The baseline objectives include:

- Initiate response within 24 hours of receiving a report of discharge from the public, other agencies or observed by a Co-permittee field staff during the course of their normal daily activities;
- Investigate to determine the nature and source of discharge and eliminate through voluntary termination or enforcement action (when possible); and
- Educate identified responsible parties and initiate enforcement actions as necessary.

While the goal is to respond within 24 hours, most reports of illicit discharge are responded to within a few hours. Some Co-permittees have prioritized problem areas (where geographical and/or activity-related) for inspection, cleanup and enforcement using the methods defined in the program.

8.1.3 Inspections

The discovery of potential or likely illicit discharges through business inspections will reduce the number of overall illicit discharges. Inspections of infrastructure can also detect and eliminate illegal connections to the MS4 and reduce pollutants discharged through such connections to the MEP. The baseline objectives include:

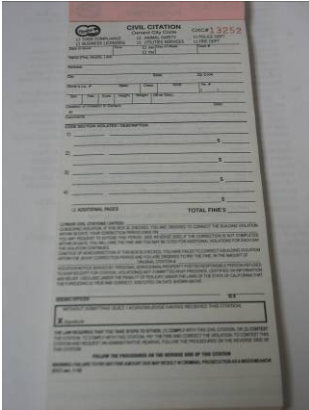
- Inspect the storm drain system to identify illegal connections during scheduled infrastructure maintenance by personnel;
- Connections to the storm drain system that are suspected or observed to be a source of an illicit discharge will be investigated to determine the origin and nature of the discharge;
- Use business inspections to identify and resolve potential illicit discharges and illegal connections; and
- Educate the business community on the environmental and legal consequences of illicit discharges.

8.1.4 Enforcement and Education

Every time a responsible party is identified for an illicit discharge there is an opportunity for education and enforcement. Enforcement activity begins at the appropriate level as determined by the Co-permittees' authorized representative. For incidents more severe or threatening at the outset, enforcement starts at an increased level. Often times a verbal warning and requiring cleanup of the discharge is effective, if necessary the Co-permittee will charge the responsible party for cleanup services provided. Education of targeted audiences occurs through inspections of illicit discharges, businesses and construction activities. The importance of eliminating or mitigating non-stormwater discharges to local streams and channels is emphasized.



SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS



The capacity to issue civil citations has been added to the City of Oxnard's enforcement plan to ensure that repeat violators of local, state, and federal stormwater quality regulations are assessed a fine for their illicit (illegal) activities. The integration of this enforcement action allows the municipality to assess a \$100.00 fee for those individuals or entities that receive a notice of violation (NOV) and thereafter again engage in the same illicit discharge activity. An additional \$100.00 fine is assessed, per day, per violation, if a repeat violation is committed within a thirty



(30) day period. If, after thirty (30) days, the same party is once again engaging in similar illicit activities then a \$200.00 citation is given. A \$500.00 fine is issued to third time participants of an illicit discharge committed sixty (60) days after the initial citation. Since current City policy allows the Mayor to delegate the authority to issue civil citations to designated employees, no changes to the City's stormwater ordinance were necessary. The only prerequisite imposed on these employees was that they receive training on civil citation writing from the City of Oxnard Code Enforcement Unit. Simply having the ability to issue a civil citation has proven to be enough of a deterrent to discourage/eliminate future occurrences of the same type of illicit activities from the local residents and the construction/building communities.

8.2 Program Implementation

8.2.1 Source Control

The Co-permittees have a number of programs facilitating the detection of sources of illicit discharges. These programs include business and industrial facility site visits, drainage facility inspection, water quality monitoring and the wide distribution of public education materials that provide phone numbers and web addresses to encourage the reporting of spills.

Staff performing routine maintenance activities within the municipal storm drain system and other Co-permittee field personnel are trained to report suspected problems and/or discharges to the system. In addition to inspections, the Co-permittees receive notifications from a variety of sources such as the public and regional and/or local agencies.



Example of Illegal Dumping

For the first few years as the program evolved and the public became aware of what was not allowed down storm drains reports of illicit discharges increased, however for the last five years reports illicit discharges have decreased. Since the public is more aware of illicit discharges this decrease likely represents a change in behavior and fewer pollutants reaching the storm drains through illicit discharges.

This reporting year, the Co-permittees continued to:

SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

- Investigate the cause, determine the nature and estimate the amount of discharge for each reported illicit discharge/dumping incidents;
- Determine when possible the type of materials and source type for each reported illicit discharge/dumping incidents;
- Determine when possible the probable cause for the illicit discharge/dumping
- Conduct enforcement or educational activities to prevent similar discharges from reoccurring;
- Verify that reported illicit discharge/dumping incidents were terminated and/or cleaned;
- Refer illicit discharge/dumping or illegal connections to other agencies when appropriate;
- Identify and eliminate illegal connections; and
- Provide educational materials and contact numbers for reporting illicit discharge/dumping when conducting stormwater inspections.

Figure 8-2 and **Figure 8-3** show the results of the Co-permittees' efforts. All of the illicit discharges reported were resolved countywide (meaning they were cleaned up; referred to another agency; and/or educational material was distributed). The number of incidents investigated and addressed by the Co-permittees reporting discharges exceeds the 90% performance criteria established in the SMP. Note: These figures represent incidents Co-permittees responded to as part of the Stormwater Management Program. Incidents addressed by EHD Hazardous Waste Program or local CUPA may not be included in these figures.

100% of reports of illicit discharges were investigated and 100% of actual illicit discharges were resolved.

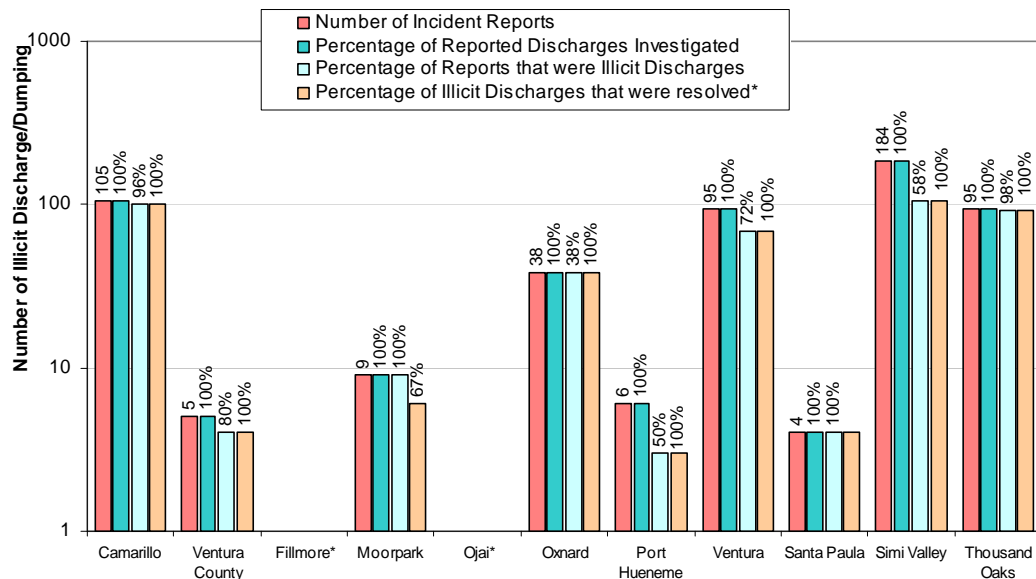


Figure 8-2 Illicit Discharge/Dumping Response

* No illicit Discharges reported this year.

Figure 8-3 indicates the number of illegal connections identified and eliminated. Each Co-permittee detects and eliminates illegal connections within its municipal storm drain system. Any illegal connection identified by the Co-permittees during routine inspections or reported by a third party is investigated. Appropriate actions are then taken to approve undocumented connections by permit procedure and/or pursue removal of those connections determined to be illicit connections and therefore not permissible.

SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

If the discharge from an identified connection is determined to consist only of stormwater or exempted non-stormwater, the connection will be allowed to remain and will no longer be considered an illegal connection. Co-permittees may elect to issue a permit for the connection or allow the connection to remain if information on the connection is documented; or the discharge will be permitted through a separate NPDES permit; or the connection will be terminated through voluntary action or enforcement proceedings.

100% of illegal connections were eliminated.

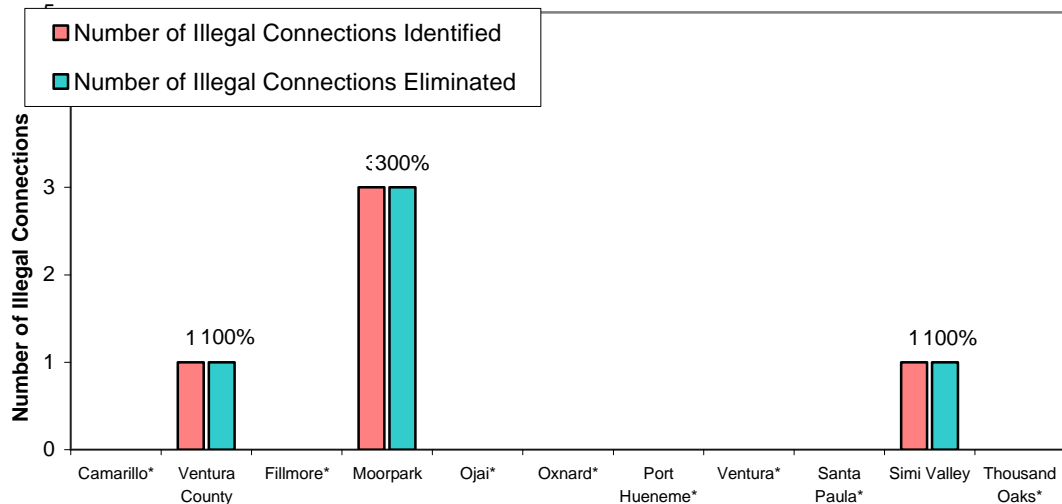


Figure 8-3 Illegal Connection Response

* No illegal connections reported this permit year.

If evidence of an illegal discharge is detected in an MS4 and the source is not apparent, a source investigation may be conducted to determine if the discharge is being conveyed through an illegal connection. Depending on the type of illicit connection detected, the Co-permittees may eliminate the connection by means of appropriate legal procedures. Follow-up compliance is conducted to ensure any required abatement activities have been successfully and adequately implemented.

Owners of existing drains without appropriate permits (including encroachment permits) are notified to comply. For those drains where the owner is unresponsive or cannot be identified, each Co-permittee is responsible for deciding whether to formally accept the connection as part of their public drainage system or cap it off.

8.2.2 Source Determination

As part of their field investigation of reported illicit discharges/dumping incidents, the Co-permittees attempt to determine the material's source. This investigation begins at the surface drainage system in the vicinity of suspected illicit discharges. This may include accessible areas in the public right-of-way adjacent to residences and businesses, catch basins, open channels near known points of discharge, and upstream manholes. If the source and responsible party can be determined, Co-permittees take one or all of the following actions when appropriate:

- Voluntary cleanup/termination;
- Initiate enforcement procedures;
- Take steps to prevent similar discharges from reoccurring.

SECTION 8.0 PROGRAM FOR ILLICIT DISCHARGES/CONNECTIONS

When the source cannot be determined, the appropriate department or contractor will be notified to contain and clean up the material. Because these situations and materials can vary, procedures vary as well. In general, the following are steps that are taken by Co-permittees to determine sources:

- Verify location of the spill/discharge;
- Containment and cleanup;
- Investigate the cause (look for origin);
- Determine the nature and estimate the amount of illicit discharge/dumped material;
- When appropriate, refer documented non-stormwater discharges/dumping or illegal connections to the proper agency for investigation; and
- If appropriate, notify the RWQCB and/other proper agencies.

The majority of illicit discharges are from residential and commercial/industrial sources.

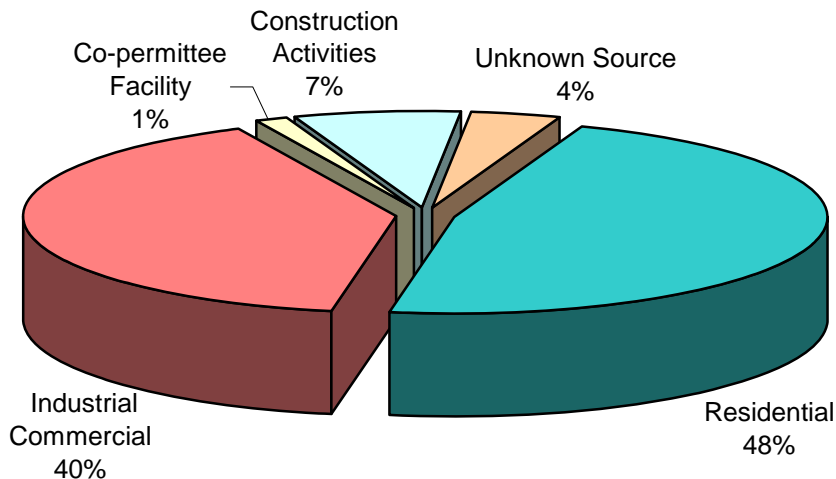


Figure 8-4 Source of Material Discharged during Illicit Discharge Events Countywide

During an illicit discharge investigation the source of the discharge is determined. Residential and industrial sources continue to be the dominate sources of illicit discharges. Since these two sources account for 88% of all illicit discharges, the Co-permittees plan to continue targeting business facilities and residents for comprehensive educational outreach. In addition, Co-permittees continue to cross-train targeted staff on how to identify and report illicit discharges. **Figure 8-4** presents a breakdown of illicit discharges by source.

Figure 8-5 indicates the likely cause for illicit discharges countywide. The vast majority of incidents resulted from cleaning activities, which the Co-permittees define as *any activity intended to wash, tidy up or make clean*. In order to reduce the number of illicit discharges and to prevent similar incidents from reoccurring, the Co-permittees have taken a variety of actions. Some Co-permittees provide additional training to field staff (such as Building Inspectors, Engineering Inspectors, maintenance personnel) to look for “potential” discharges. When “potential” discharges are found, Co-permittees provide educational material to the appropriate resident, business owner, etc. In addition, other Co-permittees distribute educational material with all encroachment and building permits. Other Co-permittees publish articles in local magazines regarding pool maintenance, vehicle maintenance and

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homeowner projects. Some Co-permittees also distribute letters, brochures and informational door hangers directly to homeowners during residential street sweeps in known problem areas.

Cleaning activities are still a major source of illicit discharges.

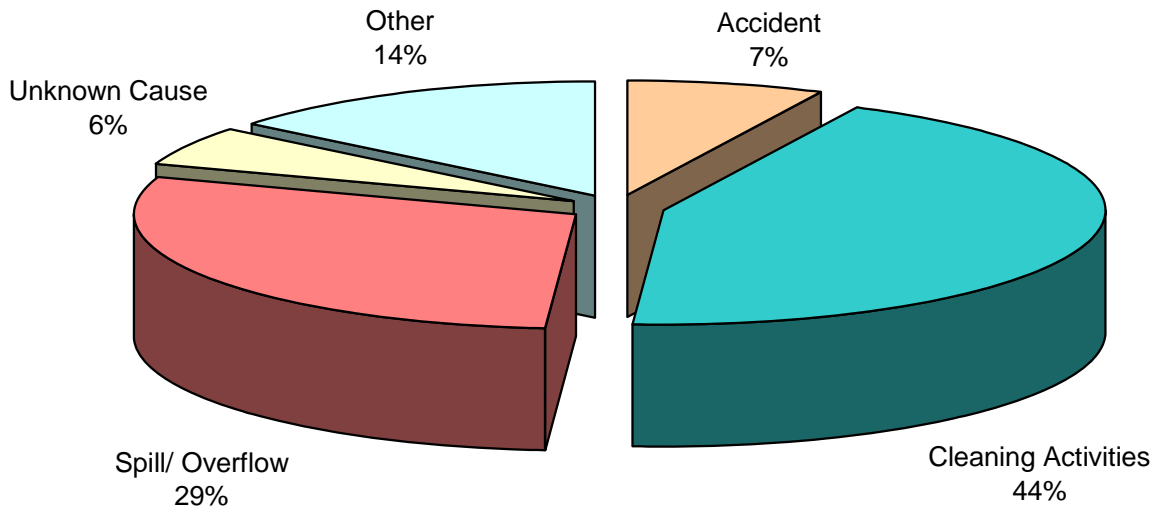


Figure 8-5 Probable Cause of Illicit Discharges Countywide

It is projected that over time there will be a shift in the cause of illicit discharges as the public becomes more educated and encouraged to change their behavior. The number of Illicit discharges due to cleaning activities should drop, and that has been observed. Also, the number due to spills and overflows should lower as better practices are employed to prevent them. Ideally, the majority of discharges will be due to accidents because they are least likely to be changed by the program's efforts. **Figure 8-6** shows how the cause of illicit discharges has changed over the last five years.

Illicit discharges due to cleaning activities trends down as public behavior changes.

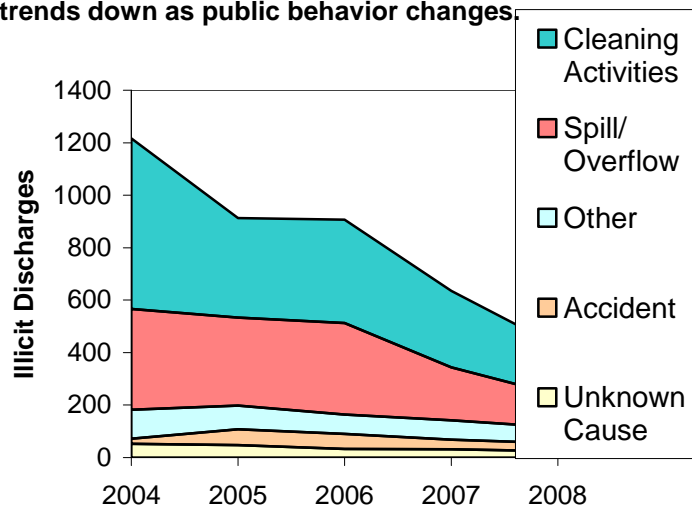


Figure 8-6 Cause of illicit discharges over past five

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Figure 8-7 shows the type of material discharged. Wastewater continues to be the most often type of material discharged. For definitions of categories for material type see Table 8.2.

Number of Incidents Countywide = 424

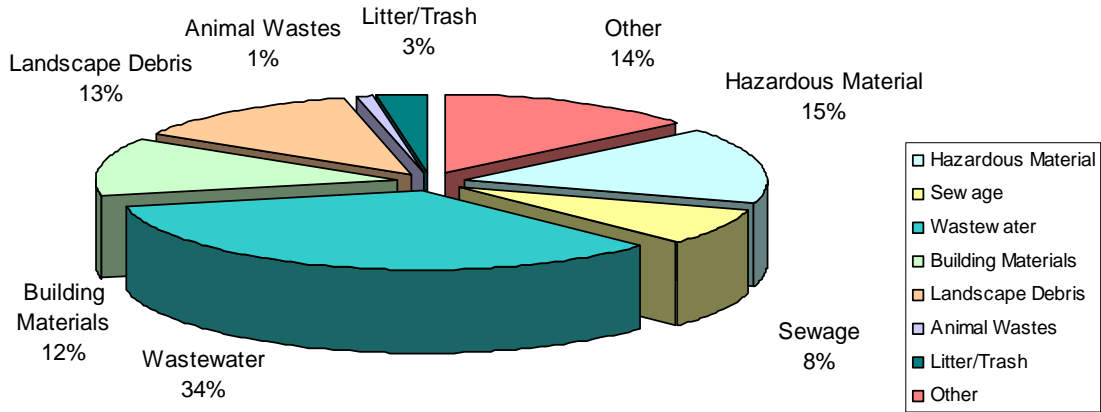


Figure 8-7 Type of Material Discharged during Illicit Discharge Events Countywide

Table 8.2 details the categories used by the Co-permittees to describe the material type of an illicit discharge. The definitions of these various categories are solely for facilitating the Co-permittees with their characterization of material type for annual report consistency. The Co-permittees are aware these definitions are by no means all-inclusive nor necessarily how another agency or person would define these categories. The Co-permittees used a variety of resources for assistance in defining these categories including the Ventura County Environmental Health and the RWQCB websites, and the Environmental Protection Agency’s glossary of terms and educational outreach materials.

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Material Type & Definitions	
TYPE	DEFINITION
Hazardous Material	By-products of society that can pose a substantial or potential hazard to human health or environment when improperly managed. Posses at least one of the four following characteristics (ignitability, corrosivity, reactivity, or toxicity), or is identified as a listed waste (e.g., oil, used anti-freeze, hydraulic fluid)
Sewage	The waste and wastewater produced by residential and commercial sources and discharged into sewers, includes the sludge produced by Publicly Owned Treatment Works.
Wastewater	The spent or used water from a home, community, farm or industry that contains dissolved or suspended matter.
Building Materials	Any debris associated with construction activities used to construct a building and/or stand-alone facility, such as plaster, dry-wall, nails, wood, etc.
Landscape Debris	Excessive eroded soils, sediment and/or organic materials.
Animal Wastes	Discharge from confinement facilities, kennels, pens, recreational facilities, stables, show facilities and residential yards.
Litter/Trash	Synthetic consumer by-product
Other	Any remaining materials that do not fit into the above mentioned categories.

Table 8.2 Illicit Discharge Material Type

8.2.3 Enforcement

Co-permittees continue to implement enforcement procedures to eliminate illicit discharges and illegal connections available through their legal authority of their respective ordinances. Most enforcement processes follow a common sequence. These typically include:

- Verbal or written warnings for minor violations;
- Formal notice of violation or non-compliance with compliance actions and time frames;
- Cease and desist or similar order to comply; and
- Specific remedies such as civil penalties (e.g., infraction), non-voluntary termination with cost recovery, or referral for criminal penalties or further legal action;
- Authority to issue civil citations of \$100 on site.

Enforcement activity begins at the appropriate level as determined by the Co-permittees' authorized representative. For incidents more severe or threatening at the outset, enforcement starts at an increased level. Enforcement steps are accelerated if there is evidence of a clear failure to act or an increase in the severity of the discharge. Enforcement actions for violating any of the provisions of the Co-permittees' ordinances may include any of the following or a combination thereof:

- Criminal Penalties
- Monetary punishment
- Imprisonment
- Civil Penalties

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Figure 8-8 and **8-9** indicate the number and type of enforcement actions taken by the Co-permittees in response to reported illicit discharge/dumping events during this reporting period. The data presented in **Figure 8-8** indicates most Co-permittees issued some form of enforcement action when resolving an illicit discharge and/or dumping event. A total of 424 verified illicit discharges were reported countywide and Co-permittees issued enforcement actions on 84% of these incidents. Generally, enforcement doesn't occur only when a responsible party cannot be identified.



Figure 8-8 Number of Enforcement Actions

Number of Enforcement Actions Countywide = 357

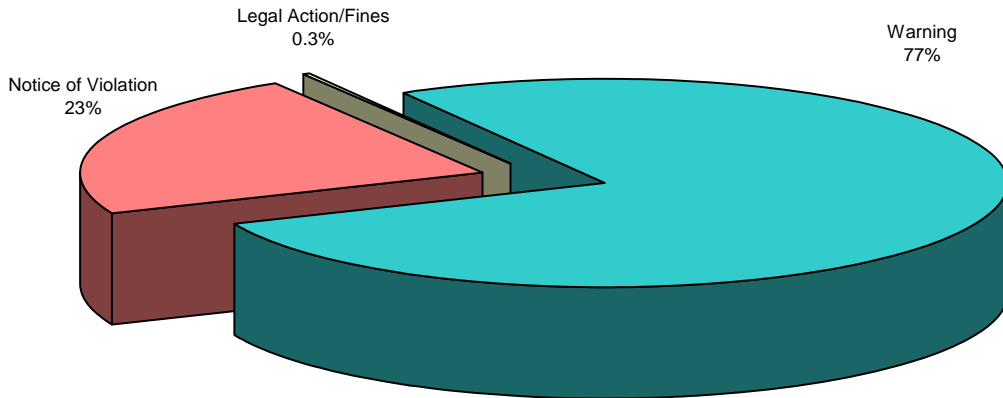


Figure 8-9 Types of Enforcement Actions taken Countywide

Due to the wide range of number of discharges across the different Co-permittees it was necessary to present on a logarithmic scale. This does not allow accurate representation of values of one or zero.
 * No enforcement action taken.

Note:
this

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As indicated in **Figure 8-9**, the vast majority of enforcement actions consisted of both verbal and written warnings of violation. Last reporting period had more enforcement actions, but this was due to there being more illicit discharges to enforce against. This year, the Co-permittees issued a total of 123 Notice of Violations (21%), 356 warnings (79%) and 1 legal action. No monetary fines were collected by the Co-permittees this year. This continued enforcement effort underscores the Co-permittees high level of expectations from its residential and business communities. After twelve years of stormwater educational outreach, the Co-permittees believe that additional tools, such as Notice of Violations (NOVs) and fines are appropriate in certain instances to achieve compliance.

In addition, the Co-permittees continue to utilize a database of reported illicit discharge incidents that includes the following information for each event:

- Date of initial inspection
- Type of material discharged
- Source type of discharge
- Probable cause of discharge
- Date of follow-up inspection
- Date of conclusion/clean up/removal/follow up/education
- Enforcement taken action

A printed copy of the Co-permittees' database is attached in Appendix 2. The Co-permittees annually update the database with their activities for the current reporting year and provide a copy as part of the Annual Report.

8.2.4 Education and Outreach

Stormwater pollution prevention is most easily and cost effectively achieved through education and awareness. Over the last five years the number of reported illicit discharges and actual illicit discharges has been trending downward as shown in **figure 8-1**. This is remarkable because over that same time there has been countywide outreach materials with reporting phone numbers distributed to educate the public on how to report discharges. This reporting year, Co-permittees continue to distribute educational material describing illicit discharges, and providing contact numbers for reporting illicit discharges during inspections to automotive, food service and construction sites.

Ongoing Co-permittees illicit discharge educational and outreach efforts:

- The City of Ventura implemented an innovative means to provide city employees and residents with a tool to report illicit discharges. The city developed and distributed to all city vehicles a static-cling windshield sticker that displays the city's Illicit Discharge Hotline phone number and a flyer describing illicit discharges and encouraging employee participation in this program.
- The City of Camarillo identified the phone number to report illicit discharges on the catch basin markers designed to discourage dumping. This combination of two permit-required activities (provide an illicit discharge reporting number to the public and stencil storm drains with a "no dump" message) has proven to be an effective approach, and has proven a great success for the city in their efforts to improve illicit discharge reporting. The city plans to implement the markers citywide.
- The City of Simi Valley on several occasions canvases streets or neighborhoods where illicit discharges were common. They distributed brochures, BMP fact sheets and informational door hangers during these sweeps in an effort to address localized stormwater issues. They have also incorporated stormwater criteria into the pretreatment inspections to aid in identifying illegal connections and stopping illicit discharges before they happen.

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- Many Co-permittees host and fund household hazardous waste and electronic waste collection events for their residents. Quarterly or even monthly operations these programs for collecting household hazardous waste serve thousands of participants each year. Thousands of pounds of toxic waste collected may have otherwise have leaked into storm drains after being placed in the trash, or worse illegally dumped straight into the storm drain.

100% of targeted staff were trained.

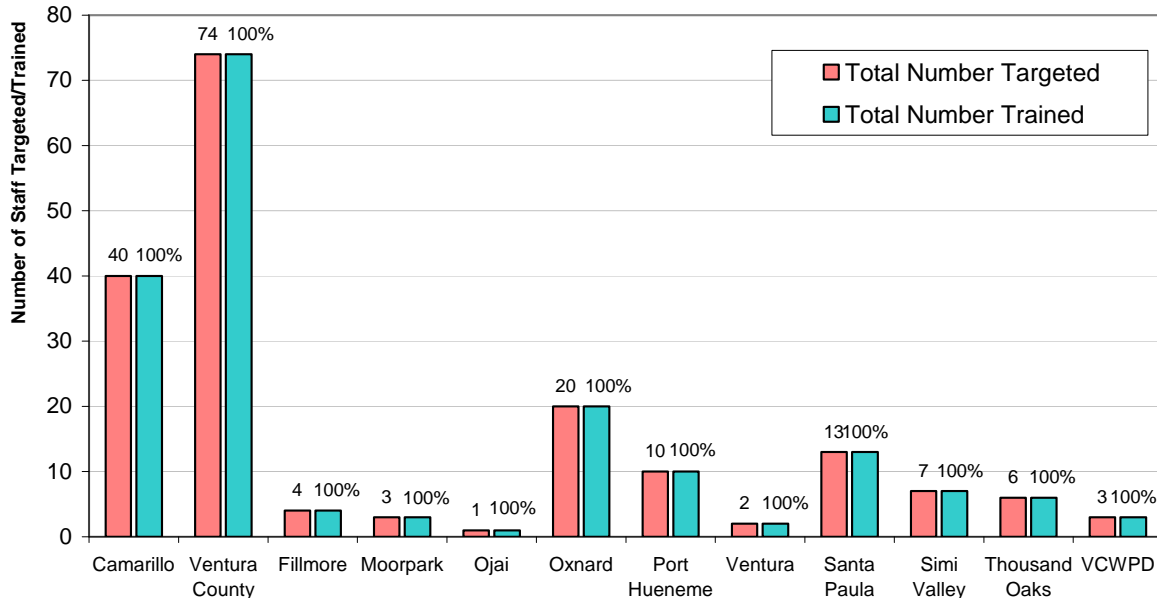


Figure 8-10 Illicit Discharge/Illegal Connection Staff Training

Details on the number of educational contacts made during this reporting period are included in **Section 4** (Program for Industrial/Commercial Business) and **Section 6** (Program for Construction Sites).

8.2.5 Stormwater Quality Staff Training

Each Co-permittee targets staff based on the type of stormwater quality and pollution issues they may encounter. Targeted staff included illicit discharge inspectors, drainage, roadway, landscape and facilities staff, industrial pretreatment inspectors and code enforcement officers. Training is incorporated with existing business inspection, construction site, and public agency activity programs.

Staff is trained in a manner that provides adequate knowledge for effective illicit discharge identification, investigation, reporting and/or clean up. Training was achieved in a variety of ways, including informal “tailgate” meetings, formal classroom training and/or self-guided training methods. During this reporting period, Co-permittees trained 162 municipal staff on illicit discharge response and non-stormwater discharges. **Figure 8-10** depicts the number of staff trained. All of the eleven Co-permittees exceeded the performance criterion established in the SMP, and trained more than the 90% of targeted employees.

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9.1 Program Summary

Pursuant to NPDES Permit No. CAS004002, the Ventura Countywide Stormwater Quality Management Program (Management Program) must submit a Stormwater Monitoring Report annually by October 1st summarizing and providing a general interpretation of the results from water quality monitoring conducted during the monitoring year. Consistent with this requirement the Management Program has prepared this Report to satisfy the permit requirements and assess the effectiveness of the overall Ventura Countywide Stormwater Monitoring Program (Stormwater Monitoring Program).

This report provides an investigation of stormwater program effectiveness, characterizes the surface water quality of Ventura County, and summarizes available water quality data for monitoring conducted during the 2008/09 season. Analysis of samples collected at various monitoring sites throughout the watershed provides information to assess the impact of stormwater runoff and helps characterize the status of surface water quality for watersheds in Ventura County. The monitoring aids in the identification of pollutant sources as well as the evaluation of the Stormwater Monitoring Program's effectiveness. Evaluating the Stormwater Monitoring Program's effectiveness allows for changes to be made and continual improvement of the overall Program. This adaptive management strategy improves the quality and effectiveness of the Stormwater Monitoring Program and minimizes the impact of stormwater pollutant discharges throughout the watersheds.



For the 2008/09 monitoring season, several key points have been identified and are highlighted below.

- **This report presents and discusses the water quality monitoring data collected during four wet weather events and two dry weather events monitored by the Stormwater Monitoring Program.** The four wet weather events included monitoring at the Stormwater Monitoring Program's Land Use (Event 1), Receiving Water (Event 1), and Mass Emission (all events) sites. The two dry weather events included monitoring only at the Mass Emission stations. The Stormwater Monitoring Program conducted a thorough QA/QC evaluation of the environmental and QA/QC results generated from its analysis of water quality samples and found the resultant data set to have achieved a 98.1% success rate in meeting program data quality objectives. Overall, the 2009/09 monitoring season produced a high quality data set in terms of the low percentage of qualified data, as well as the low reporting levels achieved by all laboratories analyzing the Stormwater Monitoring Program's water quality samples.
- **VCWPD employed the services of CRG Marine Laboratories, Inc., in order to achieve low detection limits for the majority of the water quality parameters evaluated by the Stormwater Monitoring Program.** As a means of improving the detection capability of various constituents found in the water quality samples collected by the VCWPD, the Stormwater Monitoring Program has again employed the services of CRG Marine Laboratories, Inc (CRG). CRG began analyzing the majority of the water quality parameters evaluated by the Stormwater Monitoring Program at the beginning of the 2003/04 monitoring season. CRG is known for their ability to measure analytes at concentrations much lower than most water quality laboratories. During the current monitoring year, CRG was able to achieve detection limits for trace organic compounds (i.e., organics, PCBs, and pesticides) that are 100 – 1000 times lower than laboratories used in the past. Additionally,

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CRG typically achieved detection limits for metals that are 10 times lower than historic levels for this class of constituent. Additional laboratories used by VCWPD also possess the ability to measure target analytes at very low levels.

- **VCWPD staff evaluated environmental and QA/QC water chemistry data using the *Data Quality Evaluation Plan* and *Data Quality Evaluation Standard Operating Procedures* guidance documents.** The *Data Quality Evaluation Plan* (DQEP) describes the multiple step process used by VCWPD staff to identify errors, inconsistencies, or other problems potentially associated with Stormwater Monitoring Program data. Furthermore, the DQEP describes the various data quality objectives (DQOs) to which environmental and QA/QC data are compared as part of the Stormwater Monitoring Program's quality assurance/quality control program. The *Data Quality Evaluation Standard Operating Procedures* document is a set of written instructions that describes both technical and administrative operational elements undertaken by the Stormwater Monitoring Program in carrying out its DQEP.
- **VCWPD used its water quality database to store and analyze stormwater quality data.** The Stormwater Monitoring Program has invested approximately \$200,000 in the past six years to develop a water quality database to further expedite, standardize, and enhance the Stormwater Monitoring Program's data management and data analysis activities. Key database attributes include automatic importation and cursory evaluation of electronically formatted data, semi-automated QA/QC evaluation, automated comparison of the Stormwater Monitoring Program's data to water quality objectives, and a wide array of hard copy and electronic data reporting features. The database has allowed the Stormwater Monitoring Program to improve its overall data management effort by providing staff with a robust data management tool for the storage, analysis, and reporting of stormwater monitoring data.
- **Acute toxicity of *Ceriodaphnia dubia* was observed at Receiving Water sites W-3 (La Vista) and W-4 (Revolon Slough) for the samples collected during Event 1.** The permit requires that a TIE Baseline test be initiated for each sample with a TUa >1.0. This test was performed, but by the time the testing was initiated much of the toxicity had dissipated; therefore, no further TIE testing was undertaken.
- **No chronic toxicity of *Strongylocentrotus purpuratus* (Purple Sea Urchin) was observed at any of the Mass Emission stations.**
- **Toxaphene concentrations exceeded applicable water quality objectives at multiple locations during one or more wet weather monitoring events.** These exceedances mark the first time that this insecticide has ever been detected in Ventura County.
- **No samples (water chemistry or aquatic toxicity) were collected for the Ortega Street (I-2) and Swan Street (R-1) Land Use sites.** In previous years, the Stormwater Monitoring Program satisfied its NPDES permit condition stating that these two Land Use sites must be monitored a minimum of three times per permit term with respect to the collection of water chemistry samples. Beginning last year (2007/08), the Stormwater Monitoring Program felt that it had obtained enough data to fulfill its regulatory obligation to collect aquatic toxicity grab samples at these sites in order to amass baseline toxicity information related to land use discharges.
- **Elevated pollutant concentrations were observed at all monitoring sites during one or more monitored wet weather storm events, and at Mass Emission stations ME-CC and ME-SCR during one or more dry weather events.** Constituent concentrations above Los Angeles Region Basin Plan, California Toxics Rule, and/or California Ocean Plan¹ water quality objectives were measured at the following monitoring sites:

¹ The Stormwater Management Program believes the comparison of stormwater runoff data to the California Ocean Plan is inappropriate based on the following applicability language contained in the plan: "This plan is not applicable to discharges to enclosed bays and estuaries or inland waters, nor is it applicable to vessel wastes, or the control of dredged material." (California Ocean Plan. State Water Resources Control Board. 2005.)

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Mass Emission Sites

ME-CC	Anion: Chloride Bacteriological: <i>E. coli</i> , Enterococcus, Fecal Coliform, Total Coliform Conventional: Total Dissolved Solids Metal: Aluminum, Chromium, Copper, Lead, Nickel, Zinc Nutrient: Nitrate as N Organic: Bis(2-ethylhexyl)phthalate, Total PAH Compounds Pesticide: 4,4'-DDD, 4,4'-DDE, Total Chlordane Compounds, Total DDT Compounds Toxaphene
ME-VR2	Bacteriological: <i>E. coli</i> , Enterococcus, Fecal Coliform, Total Coliform
ME-SCR	Bacteriological: <i>E. coli</i> , Enterococcus, Fecal Coliform, Total Coliform Metal: Aluminum, Chromium, Copper, Lead, Mercury, Nickel, Selenium Nutrient: Ammonia as N Organic: Bis(2-ethylhexyl)phthalate, Total PAH Compounds Pesticide: Toxaphene

Receiving Water Sites

W-3	Bacteriological: <i>E. coli</i> , Enterococcus, Total Coliform Metal: Aluminum, Copper, Lead, Zinc Organic: Total PAH Compounds Pesticide: 4,4'-DDD, 4,4'-DDE, Total DDT Compounds, Toxaphene
W-4	Bacteriological: <i>E. coli</i> , Enterococcus, Fecal Coliform, Total Coliform Conventional: Total Dissolved Solids Metal: Aluminum, Copper Nutrient: Nitrate as N Organic: Total PAH Compounds Pesticide: 4,4'-DDD, 4,4'-DDE, Total Chlordane compounds, Total DDT Compounds, Toxaphene

Even though receiving water objectives are not directly applicable to constituent concentrations measured at Land Use monitoring stations, the Stormwater Monitoring Program performed comparisons between Land Use water quality data and Los Angeles Region Basin Plan, California Toxics Rule, and California Ocean Plan objectives as a means of identifying potential pollutants of concern.

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Land Use Sites

- A-1** **Bacteriological:** *E. coli*, Enterococcus, Fecal Coliform, Total Coliform
Conventional: Total Dissolved Solids
Metal: Aluminum, Copper
Nutrient: Nitrate as N
Organic: Total PAH Compounds
Pesticide: 4,4'-DDD, 4,4'-DDE, Total Chlordane Compounds, Total DDT compounds, Toxaphene



SECTION 9.0 WATER QUALITY MONITORING

Figure 9-1: Mass Emission Site Photos: ME-CC (Calleguas Creek), ME-SCR (Santa Clara River), and ME-VR2 (Ventura River) during storm flows in January 2008 (Event 3)



Figure 1: ISCO 6712 refrigerated sampler, ISCO 4230 flowmeter, and steel enclosure at Mass Emission site ME-VR2



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

NOV 12 2010

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Revisions to the November 22, 2002 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs"

FROM: James A. Hanlon, Director
Office of Wastewater Management

Denise Keehner, Director
Office of Wetlands, Oceans and Watersheds

TO: Water Management Division Directors
Regions 1 - 10

This memorandum updates aspects of EPA's November 22, 2002 memorandum from Robert H. Wayland, III, Director of the Office of Wetlands, Oceans and Watersheds, and James A. Hanlon, Director of the Office of Wastewater Management, on the subject of "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs" (hereafter "2002 memorandum").

Background

Section III of the 2002 memorandum "affirm[ed] the appropriateness of an iterative, adaptive management best management practices (BMP) approach" for improving stormwater management over time as permitting agencies, the regulated community, and other involved stakeholders gain more experience and knowledge. Since 2002, States and EPA have obtained considerable experience in developing TMDLs and WLAs that address stormwater sources. The technical capacity to monitor stormwater and its impacts on water quality has increased. In many areas, monitoring of the impacts of stormwater on water quality has become more sophisticated and widespread. Better information on the effectiveness of stormwater controls to reduce pollutant loadings and address water quality impairments is now available. In many parts of the country, permitting agencies have issued several rounds of permits for Phase I municipal separate storm sewer systems (MS4s), Phase II MS4s, and stormwater discharges associated with industrial activity, including stormwater from construction activities. Notwithstanding these developments, stormwater discharges remain a significant cause of water quality

impairment in many places, highlighting a continuing need for more useful WLAs and better NPDES permit provisions to restore impaired waters to their beneficial uses.

With this additional experience in mind, EPA is updating and revising the following four elements of the 2002 memorandum to better reflect current practices and trends in permits and WLAs for stormwater discharges:

- Providing numeric water quality-based effluent limitations in NPDES permits for stormwater discharges;
- Disaggregating stormwater sources in a WLA;
- Using surrogates for pollutant parameters when establishing targets for TMDL loading capacity; and
- Designating additional stormwater sources to regulate and treating load allocations as wasteload allocations for newly regulated stormwater sources.

EPA is currently reviewing other elements of the 2002 memorandum and will consider making appropriate revisions in the future.

Providing Numeric Water Quality-Based Effluent Limitations in NPDES Permits for Stormwater Discharges

In today's memorandum, EPA is revising the 2002 memorandum with respect to water quality-based effluent limitations (WQBELs) in stormwater permits. Since 2002, many NPDES authorities have documented the contributions of stormwater discharges to water quality impairment and have identified the need to include clearer permit requirements in order to address these impairments. Numeric WQBELs in stormwater permits can clarify permit requirements and improve accountability and enforceability. For the purpose of this memorandum, numeric WQBELs use numeric parameters such as pollutant concentrations, pollutant loads, or numeric parameters acting as surrogates for pollutants, such as stormwater flow volume or percentage or amount of impervious cover.

The CWA provides that stormwater permits for MS4 discharges shall contain controls to reduce the discharge of pollutants to the "maximum extent practicable" and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants. CWA section 402(p)(3)(B)(iii). Under this provision, the NPDES permitting authority has the discretion to include requirements for reducing pollutants in stormwater discharges as necessary for compliance with water quality standards. *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166 (9th Cir. 1999).

Where the NPDES authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality standard excursion, EPA recommends that, where feasible, the NPDES permitting authority exercise its discretion to include numeric effluent limitations as necessary to meet water quality standards. The 2002

memorandum stated “EPA expects that most WQBELs for NPDES-regulated municipal and small construction stormwater discharges will be in the form of BMPs, and that numeric limitations will be used only in rare instances.” Those expectations have changed as the stormwater permit program has matured. EPA now recognizes that where the NPDES authority determines that MS4 discharges and/or small construction stormwater discharges have the reasonable potential to cause or contribute to water quality standards excursions, permits for MS4s and/or small construction stormwater discharges should contain numeric effluent limitations where feasible to do so. EPA recommends that NPDES permitting authorities use numeric effluent limitations where feasible as these types of effluent limitations create objective and accountable means for controlling stormwater discharges.

The Clean Water Act (CWA) requires that permits for stormwater discharges associated with industrial activity comply with section 301 of the Act, including the requirement under section 301(b)(1)(C) to contain WQBELs for any discharge that the permitting authority determines has the reasonable potential to cause or contribute to a water quality standard excursion. CWA section 402(p)(3)(A), 40 CFR 122.44(d)(1)(iii). When the permitting authority determines, using the procedures specified at 40 CFR 122.44(d)(1)(ii) that the discharge causes or has the reasonable potential to cause or contribute to an in-stream excursion of the water quality standards, the permit must contain effluent limits for that pollutant. EPA recommends that NPDES permitting authorities use numeric effluent limitations where feasible as these types of effluent limitations create objective and accountable means for controlling stormwater discharges.

Where WQBELs in permits for stormwater discharges from MS4s, small construction sites or industrial sites are expressed in the form of BMPs, the permit should contain objective and measurable elements (e.g., schedule for BMP installation or level of BMP performance). The objective and measurable elements should be included in permits as enforceable provisions. Permitting authorities should consider including numeric benchmarks for BMPs and associated monitoring protocols or specific protocols for estimating BMP effectiveness in stormwater permits. These benchmarks could be used as thresholds that would require the permittee to take additional action specified in the permit, such as evaluating the effectiveness of the BMPs, implementing and/or modifying BMPs, or providing additional measures to protect water quality.

If the State or EPA has established a TMDL for an impaired water that includes WLAs for stormwater discharges, permits for either industrial stormwater discharges or MS4 discharges must contain effluent limits and conditions consistent with the requirements and assumptions of the WLAs in the TMDL. See 40 CFR § 122.44(d)(1)(vii)(B). Where the WLA of a TMDL is expressed in terms of a surrogate pollutant parameter, then the corresponding permit can generally use the surrogate pollutant parameter in the WQBEL as well. Where the TMDL includes WLAs for stormwater sources that provide numeric pollutant load or numeric surrogate pollutant parameter objectives, the WLA should, where feasible, be translated into numeric WQBELs in the applicable stormwater permits.

The permitting authority's decision as to how to express the WQBEL(s), either as numeric effluent limitations or BMPs, including BMPs accompanied by numeric benchmarks, should be based on an analysis of the specific facts and circumstances surrounding the permit, and/or the underlying WLA, including the nature of the stormwater discharge, available data, modeling results or other relevant information. As discussed in the 2002 memorandum, the permit's administrative record needs to provide an adequate demonstration that, where a BMP-based approach to permit limitations is selected, the BMPs required by the permit will be sufficient to implement applicable WLAs. Improved knowledge of BMP effectiveness gained since 2002 should be reflected in the demonstration and supporting rationale that implementation of the BMPs will attain water quality standards and WLAs.

EPA's regulations at 40 CFR § 122.47 govern the use of compliance schedules in NPDES permits. Central among the requirements is that the effluent limitation(s) must be met "as soon as possible." 40 CFR 122.47(a)(1). EPA expects the permitting authority to include in the permit record a sound rationale for determining that any compliance schedule meets this requirement. Where a TMDL has been established and there is an accompanying implementation plan that provides a schedule for an MS4 to implement the TMDL, the permitting authority should consider the schedule as it decides whether and how to establish enforceable interim requirements and interim dates in the permit.

Lastly, NPDES permits must specify monitoring requirements necessary to determine compliance with effluent limitations. See CWA section 402(a)(2); 40 C.F.R. 122.44(i). Where WQBELs are expressed as BMPs, the permit must require adequate monitoring to determine if the BMPs are performing as necessary. When developing monitoring requirements, the NPDES authority should consider the variable nature of stormwater as well the availability of reliable and applicable field data describing the treatment efficiencies of the BMPs required and supporting modeling analysis.

Disaggregating Stormwater Sources in a WLA

As stated in the 2002 memorandum, EPA expects TMDL authorities will make separate aggregate allocations to NPDES-regulated storm water discharges (in the form of WLAs) and unregulated storm water (in the form of LAs). EPA also recognized that the available data and information usually are not detailed enough to determine waste load allocations for NPDES-regulated storm water discharges on an outfall-specific basis.

EPA still recognizes that decisions about allocations of pollutant loads within a TMDL are driven by quantity and quality of existing and readily available water quality data. However, today, TMDL writers may have better data or better access to data and, over time, may have gained more experience since 2002 in developing TMDLs and WLAs in a less aggregated manner. Moreover, since 2002, EPA has noted the difficulty of establishing clear, effective, and enforceable NPDES permit limitations for sources covered by WLAs that are expressed as single categorical or aggregated wasteload allocations.

Accordingly, for all these reasons, EPA recommends that WLAs for NPDES-regulated stormwater discharges should be disaggregated into specific categories (e.g., separate WLAs for MS4 and industrial stormwater discharges) to the extent feasible based on available data and/or modeling projections. In addition, these disaggregated WLAs should be defined as narrowly as available information allows (e.g., for MS4s, separate WLAs for each one; and, for industrial sources, separate WLAs for different sources or types of industrial sources or discharges.)

Where appropriate, EPA encourages permit writers to assign specific shares of the wasteload allocation to specific permittees during the permitting process.

Using Surrogate for Pollutant Parameters When Establishing Targets for TMDL Loading Capacity

Many waterbodies affected by stormwater discharges are listed as impaired under Section 303(d) due to biological degradation or habitat alteration, rather than for specific pollutants (e.g., metals, pathogens, sediment). Impairment can be due to pollutants where hydrologic changes such as quantity of flow and variation in flow regimes are important factors in their transport. Since the stormwater-source impairment is usually the result of the cumulative impact of multiple pollutants and physical effects, it may be difficult to identify a specific pollutant (or pollutants) causing the impairment. Using a surrogate parameter in developing wasteload allocations for waters impaired by stormwater sources may, at times, be the appropriate approach for restoring the waterbodies.

In the 2009 report *Urban Stormwater Management in the United States*, the National Research Council suggests: “A more straightforward way to regulate stormwater contributions to waterbody impairment would be to use flow or a surrogate, like impervious cover, as a measure of stormwater loading . . . Efforts to reduce stormwater flow will automatically achieve reductions in pollutant loading. Moreover, flow is itself responsible for additional erosion and sedimentation that adversely impacts surface water quality.”

Therefore, when developing TMDLs for receiving waters where stormwater sources are the primary source of impairment, it may be suitable to establish a numeric target for a surrogate pollutant parameter, such as stormwater flow volume or impervious cover, that would be expected to provide attainment of water quality standards. This is consistent with the TMDL regulations that specify that TMDLs can be expressed in terms of mass per time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)).

Where a surrogate parameter is used, the TMDL document must demonstrate the linkage between the surrogate parameter and the documented impairment (e.g., biological degradation). In addition, the TMDL should provide supporting documentation to indicate that the surrogate pollutant parameter appropriately represents stormwater pollutant loadings. Monitoring is an essential undertaking to ensure that compliance with the effluent limitations occurs.

Recent examples of TMDLs using flow or impervious cover as surrogates for pollutants in setting TMDL loading targets include: the Eagleville Brook (CT) TMDL and the Barberry Creek (ME) TMDL which used impervious cover as a surrogate; and, the Potash Brook (VT) TMDL which used stormwater flow volume as a surrogate.

Designating Additional Stormwater Sources to Regulate and Treating Load Allocations as Wasteload Allocations for Newly Regulated Stormwater Sources

The 2002 memorandum states that “stormwater discharges from sources that are not currently subject to NPDES regulation may be addressed by the load allocation component of a TMDL.” Section 402(p)(2) of the Clean Water Act (CWA) requires industrial stormwater sources, certain municipal separate storm sewer systems, and other designated sources to be subject to NPDES permits. Section 402(p)(6) provides EPA with authority to identify additional stormwater discharges as needing a permit.

In addition to the stormwater discharges specifically identified as needing an NPDES permit, the CWA and the NPDES regulations allow for EPA and NPDES authorized States to designate, additional stormwater discharges for regulation. See 40 CFR 122.26 (a)(9)(i)(C), (a)(9)(i)(D), (b)(4)(iii), (b)(7)(iii), (b)(15)(ii) and 122.32(a)(2). Since 2002, EPA has become concerned that NPDES authorities have generally not adequately considered exercising these authorities to designate for NPDES permitting stormwater discharges that are currently not required to obtain permit coverage but that are significant enough to be identified in the load allocation component of a TMDL. Accordingly, EPA encourages permitting authorities to consider designation of stormwater sources in situations where coverage under NPDES permits would afford a more effective mechanism to reduce pollutants in stormwater discharges than available nonpoint source control methods.

In situations where a stormwater source addressed in a TMDL’s load allocation is not currently regulated by an NPDES permit but may be required to obtain an NPDES permit in the future, the TMDL writer should consider including language in the TMDL explaining that the allocation for the stormwater source is expressed in the TMDL as a “load allocation” contingent on the source remaining unpermitted, but that the “load allocation” would later be deemed a “wasteload allocation” if the stormwater discharge from the source were required to obtain NPDES permit coverage. Such language, while not legally required, would help ensure that the allocation is properly characterized by the permit writer should the source’s regulatory status change. This will help ensure that effluent limitations in a NPDES permit applicable to the newly permitted source are consistent with the requirements and assumptions of the TMDL’s allocation to that source.

Such recharacterization of a load allocation as a wasteload allocation would not automatically require resubmission of the TMDL to EPA for approval. However, if the TMDL’s allocation for the newly permitted source had been part of a single aggregated or gross load allocation for all unregulated stormwater sources, it may be appropriate for the NPDES permit authority to determine a wasteload allocation and corresponding

effluent limitation specific to the newly permitted stormwater source. Any additional analysis used to refine the allocation should be included in the administrative record for the permit. In such cases, the record should describe the basis for

- (1) recharacterizing the load allocation as a wasteload allocation for this source and
- (2) determining that the permit's effluent limitations are consistent with the assumptions and requirements of this recharacterized wasteload allocation. For purposes of this discussion, it is assumed that the permit writer's additional analysis or recharacterization of the load allocation as a wasteload allocation does not change the TMDL's overall loading cap. Any change in a TMDL loading cap would have to be resubmitted for EPA approval.

If you have any questions please feel free to contact us or Linda Boornazian, Director of the Water Permits Division or Benita Best-Wong, Director of the Assessment and Watershed Protection Division.

cc: Association of State and Interstate Water Pollution Control Administrators
Water Quality Branch Chiefs, Regions 1 – 10
Permits Branch Chiefs, Regions 1 – 10