CONTRA COSTA
CLEAN WATER
PROGRAM

Thomas E. Dalziel
Program Manager

March 4, 2015

Ms. Pamela Creedon, Executive Officer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Subject: Transmittal of Report of Waste Discharge

Dear Ms. Creedon:

Please accept the enclosed Report of Waste Discharge submitted by the Contra Costa Clean Water Program on behalf of its Permittees in accordance with Provision C.16 in the East Contra Costa Municipal Stormwater NPDES Permit (Order No. R5-2010-0102, NPDES Permit No. CAS083313) issued by the Central Valley Regional Water Quality Control Board on September 23, 2010.

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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Very truly yours,

Thomas E. Dalziel
Program Manager

Enclosure

c: Elizabeth Lee, CVRWQCB, Senior Water Resource Control Engineer
Genevieve Sparks, CVRWQCB Environmental Geologist
Phil Hoffmeister, CCCWP, Management Committee Chair

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Report of Waste Discharge
Application for Reissuance of East Contra Costa Stormwater NPDES Permit
Order R5-2010-0102
NPDES Permit No. CAS083313

Applicants:

- Cities of Antioch, Brentwood, Oakley;
- Contra Costa County; and
- Contra Costa County Flood Control and Water Conservation District

Prepared for:

State of California, Central Valley Regional Water Quality Control Board
Rancho Cordova, California

Submitted by:

Contra Costa Clean Water Program

March 2015

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

I. FACILITY INFORMATION

A. Facility:

Name: Contra Costa Clean Water Program - Municipal Separate Storm Sewer System			
Address: 255 Glacier Drive			
City: Martinez	County: Contra Costa	State: CA	Zip Code: 94553
Contact Person: c/o CCCWP, Thomas E. Dalziel		Telephone Number: 1 (925) 313-2392	

B. Facility Owner:

Name: See Table 1 provided in Supplemental Information			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation 3. ☑ Governmental Agency 4. ☐ Partnership 5. ☐ Other:
Address:			
City:	State:	Zip Code:	
Contact Person:		Telephone Number:	Federal Tax ID:

C. Facility Operator (The agency or business, not the person):

Name: See Table 1 provided in Supplemental Information			Operator Type (Check One) 1. ☐ Individual 2. ☐ Corporation 3. ☑ Governmental Agency 4. ☐ Partnership 5. ☐ Other:
Address:			
City:	State:	Zip Code:	
Contact Person:		Telephone Number:	

D. Owner of the Land:

Name: See Table 1 provided in Supplemental Information			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation 3. ☑ Governmental Agency 4. ☐ Partnership 5. ☐ Other:
Address:			
City:	State:	Zip Code:	
Contact Person:		Telephone Number:	

E. Address Where Legal Notice May Be Served:

Address: See Table 1 provided in Supplemental Information		
City:	State:	Zip Code:
Contact Person:		Telephone Number:

F. Billing Address:

Address: See Table 1 provided in Supplemental Information		
City:	State:	Zip Code:
Contact Person:		Telephone Number:

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

II. TYPE OF DISCHARGE

Check Type of Discharge(s) Described in this Application (A or B):

☐ **A. WASTE DISCHARGE TO LAND** ☑ **B. WASTE DISCHARGE TO SURFACE WATER**

Check all that apply:

- ☐ Domestic/Municipal Wastewater Treatment and Disposal
- ☐ Cooling Water
- ☐ Mining
- ☐ Waste Pile
- ☐ Wastewater Reclamation
- ☐ Other, please describe: _____
- ☐ Animal Waste Solids
- ☐ Land Treatment Unit
- ☐ Dredge Material Disposal
- ☐ Surface Impoundment
- ☐ Industrial Process Wastewater
- ☐ Animal or Aquacultural Wastewater
- ☐ Biosolids/Residual
- ☐ Hazardous Waste (see instructions)
- ☐ Landfill (see instructions)
- ☑ Storm Water

III. LOCATION OF THE FACILITY

Describe the physical location of the facility. Contra Costa County. See Figure 1 for creeks and drainages.

1. Assessor's Parcel Number(s)	2. Latitude	3. Longitude
Facility:	**Facility:**	**Facility:**
Discharge Point:	**Discharge Point:**	**Discharge Point:**

IV. REASON FOR FILING

- ☐ New Discharge or Facility
- ☐ Change in Design or Operation
- ☐ Change in Quantity/Type of Discharge
- ☐ Changes in Ownership/Operator (see instructions)
- ☑ Waste Discharge Requirements Update or NPDES Permit Reissuance
- ☐ Other: _____

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: Central Valley Regional Water Quality Control Board

Has a public agency determined that the proposed project is exempt from CEQA? ☑ Yes ☐ No

If Yes, state the basis for the exemption and the name of the agency supplying the exemption on the line below.

Basis for Exemption/Agency: CEQA Statutory Exemption Class 8 regulatory actions for protection of environment

Has a "Notice of Determination" been filed under CEQA? ☐ Yes ☐ No

If Yes, enclose a copy of the CEQA document, Environmental Impact Report, or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.

Expected CEQA Documents:

☐ EIR ☐ Negative Declaration

Expected CEQA Completion Date: _____

California Environmental Protection Agency
Bill of Rights for Environmental Permit Applicants

California Environmental Protection Agency (Cal/EPA) recognizes that many complex issues must be addressed when pursuing reforms of environmental permits and that significant challenges remain. We have initiated reforms and intend to continue the effort to make environmental permitting more efficient, less costly, and to ensure that those seeking permits receive timely responses from the boards and departments of the Cal/EPA. To further this goal, Cal/EPA endorses the following precepts that form the basis of a permit applicant's "Bill of Rights."

1. Permit applicants have the right to assistance in understanding regulatory and permit requirements. All Cal/EPA programs maintain an Ombudsman to work directly with applicants. Permit Assistance Centers located throughout California have permit specialists from all the State, regional, and local agencies to identify permit requirements and assist in permit processing.

2. Permit applicants have the right to know the projected fees for review of applications, how any costs will be determined and billed, and procedures for resolving any disputes over fee billings.

3. Permit applicants have the right of access to complete and clearly written guidance documents that explain the regulatory requirements. Agencies must publish a list of all information required in a permit application and of criteria used to determine whether the submitted information is adequate.

4. Permit applicants have the right of timely completeness determinations for their applications. In general, agencies notify the applicant within 30 days of any deficiencies or determine that the application is complete. California Environmental Quality Act (CEQA) and public hearing requests may require additional information.

5. Permit applicants have the right to know exactly how their applications are deficient and what further information is needed to make their applications complete. Pursuant to California Government code Section 65944, after an application is accepted as complete, an agency may not request any new or additional information that was not specified in the original application.

6. Permit applicants have the right of a timely decision on their permit application. The agencies are required to establish time limits for permit reviews.

7. Permit applicants have the right to appeal permit review time limits by statute or administratively that have been violated without good cause. For state environmental agencies, appeals are made directly to the Cal/EPA Secretary or to a specific board. For local environmental agencies, appeals are generally made to the local governing board or, under certain circumstances, to Cal/EPA. Through this appeal, applicants may obtain a set date for a decision on their permit and, in some cases, a refund of all application fees (ask boards and departments for details).

8. Permit applicants have the right to work with a single lead agency where multiple environmental approvals are needed. For multiple permits, all agency actions can be consolidated under a lead agency. For site remediation, all applicable laws can be administered through a single agency.

9. Permit applicants have the right to know who will be reviewing their application and the time required to complete the full review process.

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

VI. OTHER REQUIRED INFORMATION

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

VII. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

See Part VI and Part VII provided in Supplemental Information.

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

VIII. CERTIFICATION

"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name: Thomas E. Dalziel

Title: CCCWP Program Manager

Signature:

Date: March 4, 2015

FOR OFFICE USE ONLY

Date Form 200 Received:	Letter to Discharger:	Fee Amount Received:	Check #:

Supplemental Information

To the Report of Waste Discharge
Stormwater NPDES Permit Order R5-2010-0102
NPDES Permit No. CAS083313

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TABLE OF CONTENTS

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PART I. SECTIONS A-F: FACILITY INFORMATION

Table 1 below presents the following facility information for boxes A-F in Form 200:

A. Facility

B. Facility Owner

C. Facility Operator

D. Owner of the Land

E. Address Where Legal Notice May Be Served

F. Billing Address

TABLE 1: FACILITY OWNER AND OPERATOR INFORMATION FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM IN CONTRA COSTA COUNTY

Facility Owner and Operator Information			Legal Notice Address Information	
Agency and Address	**City Manager/ Owner**	**Federal Tax ID Number**	**Stormwater Representative (Primary)**	**Stormwater Representative (Alternate)**
City of Antioch PO Box 5007 Antioch, CA 94531-5007	Steve Duran (925) 779-7011	94-6000293	Phil Hoffmeister Administrative Analyst II (925) 779-6169 phoffmeister@ci.antioch.ca.us	Ron Bernal Public Works Director (925) 779-6820 rbernal@ci.antioch.ca.us
City of Brentwood 150 City Park Way Brentwood, CA 94513	Steven M. Solomon, Interim City Manger (925) 516-5440	94-6000303	Jagtar Dhaliwal Development Engineering Mgr. (925) 516-5128 jdhaliwal@brentwoodca.gov	No alternate at this time.
City of Oakley 3231 Main St. Oakley, CA 94561	Bryan H. Montgomery (925) 625-7007	68-0425948	Keith Coggins Engineering Development Mgr. (925) 625-7155 coggins@ci.oakley.ca.us	Frank Kennedy Stormwater Consultant (925) 932-7857 fjk@fjkennedy.com
Contra Costa County 651 Pine St. Martinez, CA 94553	David Twa (925) 335-1080	94-6000509	Cece Sellgren Stormwater Manager (925) 313-2296 csell@pw.cccounty.us	Julia Bueren Public Works Director (925) 313-2201 jbueren@pw.cccounty.us

TABLE 1: FACILITY OWNER AND OPERATOR INFORMATION FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM IN CONTRA COSTA COUNTY

Facility Owner and Operator Information			Legal Notice Address Information	
Agency and Address	**City Manager/ Owner**	**Federal Tax ID Number**	**Stormwater Representative (Primary)**	**Stormwater Representative (Alternate)**
CCC Flood Control & Water Conservation District 255 Glacier Drive Martinez, CA 94553	Julia Bueren Chief Engineer (925) 313-2201	94-6000509	Mike Carlson Supervising Civil Engineer (925) 313-2321 mcarl@pw.cccounty.us	Tim Jensen Senior Civil Engineer (925) 313-2390 tjens@pw.cccounty.us

PART II. TYPE OF DISCHARGE

No supplement to Form 200 needed.

PART III. LOCATION OF THE FACILITY

No supplement to Form 200 needed.

PART IV. REASON FOR FILING

No supplement to Form 200 needed.

PART V: CEQA

No supplement to Form 200 needed.

PART VI. OTHER REQUIRED INFORMATION

This section addresses characterization of stormwater discharges from the Contra Costa County Municipal Separate Storm Sewer Systems (MS4s). Design and actual flows are briefly discussed, followed by a list of constituents and the characteristic discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description of treatment processes, a description of Best Management Practices (BMPs) used, and a description of disposal methods. Figure 1 shows creeks and drainages in Contra Costa County.

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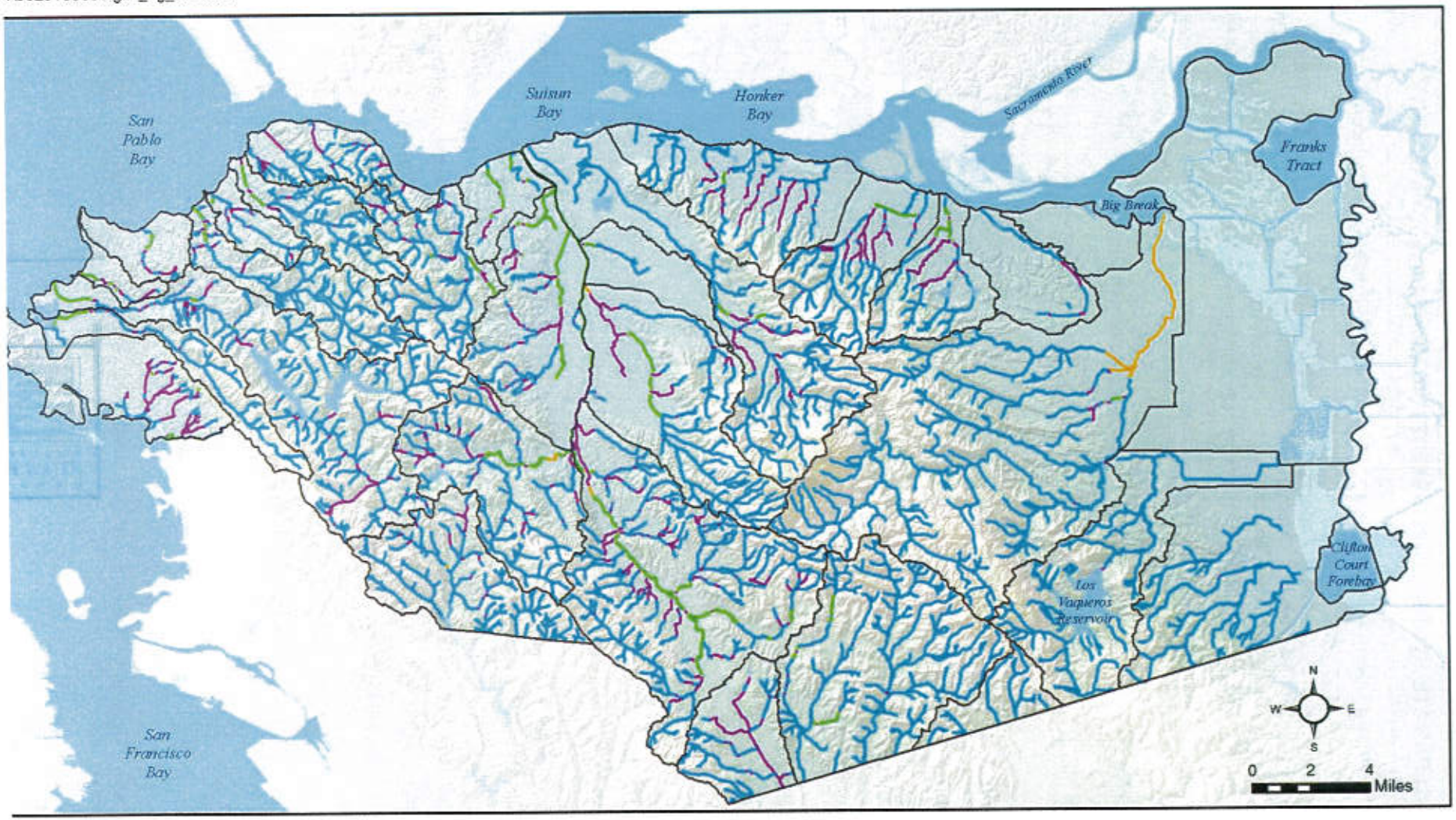

Figure 1. Contra Costa Clean Water Program Site Map Showing Surface Water

1.0 DESIGN AND ACTUAL FLOWS

Municipal Separate Storm Sewer Systems (MS4s) in Contra Costa County are designed to convey storm flows to surface water while minimizing flood risk to life and property. Generally, design standards address large events (i.e., 10-year events up to 100-year events, depending on the value of assets at risk). Watershed flows are modeled using the rational method, or other methods, which uses runoff coefficients to account for slope, vegetative cover, and land use. Actual flows are measured in tributary creeks using standardized flow monitoring techniques. Because of the variable nature of storm events and the multitude of conveyances, specific details on design vs. actual stormwater discharge flows are beyond the intent and scope of this Report of Waste Discharge.

2.0 CONSTITUENTS AND CHARACTERISTIC DISCHARGE CONCENTRATIONS

Table 2 below lists the constituents that are typically present in the MS4 discharges and the characteristic discharge concentrations.

TABLE 2: LIST OF CONSTITUENTS AND CHARACTERISTIC CONCENTRATIONS

Pollutant	Maximum Concentration Observed in Bay Area Urban Creeks[a]	Maximum Concentration Reported in Urban Stormwater	Some of the Factors Affecting Concentrations in Urban Stormwater
Suspended sediment	1,000 mg/L	100 mg/L[b]	Slope, vegetative cover, land use activities, peak channel velocity, erosion control BMPs, street sweeping, channel composition, local geology
Mercury	1,000 ng/L	120 ng/L[c]	Suspended sediment concentrations; mercury concentrations in suspended sediments, atmospheric deposition, mining legacy sources
Methyl Mercury	1.48 ng/L	Not available	Suspended sediment concentrations; mercury concentrations in suspended sediments, atmospheric deposition, mining legacy sources
Polychlorinated biphenyls (PCBs)	176 ng/L	100 ng/L[d]	Suspended sediment concentrations; PCB concentrations in suspended sediments; trackout and wind dispersion from contemporary source areas (e.g. metal recyclers); trackout or discharge from legacy source areas
Trash	See Permittees' Long Term Trash Plans	Not applicable	Proximity to high trash-generation areas, implementation of full trash capture devices or programmatic equivalent
Legacy residential use organophosphate pesticides, e.g., diazinon, chlorpirifos	6.3 ng/L (diazinon)[e] 6.6 ng/L (chlorpyrifos)[e]	Not available	Consumer and professional use

TABLE 2: LIST OF CONSTITUENTS AND CHARACTERISTIC CONCENTRATIONS

Pollutant	Maximum Concentration Observed in Bay Area Urban Creeks[a]	Maximum Concentration Reported in Urban Stormwater	Some of the Factors Affecting Concentrations in Urban Stormwater
Contemporary residential use pesticides, e.g., pyrethroids and carbaryls	254 ng/L	Not available	Consumer and professional use
Dissolved copper	20 µg/L	47 µg/L[f]	Untreated roadway runoff
Total selenium	1.6 µg/L	Not available	Not a significant stormwater issue for Contra Costa; seepage in certain areas of the South Bay stormwater tends to dilute selenium that may be present in groundwater
Polynuclear aromatic hydrocarbons (PAHs)	3,352 ng/L	Not available	Vehicle emissions
Polybrominated diphenyl ethers (PBDEs)	3,362 ng/L	Not available	Consumer goods with flame retardants
Oil and grease	Not measured	10 mg/L [b]	Untreated roadway runoff
Fecal coliform	≥16,000 MPN/100ml[g]	70,000 mpn/100 ml[b]	People and domestic and wild animals that live outdoors. Growth in shaded / stagnant waters. Septic leaks and sewage spills.

Table 2 Notes

a. Bay Area urban creeks as reported by Gilbreath et al. (2014)

b. Highest median value in stormwater discharges from different land use types as reported by Maestre et al. (2004)

c. Maximum value in stormwater discharges as reported by CCCWP to the Central Valley Regional Water Quality Control Board (2010b)

d. Maximum value in Los Angeles Area stormwater discharges as reported by Brown and Caldwell (2011)

e. Supplemental monitoring information from Marsh Creek provided by CCCWP to CVRWQCB in fulfillment of requirements set forth in Order No. R5-2010-0102 (2010a)

f. Maximum value as reported by Soller et al. (2005)

g. Maximum value as reported in the Integrated Monitoring Report - Part A Water Quality Monitoring Water Years 2012 and 2013, Alameda Countywide Clean Water Program, Hayward CA in 2014

3.0 OTHER APPROPRIATE WASTE DISCHARGE CHARACTERISTICS

As can be seen from Table 2 above, stormwater discharges are complex mixtures of constituents present in the urban environment, both naturally and from human sources. Another important characteristic of urban stormwater discharges is their inherently episodic nature. For this reason, comparison of constituent concentrations in stormwater discharges to water quality objectives relies on acute (short-duration) exposure assumptions.

Creek status monitoring helps assess how urban stormwater discharges may affect receiving water quality. The overall quality of water and creek health as impacted by the discharge of urban runoff has been evaluated in Contra Costa County using bioassessment. Bioassessment gives a long-term, integrative picture of watershed health that accounts for pollutants, channel modification, flows, and other factors that may be unrelated to urban runoff discharges. Table 3 summarizes bioassessment and water quality monitoring reports submitted from 2001 to present.

TABLE 3: CCCWP BIOASSESSMENT & WATER QUALITY MONITORING REPORTS

Year	Reports	Authors
2002-2011 (Annually)	Contra Costa Monitoring and Assessment Plan (CCMAP) - Rapid Bioassessment Project Reports.	Cressey, S., and C.A. Sommers, 2002 - 2006. Eisenberg, Olivieri and Associates (EOA), 2007. Armand Ruby Consulting, 2008-2011.
2013	Regional Urban Creeks Status Monitoring Report, Water Year 2012 (October 1, 2011–September 30, 2012). Prepared for BASMAA by EOA, Inc. on behalf of the Santa Clara Urban Runoff Pollution Prevention Program and the San Mateo Countywide Water Pollution Prevention Program and Armand Ruby Consulting on behalf of the Contra Costa Clean Water Program.	BASMAA
2014	Integrated Monitoring Report, Part A, Appendix A.1: Creek Status Monitoring Report—Regional/Probabilistic Parameters Water Years 2012 and 2013 (October 1, 2011–September 30, 2013)	Armand Ruby Consulting

3.1 DESCRIPTION OF TREATMENT PROCESSES

Low Impact Development (LID) and full trash capture devices are the most common treatment systems employed in Contra Costa County. Tree-box-type high flowrate biofilters and vault-based high flowrate media filters are also used on a less frequent basis. LID is required on most all regulated new and redevelopment projects per Provision C.3.

1. **Low Impact Development (LID)** infiltrates a portion of runoff flows and treats remaining runoff by slow percolation through a biologically active matrix of soil and plant roots. LID is the preferred

method of stormwater quality management in Contra Costa County. Schematics and descriptions of LID designs and facilities are presented in the Contra Costa Clean Water Program's *Stormwater C.3 Guidebook*, 6th Edition (CCCWP, 2012)

2. **Full Trash Capture Devices** are design to trap all particles retained by a 5 mm mesh screen and have a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour storm in the sub-drainage area.

3. **Tree-box-type high flowrate biofilters and vault-based high flowrate media filters** are allowable treatment systems on certain smart growth, high density, and transit-oriented developments per Provision C.3.ii.

3.2 BEST MANAGEMENT PRACTICES USED

Permittees of the CCCWP implement the following Best Management Practices (BMPs) to minimize pollutants in urban runoff discharges:

1. **Source Control** stops or reduces pollutant discharges by eliminating them from uses where they may be discharged into the MS4. Recent examples include ordinances banning plastic bags, which have been adopted by some Permittees to address trash reduction requirements. Re-registration by USEPA of diazinon and chlorpyrifos to limit use to registered professional applications may account for the notable absence of toxicity to water fleas reported in the CCCWP Integrated Monitoring Report, Part A, Appendix A.1 (ARC, 2014). CCCWP's current stressor source identification study found that toxicity to amphipods is caused by current use of pyrethroids. Following up on this finding, proposed responsive actions will be to promote similar product re-registration efforts.

2. **Diversion** of urban runoff discharges into sanitary sewers. Pilot tests of diverting dry-weather and first-flush stormwater are being evaluated but are not showing promising initial results as a sustainable BMP.

3. **Prohibition** of non-stormwater discharges into the MS4 is established by ordinance in each Permittee's jurisdiction.

4. **Illicit Discharge Detection and Elimination** programs implement prohibitions by providing an active program of surveillance and response to complaints.

5. **Public Education and Outreach** communications to raise public awareness and change behaviors that can affect water quality.

6. **Inspection** of businesses and construction sites provides oversight of compliance with required guidelines for housekeeping and pollution prevention.

7. **Enforcement** provides Permittees with legal authority to correct egregious or recurrent ordinance violations.

8. **Referral** to the Water Board or other appropriate authorities where individual parcels are known or suspected to be pollutant sources and where successful enforcement is beyond the capabilities or resources of the local municipal government.

3.3 DESCRIPTION OF DISPOSAL METHODS

Stormwater is typically discharged either from the MS4 into creeks that flow into San Francisco Bay and the Sacramento San Joaquin River Delta, or directly into the Bay/Delta.

PART VII. OTHER

The CCCWP implements a coordinated countywide program of water quality control within the jurisdiction of both the San Francisco Bay Regional Water Quality Control Board (Region 2) and

the Central Valley Bay Regional Water Quality Control Board (Region 5). The requirements of the Region 2 are outlined in the Municipal Regional Stormwater NPDES Permit (MRP) Order No. R2-2009-0074 and its amendment No. R2-2011-0083. The requirements of Region 5 are outlined in the East Contra Costa Municipal Stormwater NPDES Permit (East County Permit) Order No. R5-2010-0102. As stated in Finding 4 in East County Permit, the provisions in the East County Permit emulate those in the MRP where the Region 2 MRP provisions are sufficient to meet the requirements of the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plans). Where different or additional provisions are required to meet the requirements of the Basin Plan or other Central Valley Water Board policies, including the Sacramento-San Joaquin Delta Methylmercury Total Maximum Daily Load (TMDL), those different or additional provisions are included in the order. As in the past, the CCCWP will work with the Central Valley Water Board staff to coordinate and integrate the East County Permit specific provisions with the MRP provisions to the extent possible. This is critical for maintaining the countywide CCCWP organizational structure, and for maintaining countywide and Bay Area-wide consistency and a level playing field. Based on the experiences of implementing the provisions of the MRP and East County Permit, the Permittees have gained insight into its workings that are of value in the reissuance of the next MRP and East County Permit.

The Permittees developed the following guiding principles from which to develop reissuance recommendations for the MRP and East County Permit:

1. Establish priorities focused on actions that will improve water quality.
2. Identify and prioritize actions that integrate multiple water quality benefits.
3. Phase tasks as necessary consistent with funding constraints.
4. Reorganize presentation of the Provisions and rewrite language where necessary to reduce ambiguity.
5. Identify and eliminate outdated or completed tasks and reduce or eliminate the "less beneficial tasks" in the current permit, including burdensome and ineffective data collection and reporting requirements.
6. Offset new programs or initiatives with equivalent reductions in effort elsewhere in the MRP and East County Permit.

Based on these guiding principles, the CCCWP Permittees' highest priority concerns and recommendations for reissuance of the MRP and East County Permit are the provisions on New Development, Monitoring, Pesticides Toxicity Control, Trash Load Reduction, Pollutants of Concern (POC), and Annual Reporting.

In Part VII, Sections 1.0 through 7.0 in the attached Report of Waste Discharge submitted to the San Francisco Bay Regional Water Quality Control Board in June 2014, the CCCWP presents current practices, issues, priorities, and recommended updates for the highest-priority concerns.

These are the same for the East County Permit and are therefore included in this Report of Waste Discharge by reference.

Attachment

Report of Waste Discharge Submitted to the San Francisco Bay Regional Water Quality Control Board in June 2014

CONTRA COSTA
CLEAN WATER
PROGRAM

Thomas E. Dalziel
Program Manager

June 2, 2014

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Subject: Transmittal of Report of Waste Discharge

Dear Mr. Wolfe:

Please accept the enclosed Report of Waste Discharge submitted by the Contra Costa Clean Water Program on behalf of its Permittees in accordance with Provision C.19 in the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit (Order R2-2009-0074, NPDES Permit No. CAS612008) issued by the San Francisco Bay Regional Water Quality Control Board on October 14, 2009.

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 gathered and evaluated 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 possibly of fine and imprisonment for knowing violations.

Very truly yours,

Thomas E. Dalziel
Program Manager

Enclosure

c: Tom Mumley, SFBRWQCB, Assistant Executive Officer
Dale Bowyer, SFBRWQCB, Senior Water Resource Control Engineer
Selina Louie, SFBRWQCB, Water Resource Control Engineer
Rinta Perkins, CCCWP, Management Committee Chair

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Report of Waste Discharge
Application for Reissuance of Municipal Regional Stormwater NPDES Permit
Order R2-2011-0083 Amending Order R2-2009-0074
NPDES Permit No. CAS612008

Applicants:

- Cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Oakley, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek;
- Towns of Danville and Moraga;
- Contra Costa County; and
- Contra Costa County Flood Control and Water Conservation District

Prepared for:
State of California, San Francisco Bay Regional Water Quality Control Board
Oakland, California

Submitted by:
Contra Costa Clean Water Program

June 2014

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE
GENERAL INFORMATION FORM FOR
WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

I. FACILITY INFORMATION

A. Facility:

Name: Contra Costa Clean Water Program - Municipal Separate Storm Sewer System			
Address: 255 Glacier Drive			
City: Martinez	County: Contra Costa	State: CA	Zip Code: 94553
Contact Person: c/o CCCWP, Thomas E. Dalziel		Telephone Number: (925) 313-2392	

B. Facility Owner:

Name: See Table 1 provided in Supplemental Information.			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation 3. ☑ Governmental Agency 4. ☐ Partnership 5. ☐ Other:
Address:			
City:	State:	Zip Code:	
Contact Person:		Telephone Number:	Federal Tax ID:

C. Facility Operator (The agency or business, not the person):

Name: See Table 1 provided in Supplemental Information.			Operator Type (Check One) 1. ☐ Individual 2. ☐ Corporation 3. ☑ Governmental Agency 4. ☐ Partnership 5. ☐ Other:
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D. Owner of the Land:

Name: See Table 1 provided in Supplemental Information.			Owner Type (Check One) 1. ☐ Individual 2. ☐ Corporation 3. ☑ Governmental Agency 4. ☐ Partnership 5. ☐ Other:
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City:	State:	Zip Code:	
Contact Person:		Telephone Number:	

E. Address Where Legal Notice May Be Served:

Address: See Table 1 provided in Supplemental Information.		
City:	State:	Zip Code:
Contact Person:		Telephone Number:

F. Billing Address:

Address: See Table 1 provided in Supplemental Information		
City:	State:	Zip Code:
Contact Person:		Telephone Number:

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

II. TYPE OF DISCHARGE

Check Type of Discharge(s) Described in this Application (A or B):

☐ **A. WASTE DISCHARGE TO LAND** ☑ **B. WASTE DISCHARGE TO SURFACE WATER**

Check all that apply:

- ☐ Domestic/Municipal Wastewater Treatment and Disposal
- ☐ Cooling Water
- ☐ Mining
- ☐ Waste Pile
- ☐ Wastewater Reclamation
- ☐ Other, please describe: _____
- ☐ Animal Waste Solids
- ☐ Land Treatment Unit
- ☐ Dredge Material Disposal
- ☐ Surface Impoundment
- ☐ Industrial Process Wastewater
- ☐ Animal or Aquacultural Wastewater
- ☐ Biosolids/Residual
- ☐ Hazardous Waste (see instructions)
- ☐ Landfill (see instructions)
- ☑ Storm Water

III. LOCATION OF THE FACILITY

Describe the physical location of the facility. Contra Costa County. See Figure 1 for creeks and drainages.

1. Assessor's Parcel Number(s)	2. Latitude	3. Longitude
Facility:	**Facility:**	**Facility:**
Discharge Point:	**Discharge Point:**	**Discharge Point:**

IV. REASON FOR FILING

- ☐ New Discharge or Facility
- ☐ Changes in Ownership/Operator (see instructions)
- ☐ Change in Design or Operation
- ☑ Waste Discharge Requirements Update or NPDES Permit Reissuance
- ☐ Change in Quantity/Type of Discharge
- ☐ Other: _____

V. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Name of Lead Agency: San Francisco Bay Regional Water Quality Control Board

Has a public agency determined that the proposed project is exempt from CEQA? ☑ Yes ☐ No

If Yes, state the basis for the exemption and the name of the agency supplying the exemption on the line below.

Basis for Exemption/Agency: CEQA Statutory Exemption Class 8-regulatory actions for protection of environment.

Has a "Notice of Determination" been filed under CEQA? ☐ Yes ☐ No

If Yes, enclose a copy of the CEQA document, Environmental Impact Report, or Negative Declaration. If no, identify the expected type of CEQA document and expected date of completion.

Expected CEQA Documents:

☐ EIR ☐ Negative Declaration

Expected CEQA Completion Date: _____

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

State of California
Regional Water Quality Control Board

APPLICATION/REPORT OF WASTE DISCHARGE GENERAL INFORMATION FORM FOR WASTE DISCHARGE REQUIREMENTS OR NPDES PERMIT

VI. OTHER REQUIRED INFORMATION

Please provide a COMPLETE characterization of your discharge. A complete characterization includes, but is not limited to, design and actual flows, a list of constituents and the discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description and schematic drawing of all treatment processes, a description of any Best Management Practices (BMPs) used, and a description of disposal methods.

Also include a site map showing the location of the facility and, if you are submitting this application for an NPDES permit, identify the surface water to which you propose to discharge. Please try to limit your maps to a scale of 1:24,000 (7.5' USGS Quadrangle) or a street map, if more appropriate.

VII. OTHER

Attach additional sheets to explain any responses which need clarification. List attachments with titles and dates below:

See Part VI and Part VII provided in Supplemental Information.

You will be notified by a representative of the RWQCB within 30 days of receipt of your application. The notice will state if your application is complete or if there is additional information you must submit to complete your Application/Report of Waste Discharge, pursuant to Division 7, Section 13260 of the California Water Code.

VIII. CERTIFICATION

"I certify under penalty of law that this document, including all attachments and supplemental information, were prepared under my direction and supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Print Name: Thomas E. Dalziel

Title: CCCWP Program Manager

Signature: Thomas E. Dalziel

Date: June 2, 2014

FOR OFFICE USE ONLY

Date Form 200 Received:	Letter to Discharger:	Fee Amount Received:	Check #:

Supplemental Information

to the Report of Waste Discharge
Stormwater NPDES Permit Order R-2-2011-0083
Amending Order R2-2009-0074
NPDES Permit No. CAS612008

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PART I. SECTIONS A-F: FACILITY INFORMATION

Table 1 below presents the following facility information for boxes A-F in Form 200:

A. Facility

B. Facility Owner

C. Facility Operator

D. Owner of the Land

E. Address Where Legal Notice May Be Served

F. Billing Address

TABLE 1: FACILITY OWNER AND OPERATOR INFORMATION FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM IN CONTRA COSTA COUNTY

Facility Owner and Operator Information			Legal Notice Address Information	
Agency and Address	**City Manager/ Owner**	**Federal Tax ID Number**	**Stormwater Representative (Primary)**	**Stormwater Representative (Alternate)**
City of Clayton 6000 Heritage Trail Clayton, CA 94517	Gary A. Napper (925) 673-7300	94-1568979	Laura Hoffmeister Assistant to the City Manager (925) 673-7308 lhoffmeister@ci.clayton.ca.us	No alternate at this time.
City of Concord 1950 Parkside Drive Concord, CA 94519	Valerie Barone (925) 671-3150	94-6000315	Dan Sequeira Senior Civil Engineer (925) 671-3031 daniel.sequeira@cityofconcord.org	Frank Kennedy Stormwater Consultant (925) 932-7857 fjk@fjkennedy.com
Contra Costa County 651 Pine St. Martinez, CA 94553	David Twa (925) 335-1080	94-6000509	Cece Sellgren Stormwater Manager (925) 313-2296 csell@pw.cccounty.us	Julia Bueren Public Works Director (925) 313-2201 jbueren@pw.cccounty.us No second alternate at this time.
CCC Flood Control & Water Conservation District 255 Glacier Drive Martinez, CA 94553	Julia Bueren Chief Engineer (925) 313-2201	94-6000509	Mike Carlson Supervising Civil Engineer (925) 313-2321 mcarl@pw.cccounty.us	Tim Jensen Senior Civil Engineer (925) 313-2390 tjens@pw.cccounty.us

TABLE 1: FACILITY OWNER AND OPERATOR INFORMATION FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM IN CONTRA COSTA COUNTY

Facility Owner and Operator Information			Legal Notice Address Information	
Agency and Address	**City Manager/ Owner**	**Federal Tax ID Number**	**Stormwater Representative (Primary)**	**Stormwater Representative (Alternate)**
Town of Danville 510 La Gonda Way Danville, CA 94526	Joe Calabrigo (925) 314-3388	94-2834842	Chris McCann Clean Water Program Coordinator (925) 314-3342 cmccann@danville.ca.gov	Steve Lake Development Services Director (925) 314-3319 slake@danville.ca.gov Michael Stella Senior Civil Engineer (925) 314-3316 mstella@danville.ca.gov
City of El Cerrito 10890 San Pablo Ave. El Cerrito, CA 94530	Scott Hanin (510) 215-4300	94-6000325	Stephen Prée Environmental Programs Manager/City Arborist (510) 215-4333 spree@ci.el-cerrito.ca.us	
City of Hercules 111 Civic Drive Hercules, CA 94547	Phil Batchelor (Interim CM) (510) 799-8200	94-6027345	Jose Pacheco Assistant Civil Engineer (510) 799-8247 jpacheco@ci.hercules.ca.us	
City of Lafayette 3675 Mt. Diablo Blvd. #210 Lafayette, CA 94549	Steven Falk (925) 284-1968	94-1674826	Donna Feehan Public Works Administrative Analyst (925) 256-1864 dfeehan@ci.lafayette.ca.us	Ron Lefler Public Works Services Manager (925) 934-3908 rlefler@ci.lafayette.ca.us
City of Martinez 525 Henrietta Street Martinez, CA 94553	Anna Gwyn Simpson (925) 372-3505	94-60003670	Tim Tucker City Engineer (925) 372-3562 ttucker@cityofmartinez.org	Khalil Yowakim Associate Civil Engineer (925) 372-3569 kyowakim@cityofmartinez.org
Town of Moraga 329 Rheem Blvd. Moraga, CA 94556	Jill Keimach (925) 888-7022	94-2275991	Edric Kwan Public Works Director/Town Engineer (925) 888-7025 ekwan@moraga.ca.us	Frank Kennedy Stormwater Consultant (925) 932-7857 fjk@fjkennedy.com

TABLE 1: FACILITY OWNER AND OPERATOR INFORMATION FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM IN CONTRA COSTA COUNTY

Facility Owner and Operator Information			Legal Notice Address Information	
Agency and Address	**City Manager/ Owner**	**Federal Tax ID Number**	**Stormwater Representative (Primary)**	**Stormwater Representative (Alternate)**
City of Orinda 22 Orinda Way Orinda, CA 94563	Janet Keeter (925) 253-4200	68-0069675	Charles Swanson Director of PW & Engineering Services (925) 253-4252 cswanson@cityoforinda.org	Wendy Wellbrock Associate Civil Engineer (925) 253-4251 wwellbrock@cityoforinda.org Larry Theis Senior Civil Engineer (925) 253-4260 ltheis@cityoforinda.org
City of Pinole 2131 Pear Street Pinole, CA 94564	Belinda Espinosa (510) 724-9000	94-6000394	Dean Allison Director of Public Works/City Engineer (510) 724-9010 dallison@ci.pinole.ca.us	None
City of Pittsburg 65 Civic Avenue Pittsburg, CA 94565	Joe Sbranti (925) 252-4850	94-6000395	Jolan Longway Civil Engineer II (925) 252-4803 jlongway@ci.pittsburg.ca.us	Laura Wright Administrative Officer (925) 252-4114 lwright@ci.pittsburg.ca.us Keith Halvorson Assistant City Engineer (925) 252-4930 khalvorson@ci.pittsburg.ca.us
City of Pleasant Hill 100 Gregory Lane Pleasant Hill, CA 94523	June Catalano (925) 671-5267	94-1527260	Rod Wui Sr. Civil Engineer (925) 671-5261 rwui@ci.pleasant-hill.ca.us	None
City of Richmond 450 Civic Center Plaza Richmond, CA 94804	Bill Lindsay (510) 620-6512	94-6000403	Lynne Scarpa Environmental Manager (510) 307-8135 lynne_scarpa@ci.richmond.ca.us	Joanne Le Source Control Inspector (510) 621-1214 joanne_le@ci.richmond.ca.us

TABLE 1: FACILITY OWNER AND OPERATOR INFORMATION FOR THE MUNICIPAL SEPARATE STORM SEWER SYSTEM IN CONTRA COSTA COUNTY

Facility Owner and Operator Information			Legal Notice Address Information	
Agency and Address	**City Manager/ Owner**	**Federal Tax ID Number**	**Stormwater Representative (Primary)**	**Stormwater Representative (Alternate)**
City of San Pablo 13831 San Pablo Avenue San Pablo, CA 94806	Matt Rodriguez (510) 215-3016	94-6000423	Karineh Samkian Environmental Programs Analyst (510) 215-3064 karinehs@sanpabloca.gov	Jen Jackson Environmental Programs Analyst (510) 215-3066 jenj@sanpabloca.gov
City of San Ramon 2401 Crow Canyon Road San Ramon, CA 94583	Greg Rogers (925) 973-2530	94-2907633	Steven Spedowfski Senior Analyst (925) 973-2653 spedowfski@sanramon.ca.gov	Robin Bartlett Division Manager (925) 973-2683 rbartlett@sanramon.ca.gov Maria Fierner Engineering Services Director (925) 973-2670 mfierner@sanramon.ca.gov
City of Walnut Creek 1666 N. Main Street Walnut Creek, CA 94596	Ken Nordhoff (925) 943-5812	94-6000450	Rinta Perkins NPDES Program Manager (925) 256-3511 perkins@walnut-creek.org	Carlton Thompson Associate Engineer (925) 943-5800 cthompson@walnut-creek.org Steve Waymire City Engineer (925) 256-3507 waymire@walnut-creek.org

PART II. TYPE OF DISCHARGE

No supplement to Form 200 needed.

PART III. LOCATION OF THE FACILITY

No supplement to Form 200 needed.

PART IV. REASON FOR FILING

No supplement to Form 200 needed.

PART V: CEQA

No supplement to Form 200 needed.

PART VI. OTHER REQUIRED INFORMATION

This section addresses characterization of stormwater discharges from the Contra Costa County Municipal Separate Storm Sewer Systems (MS4s). Design and actual flows are briefly discussed, followed by a list of constituents and the characteristic discharge concentration of each constituent, a list of other appropriate waste discharge characteristics, a description of treatment processes, a description of Best Management Practices (BMPs) used, and a description of disposal methods. Figure 1 shows creeks and drainages in Contra Costa County.

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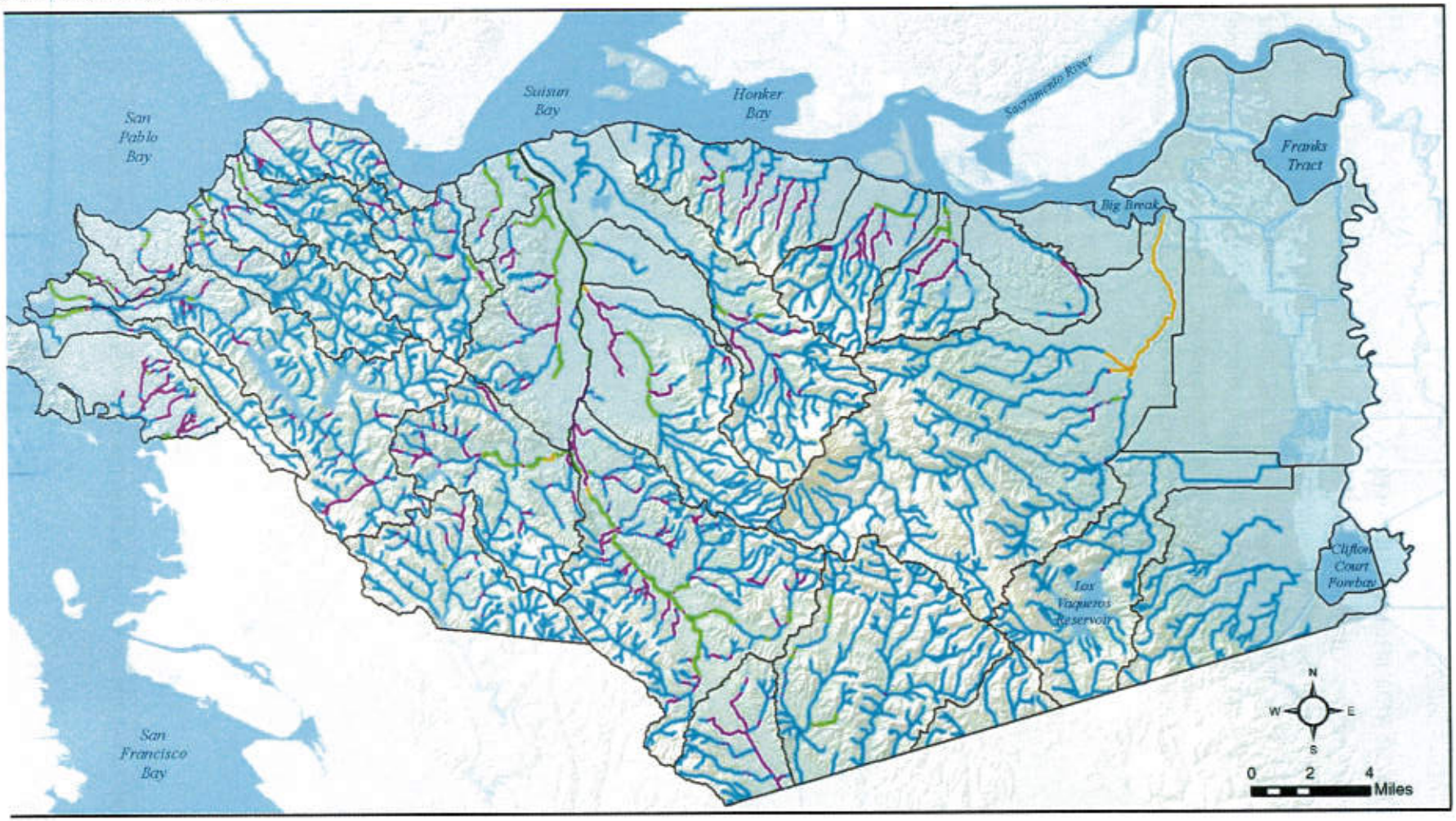

Creeks and Drainages
(by bank and/or channel type)

- Natural
- Concrete
- Riprap
- Earth (constructed)
- Underground

Watershed Boundary

Figure 1. Contra Costa Clean Water Program Site Map Showing Surface Water

1.0 DESIGN AND ACTUAL FLOWS

Municipal Separate Storm Sewer Systems (MS4s) in Contra Costa County are designed to convey storm flows to surface water while minimizing flood risk to life and property. Generally, design standards address large events (i.e., 10-year events up to 100-year events, depending on the value of assets at risk). Watershed flows are modeled using the rational method, or other methods, which uses runoff coefficients to account for slope, vegetative cover, and land use. Actual flows are measured in tributary creeks using standardized flow monitoring techniques. Because of the variable nature of storm events and the multitude of conveyances, specific details on design vs. actual stormwater discharge flows are beyond the intent and scope of this Report of Waste Discharge.

2.0 CONSTITUENTS AND CHARACTERISTIC DISCHARGE CONCENTRATIONS

Table 2 below lists the constituents that are typically present in the MS4 discharges and the characteristic discharge concentrations.

TABLE 2: LIST OF CONSTITUENTS AND CHARACTERISTIC CONCENTRATIONS

Pollutant	Maximum Concentration Observed in Bay Area Urban Creeks[a]	Maximum Concentration Reported in Urban Stormwater	Some of the Factors Affecting Concentrations in Urban Stormwater
Suspended sediment	1,000 mg/L	100 mg/L[b]	Slope, vegetative cover, land use activities, peak channel velocity, erosion control BMPs, street sweeping, channel composition, local geology
Mercury	1,000 ng/L	120 ng/L[c]	Suspended sediment concentrations; mercury concentrations in suspended sediments, atmospheric deposition, mining legacy sources
Polychlorinated biphenyls (PCBs)	176 ng/L	100 ng/L[d]	Suspended sediment concentrations; PCB concentrations in suspended sediments; trackout and wind dispersion from contemporary source areas (e.g. metal recyclers); trackout or discharge from legacy source areas
Trash	See Permittees' Long Term Trash Plans	Not applicable	Proximity to high trash-generation areas, implementation of full trash capture devices or programmatic equivalent
Legacy residential use organophosphate pesticides, e.g., diazinon, chlorpirifos	6.3 ng/L (diazinon)[e] 6.6 ng/L (chlorpyrifos)[e]	Not available	Consumer and professional use

TABLE 2: LIST OF CONSTITUENTS AND CHARACTERISTIC CONCENTRATIONS

Pollutant	Maximum Concentration Observed in Bay Area Urban Creeks[a]	Maximum Concentration Reported in Urban Stormwater	Some of the Factors Affecting Concentrations in Urban Stormwater
Contemporary residential use pesticides, e.g., pyrethroids and carbaryls	254 ng/L	Not available	Consumer and professional use
Dissolved copper	20 µg/L	47 µg/L[f]	Untreated roadway runoff
Total selenium	1.6 µg/L	Not available	Not a significant stormwater issue for Contra Costa; seepage in certain areas of the South Bay stormwater tends to dilute selenium that may be present in groundwater
Polynuclear aromatic hydrocarbons (PAHs)	3,352 ng/L	Not available	Vehicle emissions
Polybrominated diphenyl ethers (PBDEs)	3,362 ng/L	Not available	Consumer goods with flame retardants
Oil and grease	Not measured	10 mg/L[b]	Untreated roadway runoff
Fecal coliform	Not measured	70,000 mpn/100 ml[b]	People and domestic and wild animals that live outdoors. Growth in shaded / stagnant waters. Septic leaks and sewage spills.

Table 2 Notes

a. Bay Area urban creeks as reported by Gilbreath et al. (2014)
b. Highest median value in stormwater discharges from different land use types as reported by Maestre et al. (2004)
c. Maximum value in stormwater discharges as reported by CCCWP to the Central Valley Regional Water Quality Control Board (2010b)
d. Maximum value in Los Angeles Area stormwater discharges as reported by Brown and Caldwell (2011)
e. Supplemental monitoring information from Marsh Creek provided by CCCWP to CVRWQCB in fulfillment of requirements set forth in Order No. R5-2010-0102 (2010a)
f. Maximum value as reported by Soller et al. (2005)

3.0 OTHER APPROPRIATE WASTE DISCHARGE CHARACTERISTICS

As can be seen from Table 2 above, stormwater discharges are complex mixtures of constituents present in the urban environment, both naturally and from human sources. Another

important characteristic of urban stormwater discharges is their inherently episodic nature. For this reason, comparison of constituent concentrations in stormwater discharges to water quality objectives relies on acute (short-duration) exposure assumptions.

Creek status monitoring helps assess how urban stormwater discharges may affect receiving water quality. The overall quality of water and creek health as impacted by the discharge of urban runoff has been evaluated in Contra Costa County using bioassessment. Bioassessment gives a long-term, integrative picture of watershed health that accounts for pollutants, channel modification, flows, and other factors that may be unrelated to urban runoff discharges. Table 3 summarizes bioassessment and water quality monitoring reports submitted from 2001 to present.

TABLE 3: CCCWP BIOASSESSMENT & WATER QUALITY MONITORING REPORTS

Year	Reports	Authors
2002-2011 (Annually)	Contra Costa Monitoring and Assessment Plan (CCMAP) - Rapid Bioassessment Project Reports.	Cressey, S., and C.A. Sommers, 2002 - 2006. Eisenberg, Olivieri and Associates (EOA), 2007. Armand Ruby Consulting, 2008-2011.
2013	Regional Urban Creeks Status Monitoring Report, Water Year 2012 (October 1, 2011–September 30, 2012). Prepared for BASMAA by EOA, Inc. on behalf of the Santa Clara Urban Runoff Pollution Prevention Program and the San Mateo Countywide Water Pollution Prevention Program and Armand Ruby Consulting on behalf of the Contra Costa Clean Water Program.	BASMAA
2014	Integrated Monitoring Report, Part A, Appendix A.1: Creek Status Monitoring Report—Regional/Probabilistic Parameters Water Years 2012 and 2013 (October 1, 2011–September 30, 2013)	Armand Ruby Consulting

3.1 DESCRIPTION OF TREATMENT PROCESSES

Low Impact Development (LID) and full trash capture devices are the most common treatment systems employed in Contra Costa County. Tree-box-type high flowrate biofilters and vault-based high flowrate media filters are also used on a less frequent basis. LID is required on most all regulated new and redevelopment projects per Provision C.3.

1. **Low Impact Development (LID)** infiltrates a portion of runoff flows and treats remaining runoff by slow percolation through a biologically active matrix of soil and plant roots. LID is the preferred method of stormwater quality management in Contra Costa County. Schematics and descriptions of LID designs and facilities are presented in the Contra Costa Clean Water Program's *Stormwater C.3 Guidebook*, 6th Edition (CCCWP, 2012)

2. **Full Trash Capture Devices** are design to trap all particles retained by a 5 mm mesh screen and have a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour storm in the sub-drainage area.
3. **Tree-box-type high flowrate biofilters and vault-based high flowrate media filters** are allowable treatment systems on certain smart growth, high density, and transit-oriented developments per Provision C.3.ii.

3.2 BEST MANAGEMENT PRACTICES USED

Permittees of the CCCWP implement the following Best Management Practices (BMPs) to minimize pollutants in urban runoff discharges:

1. **Source Control** stops or reduces pollutant discharges by eliminating them from uses where they may be discharged into the MS4. Recent examples include ordinances banning plastic bags, which have been adopted by some Permittees to address trash reduction requirements. Re-registration by USEPA of diazinon and chlorpyrifos to limit use to registered professional applications may account for the notable absence of toxicity to water fleas reported in the CCCWP Integrated Monitoring Report, Part A, Appendix A.1 (ARC, 2014). CCCWP's current stressor source identification study is evaluating whether toxicity to amphipods is caused by current use of pyrethroids; if so, responsive actions would include promoting similar product re-registration efforts.
2. **Diversion** of urban runoff discharges into sanitary sewers. Pilot tests of diverting dry-weather and first-flush stormwater are being evaluated but are not showing promising initial results as a sustainable BMP.
3. **Prohibition** of non-stormwater discharges into the MS4 is established by ordinance in each Permittee's jurisdiction.
4. **Illicit Discharge Detection and Elimination** programs implement prohibitions by providing an active program of surveillance and response to complaints.
5. **Public Education and Outreach** communications to raise public awareness and change behaviors that can affect water quality.
6. **Inspection** of businesses and construction sites provides oversight of compliance with required guidelines for housekeeping and pollution prevention.
7. **Enforcement** provides Permittees with legal authority to correct egregious or recurrent ordinance violations.
8. **Referral** to the Water Board or other appropriate authorities where individual parcels are known or suspected to be pollutant sources and where successful enforcement is beyond the capabilities or resources of the local municipal government.

3.3 DESCRIPTION OF DISPOSAL METHODS

Stormwater is typically discharged either from the MS4 into creeks that flow into San Francisco Bay and the Sacramento San Joaquin River Delta, or directly into the Bay/Delta.

PART VII. OTHER

The CCCWP implements a coordinated countywide program of water quality control within the jurisdiction of both the San Francisco Bay Regional Water Quality Control Board (Region 2) and the Central Valley Bay Regional Water Quality Control Board (Region 5). The requirements of that program in Region 2 are established by the Municipal Regional Stormwater NPDES Permit

(MRP) Order No. R2-2009-0074 and its amendment No. R2-2011-0083. Based on the experiences of implementing the provisions of the MRP, the Permittees have gained insight into its workings that are of value in the reissuance of the next MRP.

The Permittees developed the following guiding principles from which to develop reissuance recommendations:

1. Establish priorities focused on actions that will improve water quality.
2. Identify and prioritize actions that integrate multiple water quality benefits.
3. Phase tasks as necessary consistent with funding constraints.
4. Reorganize presentation of the Provisions and rewrite language where necessary to reduce ambiguity.
5. Identify and eliminate outdated or completed tasks and reduce or eliminate the "less beneficial tasks" in the current permit, including burdensome and ineffective data collection and reporting requirements.
6. Offset new programs or initiatives with equivalent reductions in effort elsewhere in the MRP.

Based on these guiding principles, the Permittees' highest priority concerns and recommendations for MRP reissuance are the provisions on New Development, Monitoring, Pesticides Toxicity Control, Trash Load Reduction, Pollutants of Concern (POC), and Annual Reporting.

In Sections 1.0 through 7.0 below, CCCWP presents current practices, issues, priorities, and recommended updates for the highest-priority concerns.

1.0 NEW DEVELOPMENT (PROVISION C.3.)

Bay Area MS4 Permittees have led California in implementing LID on new developments. This trend began with BASMAA's development and publication of *Start at the Source: Residential Site Planning & Design Guidance Manual for Stormwater Quality Protection* (BASMAA, 1997) and *Start at the Source: Design Guidance Manual for Stormwater Quality Protection* (BASMAA, 1999).

In 2003, the Water Board adopted permit amendments that included hydraulic criteria to be used in the design of non-LID treatment facilities (e.g., extended detention basins, sand filters, and hydrodynamic separators). Contra Costa Permittees responded by adapting these criteria to the design of LID features such as bioretention, and published these design criteria in a *Stormwater C.3 Guidebook* (CCCWP, 2005). The Guidebook has since been updated five times (CCCWP, 2012).

The 2003 permit amendment also included hydromodification management requirements. Water Board staff subsequently interpreted these requirements to mandate numeric criteria to be used

in the design of (non-LID) flow-duration basins. Contra Costa Permittees responded by adapting their design criteria for LID features and facilities to provide equivalent hydromodification management effectiveness. In a 2006 permit amendment, the Water Board adopted the non-LID flow duration design criteria and required Contra Costa Permittees to conduct extensive studies to demonstrate that LID facilities could replicate the performance of (non-LID) flow duration basins.

In the 2009 MRP, the Water Board added LID criteria for stormwater treatment for new developments, while maintaining the non-LID criteria for hydromodification management and renewing the requirement that Contra Costa Permittees conduct studies to demonstrate the effectiveness of LID. The CCCWP completed these studies and submitted the results to the Water Board in 2013.

In considering the New Development provisions of a reissued MS4 permit, Contra Costa Permittees note that thousands of LID facilities will be constructed in the coming years under the MRP permit mandate. These facilities will be distributed throughout the urban landscape, effectively disconnecting substantial portions of overall impervious area from creeks and the Bay. The Permittees seek to facilitate the effective, sustainable, long-term operation and maintenance of these LID facilities in the following ways:

1. Emphasizing design and construction of robust, low-maintenance facilities, recognizing that bioretention is the most effective and sustainable method of LID treatment for most development projects.
2. Updating hydromodification and treatment criteria so that both can be addressed through integrated LID landscape features and LID facilities.
3. Shifting the strategy for maintenance toward engaging the public to help ensure that LID facilities are not removed or their operation undermined by alterations.
4. Strategically setting project-size thresholds and requirements to optimize the amount of new or replaced impervious area draining to sustainable LID features and facilities, while considering limitations in municipal resources.
5. Making minor adjustments to the allowance for on-site non-LID treatment on "special projects" as defined in the current MRP.
6. Making it easier to use of off-site LID treatment in the relatively rare cases where that option is more cost-effective and environmentally beneficial.
7. Reducing the time and effort currently devoted to producing Water Board submittals and preparing data for Water Board staff review, and redirect Permittee staff resources to enhancing implementation of LID on new developments.

These objectives, and the technical justification for each, will be addressed in a forthcoming "white paper" to be produced by BASMAA in cooperation with Water Board staff.

With regard to applying new development provisions to streets and roads projects, the Permittees seek to maintain the current definitions and thresholds, while pursuing—in cooperation with the Water Board and other state and regional agencies—a long-term strategy

for green infrastructure, i.e., integrating water-quality features into transportation and drainage projects where feasible.

2.0 MONITORING ACTIVITIES (PROVISIONS C.8., C.11., C.12.)

Three types of monitoring are currently being conducted by CCCWP: (1) creek status monitoring; (2) POC loads monitoring; and (3) pilot studies and projects to monitor BMP effectiveness.

Creek status monitoring requires collection of bioassessment data and other parameters at creek locations throughout the Bay Area, in collaboration with other programs. In Contra Costa County, bioassessment data has been collected annually since 2001. Essentially every watershed in the County has been characterized by bioassessment. Reports of bioassessment and other monitoring studies conducted by CCCWP are listed in Table 3 above.

The creek status monitoring studies produced by CCCWP in the last 13 years tell a convincing story that creek health is generally much poorer in highly modified channels and within highly urbanized watersheds. This is consistent with the findings of Schueler and others (2009), which is that urbanization and the degree of imperviousness are directly related to creek health.

Since every watershed in the County has been characterized, CCCWP Permittees do not see the value in continued bioassessment monitoring. CCCWP proposes to reduce and focus Creek Status monitoring required in the reissued MRP. Resources saved could be applied to implementing projects to improve water quality, as opposed to continued monitoring that would generate data that confirm lessons already learned.

TMDL monitoring for POCs such as mercury and PCBs, addresses base-of-watershed tributary monitoring. It would take decades to detect change in response to upstream water quality improvement projects by this monitoring approach. A key lesson learned during the current MRP is that in order to show progress in attaining load reduction goals set by TMDLs, the point of monitoring needs to be moved closer to the known source areas. Resources currently allocated for tributary monitoring should be reallocated in the coming year to support a reconnaissance approach to identifying "high-opportunity" areas for PCB load reductions. Following the reconnaissance activities anticipated during Fiscal Year 2014–2015, resources saved by eliminating tributary monitoring could potentially be applied to support projects that reduce PCB loads.

Focused effectiveness monitoring of BMPs may have value. The balance of financial resources should be focused on actual planning, design, construction, and operation or water quality improvement projects. Monitoring to generate new information that has regional or statewide benefits should be carried out, to the extent possible, with grant-supported funds.

3.0 PESTICIDES TOXICITY CONTROL (PROVISION C.9.)

Source control is the preferred approach to reduce pesticide-caused toxicity. This is a demonstrated success story for organophosphates such as diazinon and chlorpyrifos, and is the proposed approach for new pesticides that have emerged to replace organophosphates. In the 1990s and early 2000s, diazinon was routinely detected in receiving waters at concentrations high enough to cause toxicity to water fleas. Sales of diazinon for urban uses were eliminated by the end of 2004, and consequently, diazinon and associated diazinon toxicity to water fleas is no longer observed in Bay Area urban creeks. Pyrethroid pesticides have replaced diazinon as residential use pesticides. As noted in the 2014 CCCWP Integrated Monitoring Report, pyrethroids are suspected to be the cause of observed toxicity to amphipods. Based on lessons learned with diazinon, source control through product re-registration is the most effective and efficient approach to addressing impacts from pyrethroids and other consumer-use pesticides.

4.0 TRASH REDUCTION (PROVISION C.10.)

Provision C.10 in the 2009 MRP requires the Permittees to implement control measures and other actions to reduce trash loads from MS4s by 40 percent by 2014, 70 percent by 2017, and 100 percent by 2022. Further, the Permittees are required to install full trash capture devices to treat runoff from an area equivalent to 30 percent of Retail/Wholesale Land that drains to MS4s within their jurisdictions and to conduct annual cleanups of designated "hot spots." As required, the Permittees submitted Short-Term Trash Loading Reduction Plans and a Baseline Trash Load and Trash Load Reduction Tracking Method in February 2012, and also submitted Long-Term Trash Loading Reduction Plans in February 2014.

The Permittees are implementing control measures and actions to reduce trash. However, their ability to demonstrate compliance, and to select activities that contribute toward compliance, has been hindered by the following factors:

1. Trash loading rates cannot be measured with sufficient precision to determine whether the 40 percent or 70 percent reductions have been achieved. Further, trash loading rates at any particular location vary by orders of magnitude due to wind and other factors. Like all stormwater pollutant loading, trash loading is variable and episodic by nature.
2. The baseline for determining attainment of 40 percent and 70 percent trash reductions should consider pre-MRP conditions, to be fair to communities that have established robust trash control programs prior to adoption of the MRP.
3. It is not possible to distinguish trash conveyed by the MS4 from trash conveyed to the receiving water by wind or direct dumping, including by homeless encampments. Further, in many jurisdictions, creeks flow into storm drains and then into creeks again, blurring the distinction between trash in the MS4 and trash in the receiving water.
4. Mechanical "full-trash capture" devices work in some locations, but not in areas where runoff carries vegetative matter (as in areas with trees or that drain open space), or in areas with limited hydraulic head. Further, these devices are susceptible to clogging and bypass during storms.

The Permittees have worked closely with Water Board staff to address these factors and to develop effective ways to reduce trash and demonstrate compliance. The results of this collaboration are reflected in the Long-Term Trash Reduction Plans submitted in February 2014. The plans delineate areas where trash generation is thought to be relatively high, medium, or low; delineate trash management areas; and, identify actions to be implemented in each trash management area, as well as jurisdiction-wide actions.

For the reissued MRP, the Permittees seek to implement their Long-Term Trash Plans, including the flexibility to update and revise those plans based on changing sources, conditions, and available resources. In particular, the Permittees seek to apply their limited resources to reduce trash and enhance local environmental quality, rather than having their priorities driven by questionable regulatory definitions and one-size fits all requirements.

The Permittees identify the final goal of the trash reduction effort as "no adverse impact on beneficial uses due to trash", and will continue to work with Water Board staff to develop methods to measure the effectiveness of their trash reduction efforts and to characterize impacts to receiving waters.

5.0 POLLUTANTS OF CONCERN (PROVISIONS C.11., C.12., C.13., C.14.)

Current regulatory drivers such as the PCB and mercury TMDL are compelling CCCWP and other Bay Area stormwater programs to evaluate implementing robust water quality improvement plans at the watershed scale. CCCWP has worked with other Bay Area stormwater programs and the Water Board through the MRP Steering Committee on an approach for developing robust water quality improvement plans.

The first step in the approach is to produce a geographic information system (GIS) analysis of land use by jurisdiction. PCB loads can be estimated based on land use; high PCB concentrations are typically found in older urban and old industrial areas. Within old industrial areas, high-opportunity areas may be identified where controllable sources of PCB-contaminated sediments need to be managed at the parcel scale. High-opportunity areas are identified by following up the GIS / desktop analysis with driving and walking surveys, followed by reconnaissance monitoring. Details of this approach are described in Part C of CCCWP's Integrated Monitoring Report (CCCWP, 2014).

High-opportunity areas located on private lands will be addressed through enforcement or referral, as noted in Part VI above. Attainment of TMDL goals through control of PCB discharges from high-opportunity areas alone is not likely. Rather, water quality improvement plans implemented over large (e.g., up to 20,000 acres) areas of older urban development lands would be necessary to achieve the 90 percent PCB load reduction goals established for urban stormwater by the PCB TMDL.

Treatment of stormwater discharges of such large land areas is beyond the reasonable and foreseeable means of municipalities. CCCWP is working with other Bay Area programs through the MRP Steering Committee to define and implement a region-wide Green Streets program that would assist municipalities in the implementation of LID and other green infrastructure techniques to treat stormwater in areas where and when streets and roads improvement projects are being designed. The priority for implementing such projects is in older urban areas, particularly old industrial areas.

A current grant-funded project being executed by the San Francisco Estuary Institute is developing GIS tools to identify opportunity areas where green infrastructure retrofits may be located. Another new grant pursuit by BASMAA member agencies would overlay the land use analysis with the opportunity areas to prioritize where green infrastructure would provide the greatest benefit. Concurrent with that analysis, constraints (e.g., deed restrictions, easements, underground utilities) need to be identified for the most attractive locations.

For a Green Streets approach to be successful, funding sources must be identified. Transportation funds cannot typically be used for water quality improvement. In 2012, the CCCWP conducted a Community Clean Water Initiative to generate revenues for stormwater quality protection; voters rejected the initiative. CCCWP is working with the MRP Steering Committee to recruit and retain professional support to lobby regional, state and federal agencies for the creation of new revenue programs to support Green Streets and stormwater treatment retrofits.

6.0 ANNUAL REPORTING (PROVISION C.2 – C.15.)

The compliance reporting requirements in the MRP were created as an experiment to address some long-standing dissatisfaction with reporting under the previous countywide Phase I municipal permits. As we complete a fifth annual reporting cycle, we assess the results of the experiment and look for ways to make reporting more efficient and effective.

6.1 CURRENT APPROACH

The first-generation MRP (2009, amended 2011) included a then-new approach to compliance reporting. The new approach was created in response to two sets of concerns.

The first concern was the ineffectiveness of the largely narrative reporting required by the pre-MRP countywide Phase I municipal permits. Permittees found preparing narrative descriptions of Program activities burdensome. The topics and questions specified in the permit were difficult to address in a meaningful way, particularly with regard to assessing the effectiveness of mandated activities. Water Board staff found the narrative descriptions difficult to read, absorb, and comment upon, as evidenced by the lack of timely response or comment on the Permittees' Annual Reports.

The second concern was the need to balance flexibility and accountability in the permit provisions. This balance was an agreed-upon goal for Water Board members, the public, and Permittees alike.

The 2009 reporting requirements included the following new features:

1. MRP Provision C.16 specifies a region-wide Annual Reporting format, prepared collectively by the Permittees and reviewed and approved by Water Board staff.
2. The format is tabular and prompts quantitative entries and brief narrative descriptions related to implementation of each permit provision.
3. Individual permit provisions include detailed reporting requirements, in some cases specifying the format and content of tables to be completed.
4. Reporting requirements are supplemented by record retention requirements; these requirements also specify the format and content of tables which must be submitted to Water Board staff on request.

The prescriptive reporting requirements are tied to the MRP's prescriptive approach to implementation. For example, MRP Provisions C.2 (Municipal Maintenance), C.4 (Business Inspections), C.5 (Illicit Discharge Identification and Control), C.6 (Construction Inspection) specify actions to be taken. During development of the MRP in 2006-2009, Water Board staff characterized these as "no regrets" actions because they are presumed to be established and low cost. These provisions also specify in detail in the contents of each "database or equivalent tabular format" in which the records of each inspection, follow-up inspection, or enforcement action are to be kept. The same approach applies to Provision C.3 (New Development Controls) with regard to inspections to verify the operation and maintenance of stormwater treatment facilities.

The prescriptive reporting and record-keeping requirements have engendered frustrating inefficiencies. This is not surprising, given that the formats were adopted in the permit without testing or experience and apply to 76 Permittees of varying size and characteristics.

Worse, during the MRP term the Water Board's Executive Officer has issued Notices of Violation (NOVs) to Permittees who have tried to adapt the prescriptive record-keeping formats to make them more usable. For example, one Permittee received an NOV because Permittee staff maintained inspection data on multiple sheets in an Excel workbook file, rather than keeping all the data on a single sheet. There are many examples of the Executive Officer taking enforcement or corrective action over similarly picayune variations from the MRP's reporting and record-keeping requirements.

During the MRP term, Permittee effort to respond to audits, inquiries, and notices—including correspondence and meetings with Water Board staff—which relate only to record keeping and

reporting and not to implementation, consumed hundreds of hours of staff time within Contra Costa municipalities alone. This is in addition to the effort required to maintain records precisely in the manner specified by the permit. The combined effort of report preparation and audit response has substantially impacted Permittees' ability to meet the demanding implementation requirements of the Permit. It is also discouraging and bad for staff morale.

To summarize the results of this 4-year experience: While the MRP's prescriptive approach to implementation facilitates accountability, the prescriptive reporting and record-keeping requirements have hindered overall Program effectiveness.

In hindsight, many of the prescriptive reporting and record-keeping requirements reflect questionable assumptions regarding effective Program implementation. For example, Provisions C.4 and C.6 (Business Inspections and Construction Inspections, respectively) emphasize that municipal Permittees should create and implement Enforcement Response Plans that inspectors would use to address violations of stormwater requirements. Reporting requirements emphasize recording inspections and following up on violations found during inspections. In fact, effective implementation of stormwater controls on private businesses and construction sites depends on an adept integration of surveillance, observation, and communication. Enforcement—that is, issuing violations—is not always necessary or productive. In cases where a contractor or business operator is a "bad actor," the activity that produces actual or potential non-stormwater discharges often also is in violation of other requirements or codes (for example, unpermitted construction or health and safety violations). In these cases, it is typically more effective for a stormwater coordinator to allow other authorities and agencies to enforce changes which will also address the actual or potential discharge. Therefore the review of violations issued, or the municipalities' record in taking compliance action in follow-up to violations, is an ineffective means to monitor or evaluate Program effectiveness.

6.2 PROPOSED APPROACH

Based on over 20 years' experience implementing municipal stormwater NPDES requirements in Contra Costa County and its 19 cities and towns, Contra Costa Permittees believe:

1. Water Board oversight is important to ensure consistent ongoing compliance and a level playing field among municipalities.
2. Much of the current reporting and records-retention effort is not helping Water Board staff to assess local implementation.
3. The prescriptive reporting and records-retention requirements are "less beneficial tasks" and should be revised or eliminated so that Permittees can focus on more beneficial tasks under the reissued MRP.

A few simple indicators can be developed and used to assess whether a municipality is implementing a particular permit provision adequately; these indicators, along with directly relevant reportable information, should form the basis for reporting and for audits.

It is possible for Permittees and Water Board staff to develop and agree on indicators to be used in the reissued MRP and to also agree on a process to continuously improve those indicators during the term of the reissued MRP.

The Permittees believe Water Board oversight is most needed and best used to ensure all Permittees are engaged and have directed management attention to mandated tasks (a "level playing field"), rather than micromanaging the specifics of how Permittees implement that task. Correspondingly, the suggested indicator approach is best used to determine whether a municipal program meets a basic, "no regrets" level of implementation, rather than to assess more subtle differences in the level of implementation.

As an example, the annual reporting requirement for Provision C.6 could be reduced to:

1. Number of sites requiring Erosion and Sediment Control plans
2. Number of these sites subject to the statewide Construction General Permit.
3. Number of sites where enforcement action (written notice of violation) was required.
4. Narrative summary of inspection activity, general level of compliance, enforcement action taken, problems encountered and how resolved.

Such a report provides indicators of (1) the general level of construction activity; (2) whether the municipality is achieving compliance without the need for enforcement action, and (3) the municipality's ability to respond to compliance problems, if any, by taking enforcement action. This level of annual reporting detail would allow Water Board staff to readily distinguish municipalities that actively pursue adequate pollution prevention and erosion/sedimentation controls on construction sites vs. those that have an inactive or failing construction inspection program.

The records retention requirements should be eliminated completely, as the Permittees must manage their data well enough to prepare the required annual reports anyway. The essence of an effective local stormwater construction inspection program is the inspectors' capabilities and diligence in observing construction sites and in communicating with contractors regarding BMP requirements. Water Board staff can best oversee this process by conducting joint inspections, from time to time, with Permittee inspectors. We believe Water Board staff could conduct a sufficient number of joint inspections annually if they redirected the effort and hours they currently devote to review of records, "paper audits", and enforcement actions related solely to record keeping and reporting.

7.0 SUMMARY OF RECOMMENDED REVISIONS FOR REISSUANCE OF THE MUNICIPAL REGIONAL PERMIT

For the highest-priority provisions presented in sections 2.0 through 6.0 above, Table 4 summarizes the recommendations for revisions to the reissued MRP. The Table also presents recommendations on other permit provisions based on the Permittees' analysis of current NPDES permit provisions. The table identifies provisions that have worked well to achieve the permit goals and those that have been ineffective, too costly to warrant the expense, or impractical to implement.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.2.d.	Municipal Pump Stations	1. Eliminate dry-season pump station monitoring. Require ongoing implementation of necessary mitigation measures for discharges with DO below 3 mg/L. 2. Eliminate wet-weather inspection and data collection and reporting requirements.	1. Municipal pump station monitoring has been conducted for the past 5 years. Corrective measures are being implemented where necessary. 2. Wet-weather inspections are routinely inspected to ensure proper operation of pump stations. The data collection and reporting requirements are "less beneficial" tasks. Pump station operators are trained to inspect and maintain pump stations, and to report potential water quality issues to their Stormwater Program Coordinator.
C.2.f	Corporation Yards	1. Eliminate the Corp Yard inspection reporting requirements.	1. Municipalities are implementing their Corp Yard Stormwater Pollution Prevention Plans (SWPPPs), which include routine inspections. Requiring pre-rainy season inspections, and inspection data collection and reporting are unnecessary and should be eliminated.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.3.b.	Regulated Projects	1. Eliminate the 50% rule requiring retrofit of existing portions of a partially developed site, OR allow non-LID treatment and limit applicability to non-residential projects. 2. Maintain "Road Projects" requirements. 3. Clarify applicability of small parking lots in provision C.3.b.ii.(1)(iv) (i.e., a single parking space shouldn't lower the threshold from 10,000 to 5,000 square feet of total impervious surface). 4. Make explicit the "de minimis" exemption for treatment of small amounts of impervious surface (for example, driveway aprons).	1. The 50% rule, as written, is too much of an economic disincentive for redevelopment projects. Providing the flexibility for non-LID treatment measures on those portions of the site not slated for redevelopment will ease the burden while still achieving water quality benefit. 2. With regard to applying new development provisions to streets and roads projects, the Permittees seek to maintain the current definitions and thresholds, while pursuing—in cooperation with the Water Board and other regional agencies—a long-term strategy for integrating water-quality features into transportation and drainage projects where feasible ("green infrastructure").
C.3.c.	Low Impact Development (LID)	1. Eliminate the hierarchy and feasibility tests for infiltration and harvesting and reuse; bioretention should have parity as a stormwater retention and treatment measure. 2. Fully integrate hydromodification and LID requirements. Simplify the hydromodification criteria to make it clear how LID can be used to comply.	See comments under Section 1.0 above.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.3.e.	Alternative Compliance	1. Eliminate disincentives and barriers for regional solutions and off-site treatment measures	1. Current requirements restrict the ability of municipalities to place off-site treatment solutions in areas of greatest benefit. For example, offsite treatment measures must be located in the same watershed. Current requirements also require completion of offsite measures at the time of project construction. Offsite regional solutions, which are limited in opportunity and more complex to implement, are penalized by the time requirement (i.e., an additional 10% per year penalty of runoff treatment area or pollutant loading reduction).
C.3.h.	O&M Inspections	1. Coordinate and make clear the Provision C.3.b. and C.3.h reporting tables so that it is easy to track projects from application through construction and then to the list of sites to be inspected. 2. Allow municipal approved vendors or other third parties to inspect stormwater treatment facilities and certify their condition.	See discussion under Section 1.0 above.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.4.c.	Enforcement Response Plan (ERP)	1. Maintain timely corrective action requirements for violations. However, allow inspectors to exercise their best professional judgment and skills in determining the most appropriate enforcement response. Permittees recommend that an observed stormwater problem will be deemed a "violation" when one or more of the following criteria has been met: • The inspector observes an active pollutant discharge or clear evidence of a recent and significant pollutant discharge. • The inspector finds during a follow-up or subsequent inspection inadequate response or corrective action has occurred in response to a previous verbal warning or written warning notice. • The inspector determines a clear and significant potential pollutant discharge threat exists that warrants timely corrective measure(s) and follow-up.	1. A finding that every observed problem is a "violation" creates a disincentive for inspectors to proactively identify and communicate potential problems to site operators because it necessitates the prescriptive follow-up and documentation requirements. Not every observed problem should nor needs to be deemed a violation. Verbal warnings and written warning notices can be effective and efficient Tier 1 enforcement response tools.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.4.c., C.4.d.	Reporting	1. Reduce the excessive data collection and reporting requirements (e.g., number of inspections, number of violations, percentage of sites in violation, number and percent of violations resolved in 10 working days or otherwise deemed resolved in a longer but still timely manner; frequency and types/categories of violations observed, frequency and type of enforcement conducted, summary of types of violations noted by business category, facilities that are required to have coverage under the General Industrial Permit but have not filed, and dates of trainings, training topics covered, percentage of inspectors attending training).	1. Much of the data collection and reporting requirement within these provisions is another example of "less beneficial" tasks. See also the discussion in Section 6.0 above.
C.5.e., C.5.f.	Illicit Discharge Detection and Elimination	1. Eliminate field screening, and reduce the data collection and reporting requirements.	1. Municipal maintenance inspection staff is trained to look for and report non-stormwater discharges to the municipality's Illicit Discharge Coordinator. The prescriptive spill and discharge complaint tracking system information is overly burdensome and another example of a "less beneficial" task. See also the discussion in Section 6.0 above.
C.6.e.	Construction Site Control	1. Simplify reporting by eliminating requirements to report number and percentages of violations and enforcement actions.	1. See the discussion in Section 6.0 above.
C.7.	Public Information and Outreach	1. Consolidate requirements throughout the permit for public information and outreach into this section and cross-reference it from other sections.	1. See additional recommendations and suggested changes below.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.7.a.	Storm Inlet Marking	1. Simplify the requirement for maintaining storm drain inlet markings. 2. Remove language regarding new inlets.	1. Current requirement is to mark and maintain 80% of storm drains, and at least 80% of these must be inspected and maintained at least once during permit term. Tracking and reporting percentages inspected, maintained, and verified is not an effective use of limited staff resources. 2. Provision C.3. contains language for marking new inlets.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.7.b.	Advertising Campaigns	1. Provide flexibility on how to conduct a public outreach campaign (message, audience, effectiveness assessment), which allows an appropriate emphasis on social marketing, specifically: a. Drop the word "Advertising" from "Advertising Campaigns" b. Focus reporting on outcomes to "behavior change efforts" and/or increased "cultural awareness" rather than "changes in behavior" which are difficult to achieve and measure. c. Allow alternatives to reaching a "broad audience", which has been tried. d. Allow the ability to leverage other programs, and reach captive and active audiences. e. Allow flexibility in methods for assessing effectiveness. f. Provide the flexibility to identify and target "Hot Spots", along with medium and low priority areas, for campaign(s) based on what the problems/issues are. g. Allow public campaign to incorporate a comprehensive outreach program that includes media relations, public events, watershed stewardship, etc.	1. "Advertising" suggests traditional media such as TV, radio, billboards, etc., which are expensive, and may not be the most effective given limited resources. The MRP could outline a general "framework" suggesting elements to include (i.e., citizen involvement, community/public events, use of free media, outreach to municipal officials, youth outreach, etc.). The approach should allow and encourage communities to determine what needs to be done, allowing efforts that address and consider local resources, issues, and characteristics of the area.
C.7.c.	Media Relations – Use of Free Media	1. Allow flexibility for the integration of media relations into the overall Campaign framework discussed under C.7.b. above.	

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.7.e.	Public Outreach Events	1. Allow flexibility to integrate into the Campaign framework discussed under C.7.b. above. 2. Change "pollution prevention messages **shall** include" to "pollution prevention messages **may** include". 3. Remove specific number of events; allow flexibility based on need and overall campaign strategy.	.
C.7.f.	Watershed Stewardship Collaborative Efforts	1. CCCWP likes that this provision is broad enough to provide flexibility. 2. Allow flexibility to integrate this with the Campaign framework discussed under C.7.b. above.	.
C.7.g.	Citizen Involvement	1. Allow flexibility to integrate into the Campaign framework discussed under C.7.b. above.	.
C.7.h.	School-Age Children Outreach	1. This component of the provision should still exist, but Permittees should be allowed to choose how, and to what age range, the school-age outreach should be done.	1A. Good, but want flexibility to figure out how to do it better (e.g., library programs). 1B. Reaching K-12 may be too broad. Allow flexibility to focus on elementary, middle, and/or high school youth. 1C. Some municipalities have their own programs, which should be allowed.
C.7.i	Outreach to Municipal Officials	1. Retain this provision.	

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.8.	Water Quality Monitoring (General)	1. Contain the scope of Water Quality monitoring requirements for CCCWP to a budget of no more than $150,000 per year above and beyond the existing CCCWP contribution to the San Francisco Bay RMP.	1. CCCWP has already invested in a 14-year bioassessment data set covering every watershed in the County. There needs to be demonstrable benefit for Creek Status Monitoring or other water quality monitoring required in the reissued MRP.
C.8.a.	Water Quality Monitoring – Compliance Options, Regional Collaboration	1. Continue to allow flexibility for regional collaboration and alternative monitoring and sampling designs in the reissued MRP.	1. Permittees should be allowed to decide whether regional collaboration is cost-effective based on the potential added effort and complexity of collaboration vs. the potential benefits of integrated monitoring designs and resource sharing.
C.8.b.	Water Quality Monitoring – San Francisco Estuary Receiving Water Monitoring	1. Continue to fund RMP pilot projects that support stormwater. 2. Support a RMP PCB reconnaissance special study in 2014- 2015. 3. Support a RMP special study to explore stormwater treatment alternatives at municipal pump stations.	1. Stormwater programs pay into the RMP. 2. Reconnaissance sampling to identify high-yield PCB watersheds is one of the best "dollar for data point" values available through RMP resources. 3. CCCWP would like to partner with other BASMAA members to pursue grant funding to explore stormwater treatment alternatives at pump stations. RMP commitment to monitoring would be helpful as a cost-match.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.8.c.	(Creek) Status Monitoring	1. Limit bioassessment to the currently implemented taxanomic level ("SAFIT level 1.1"). 2. Eliminate algae sampling, algae taxonomic identification, and full physical habitat assessments. 3. Eliminate bacteria sampling. 4. Eliminate temperature monitoring. 5. Eliminate the requirement for a geomorphic study. 6. Do not require additional stressor source identification studies. 7. Increase the trigger level for residual chlorine. 8. Require the CRAM method, not USA, for stream surveys at bioassessment sites, and eliminate the numeric requirement for stream miles surveyed.	1. The current approach is sufficient to implement the California Stream Condition Index. There is no added value to going to SAFIT level 2. CCCWP's historic data is all based on SAFIT level 1. 2. These protocols double the field labor cost with no demonstrable added value for decision making. 3. This monitoring is already being done by health departments where people engage in water contact recreation. 4. The temperature monitoring conducted so far tells us what we already know: modified channels are warmer, and Contra Costa County is a warm, arid location that supports limited cold water fisheries habitat. This monitoring has no clear nexus to discharges. 5. CCCWP has already surpassed the intention of the Geomorphic Study requirement with the development of the Contra Costa Watershed Atlas (CDD, 2003). 6. Resources need to be focused on existing, identified issues such as reducing pyrethroid toxicity. 7. The existing trigger is close to the detection limit for the field methods used; a higher trigger would be more indicative of true releases of chlorinated water. 8. Implementing CRAM at existing bioassessment sites is the current, cost-effective approach implemented by BASMAA members. CRAM is more appropriate to California streams.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.8.e.	Pollutants of Concern and Long-term Trends Monitoring	1. Do not require more data to support the Regional Watershed Spreadsheet Model (RWSM). 2. Move the point of monitoring closer to sources. 3. Focus on curb and gutter sampling to identify source areas. 4. Only require this activity once per permit cycle.	1. The RWSM development has provided limited new insights as to where PCB source control is needed. Modeling uncertainty limits the usefulness for decision making. 2. It is impossible to detect change through base of watershed tributary monitoring in a reasonable (i.e., less than 20 years) time frame. In contrast, monitoring close to a source area can show change soon after the source is abated. 3. Curb and gutter sampling is a proven, cost-effective way to identify trackout sources of PCB-contaminated sediments to the MS4 system. 4. Once per permit cycle makes sense – it takes at least four years to make progress reducing source areas, no need for higher frequency monitoring. Far better to focus resources on controlling the sources.
C.9.	Pesticides Toxicity Control	1. Eliminate the reporting requirement to show trends in quantities and types of pesticides used, as it is not directly relevant to the degree of IPM implementation or to water quality. 2. If the reporting requirement is not eliminated then allow for alternative compliance such as submitting DPR forms.	

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.10.	Trash Load Reduction	1. For the reissued MRP, the Permittees seek to implement their Long-Term Trash Plans with the flexibility to update and revise those plans based on changing sources, conditions, and available resources. 2. Limit any expansion of full trash capture requirements and incorporate flexibility in application of full trash capture into the long-term trash plan requirements. 3. Coordinate hot spot cleanups and assessment requirements with long-term trash plan implementation (use condition of hot spot prior to cleanup and amount of trash removed as progress indicators). 4. Replace 100% trash load reduction goal with "no adverse impact on beneficial uses due to trash".	1. In particular, the Permittees seek to apply their limited resources to reduce trash and enhance local environmental quality, rather than having their priorities driven by questionable regulatory definitions and one-size fits all requirements. Permittees will continue to work with Water Board staff to develop methods to measure the effectiveness of their trash reduction efforts and to characterize impacts to receiving waters.
C.11., C.12.	Mercury Controls, Polychlorinated Biphenyls (PCBs) Controls	1. These provisions are expected to incorporate requirements for new control measures based on the outcomes of studies mandated under the current MRP. 2. POC TMDLs are appropriately a water quality priority. However, new projects and controls must be appropriately phased, targeted, and prioritized (emphasis on projects with multiple benefits).	

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.11.b.	Monitor methylmercury	1. Eliminate this requirement.	1. Duplicative - CCCWP is already conducting a methylmercury control study required under the East County permit; the study addresses LID effectiveness at reducing methylmercury in stormwater, and will assess effectiveness at LID installations in both Region 2 and Region 5 areas of the County.
C.11., C.12. c. through f.	Pilot projects to Investigate and Abate	1. Replace these requirements with a requirement to develop water quality improvement plans for identified high opportunity areas.	1. Identifying high opportunity areas such as the Santa Fe Channel in Richmond, and abating sources from those areas, are the most significant control action that needs to be addressed.
C.11.h ., C12.h.	Fate and Transport Study	1. Eliminate this requirement.	1. This has been completed as an RMP project.
C.11.i., C.12.i.	Development of a Risk Reduction Program	1. Eliminate this requirement.	1. The products from the risk reduction product have been developed and are being used by Permittees; no need to require this project again.

TABLE 4: CCCWP NPDES PERMIT PROVISIONS AND RECOMMENDED REVISIONS FOR REISSUANCE

Prov. #	Subject	Recommendation(s)	Rationale for Recommended Changes
C.13.	Copper Controls	1. Consider incorporating current requirements for managing waste generated from cleaning and treating copper architectural features into Provisions C.3 and C.6 as appropriate. 2. Consider incorporating requirements to manage discharges from Pools, Spas, and Fountains, into Provisions C.2 (for municipal facilities) and C.3 as appropriate. 3. Consider incorporating requirements to ensure industrial facilities do not discharge elevated levels of copper to storm drains into Provision C.4, as appropriate. 4. Eliminate "Vehicle Brake Pad" requirements. 5. Transfer "Studies to Reduce Pollutant Impact Uncertainties" to RMP.	1 – 3. In general, copper as a POC has been well studied and managed. Suggestion is to transfer required activities to be implemented under C.2, C.3, C.4, and C.6 to simplify the permit. 4. The vehicle brake pad reformulation has been successfully achieved via legislation; no need to keep requiring this activity in permits. 5. This is more appropriate as an RMP special study, not a stormwater specific issue that needs to be in the permit.
C.14.	Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides and Selenium	1. Update this provision to reflect progress on current studies and identify further studies, if needed. 2. If further studies are needed, have these be conducted by the RMP.	
C.15.	Exempted and Conditionally Exempted Discharges	1. No change.	1. Existing BMPs are effective and are being implemented.

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