



**SAN MATEO COUNTYWIDE**  
**Water Pollution Prevention Program**  
Clean Water. Healthy Community.  
[www.flowstobay.org](http://www.flowstobay.org)

# **Stormwater Orientation for Municipal Staff**

*A workshop on municipal regional stormwater permit  
requirements and resources for keeping your municipality in  
compliance.*

**January 25, 2011**

Community Room,  
City Hall - Brisbane

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# **Stormwater Orientation for Municipal Staff**

## **Workshop Binder**

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## Section 1 Introduction

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**AGENDA**

**Stormwater Orientation for Municipal Staff**

January 25, 2011, 8:45 AM – 12:00 Noon  
Community Room – City Hall  
50 Park Place, Brisbane

**Registration** (food and drinks not allowed in the Community Room) 8:45 – 9:00

**Welcome, Introductions, and Request Questions that People Want Answered** 9:00 – 9:15

*Matt Fabry, Program Coordinator, San Mateo Countywide  
Water Pollution Prevention Program – 15 min.*

**Regulatory Background & Overview of Requirements of Municipal Stormwater  
Permits Including the Municipal Regional Stormwater Permit** 9:15 – 9:30

*Fred Jarvis, EOA, Inc. – 15 min.*

**Countywide Program, Regional, and Local Roles** 9:30 – 9:50

- Countywide Program's Role, Decision-Making and Funding
- Bay Area Stormwater Management Agency Association's Role
- Municipality's Role
- Certification of Submittals by Each Agency's Duly Authorized Representative

*Matt Fabry – 20 min.*

**Specific Municipal Regional Stormwater Permit Requirements, Responsible  
Subcommittees/Work Groups, & Compliance Resources** 9:50 – 10:15

Municipal Maintenance Subcommittee

- Municipal Operations (MRP Provision C.2)

Parks Maintenance and IPM Work Group

- Pesticides Toxicity Control (portions of Provision C.9)

Trash Work Group

- Trash Load Reduction (Provision C.10)

Commercial, Industrial, and Illicit Discharge Control Subcommittee

- Industrial and Commercial Site Controls (Provision C.4)
- Illicit Discharge Detection and Elimination (Provision C.5)
- Exempted and Conditionally Exempted Discharges (Provision C.15)

*Fred Jarvis – 25 min.*

<b>BREAK</b>	10:15 – 10:30
<b>More Municipal Regional Stormwater Permit Requirements, Responsible Subcommittees &amp; Compliance Resources</b>	10:30 – 11:00
<u>New Development Subcommittee</u>	
<ul style="list-style-type: none"><li>▪ New Development and Redevelopment (Provision C.3)</li><li>▪ Construction Site Control (Provision C.6)</li></ul>	
<i>Laura Prickett, EOA, Inc. – 30 min.</i>	
<u>Public Information/Participation Subcommittee</u>	
<ul style="list-style-type: none"><li>▪ Public Information and Outreach (Provision C.7) and Pesticides Toxicity Control (portions of Provision C.9)</li><li>▪ Website</li></ul>	
<i>Mary Bell Austin, San Mateo County – 20 min.</i>	
<u>Watershed Assessment and Monitoring Subcommittee</u>	
<ul style="list-style-type: none"><li>▪ Water Quality Monitoring (Provision C.8)</li><li>▪ Mercury Controls (Provision C.11) and Polychlorinated Biphenyls (PCBs) Controls (Provision C.12)</li></ul>	
<i>Jon Konnan, EOA – 20 min.</i>	
<b>California Stormwater Quality Association, California Water Environment Association, Training, and Useful Websites</b>	11:40 – 11:50
<i>Matt Fabry</i>	
<b>Questions and Answers and Closing Remarks</b>	11:50 – 12:00
<i>Matt Fabry</i>	



## Regulatory Background and Overview of Stormwater Permits – and How They Apply to You –



*Stormwater Orientation for Municipal Staff*  
January 25, 2011  
Fred Jarvis, EOA, Inc.

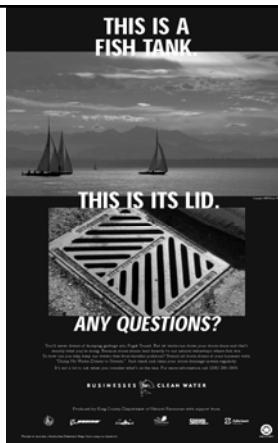
## Outline of Presentation

- Why Regulate Pollutants in Stormwater?
- What Is a Municipal Stormwater Permit?
- What Is the Municipal Regional Stormwater Permit (MRP)?
- How is MRP Different from Previous Permits?

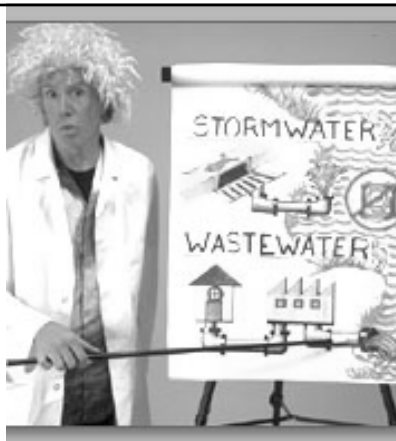


## Why Regulate Pollutants in Stormwater?

- Your city's storm drain system is **completely separate** from the sanitary sewer system
- Water entering storm drains generally **receives no treatment** before discharging to creeks and the Bay



- Most cities maintain the sanitary sewer collection system
- Wastewater flows to the local treatment plant



## Why Regulate Pollutants in Stormwater?

- **\$3 billion** was spent to improve Bay Area sewage and industrial wastewater treatment in 1970's and 1980's
- Stormwater is **biggest remaining pollution source** to Bay, ocean, and creeks
- Examples include:
  - Toxic chemicals - mercury, polychlorinated biphenyl (PCBs), copper, lead, zinc, pesticides;
  - Sediment, bacteria, & litter







**Trash/Debris**



**Construction wastes**



**Business wastes**





## What Is a Municipal Stormwater Permit?

- Since 1987 the federal Clean Water Act has required municipalities to obtain **permits to discharge stormwater** from municipal storm drain systems
- These are National Pollutant Discharge Elimination System (NPDES) **Municipal Stormwater Permits**
- Larger municipalities' permits called Phase 1 and smaller ones Phase 2



## What Do Municipal Stormwater Permits Require?

If you only remember two general things:

- I. Implement controls to **reduce** the discharge of pollutants in stormwater to the **maximum extent practicable**, AND
- II. Effectively **prohibit non-stormwater discharges** into the storm drains



## Roles of State and Feds



### State Water Bd. – Sacto. Reg. Water Bd. –Oakland\*

1. Day to day assistance and oversight\*
2. **Adopt NPDES permits**
3. **Enforce NPDES permits**, e.g., Notices of Violation & Administrative Civil Liability
4. Identify water quality impairments and planned solutions (TMDLs)
5. Updates regionwide Water Quality Control Plan (Basin Plan)

### U.S. EPA Hdqtrs. – Wash. D.C. U.S. EPA Reg. IX– S. F.

1. May **audit your city's stormwater program** and businesses in your city
2. Approve NPDES permits adopted by Water Bd.
3. Has independent permit enforcement authority
4. Provides nationwide consistency and some funding
5. Approves Basin Plan

## What Is the MRP?

- From 1993 through Nov. 2009 each municipality in San Mateo County was covered by the **Countywide Municipal Stormwater NPDES Permit** - 21 municipalities
- In 2009 Water Board adopted the municipal regional stormwater permit (MRP) covering in one permit 76 municipalities and flood control districts.
- **Each copermitttee listed is responsible for complying with the MRP's requirements**



## How is the MRP Different from Previous Permits?

- Eliminated the San Mateo Countywide Water Pollution Prevention Program's Stormwater Management Plan and put all of the detailed requirements in MRP
- **Enhance opportunities** for cost-effective collaboration through BASMAA
- Submit **annual report** using BASMAA/Water Board approved form instead of Countywide Program prepared deliverable forms

### How is the MRP Different from Previous Permits?

- Has significant new requirements for controlling **trash and litter**
- Will require the **use of low impact development**, with certain exceptions, to treat stormwater runoff from new development/redevelopment projects
- Has many new requirements for **recordkeeping and reporting**

### How is the MRP Different from Previous Permits?

- Has **prescriptive and extensive new monitoring**
- Has many new requirements for **pollutants of concern, e.g., polychlorinated biphenyls (PCBs) and mercury**
- **Expands previous requirements to control pesticide toxicity and copper**



# 1.0 Overview of the San Mateo Countywide Water Pollution Prevention Program

## Purpose and Governance

The San Mateo Countywide Water Pollution Prevention Program (Countywide Program) is a program of the City/County Association of Governments of San Mateo County (C/CAG). C/CAG is comprised of local elected city council representatives from each municipality in San Mateo County, one member of the County Board of Supervisors, and representatives from the local transit district and transportation authority. Each municipality in San Mateo County and the San Mateo County Flood Control District is responsible for preventing stormwater pollution and implementing its local stormwater pollution prevention and control activities.

C/CAG operates as a joint powers authority on issues of regional importance to San Mateo County jurisdictions. Administrative and policy-making responsibilities were assumed under Amendment No. 3 to the Joint Powers Authority Agreement issued on April 22, 1993. This agreement allows C/CAG to assist the Countywide Program's member agencies to comply with the MRP.

## Municipal Regional Stormwater Permit

The municipal regional stormwater permit (MRP) was adopted by the Regional Water Board on October 14, 2009. The Countywide Program's 22 member agencies are co-permittees along with 44 other co-permittees located in Santa Clara, Alameda, Contra Costa and Solano Counties. Similar to the Countywide Program, the Santa Clara, Alameda, and Contra Costa have countywide stormwater programs comprised of all of the local municipalities and the flood control districts within their counties.

The MRP is a type of federal National Pollutant Discharge Elimination System (NPDES) permit that allows municipalities and flood control districts to discharge stormwater runoff from their municipal separate storm sewer systems (storm drains). U.S. Environmental Protection Agency has delegated to the State of California's State Water Resources Control Board and Regional Water Quality Control Boards the authority to implement the NPDES permit program in California including the authority to adopt and enforce permits. The state's implementation of the NPDES program is conducted under oversight provided by U.S. EPA's Region 9 located in San Francisco.

### C/CAG's Technical Advisory Committee and Subcommittees to Assist with MRP Compliance

C/CAG's deliberations are assisted by the NPDES Technical Advisory Committee (TAC), which consists of municipal representatives in the fields of engineering, planning, environmental health, wastewater treatment, source control inspection, and public works administration.

The TAC has established the following five subcommittees and two work groups to provide forums for discussion and assistance with seven major aspects of the MRP:

#### New Development Subcommittee:

- New Development and Redevelopment (Provision C.3)
- Construction Site Controls (Provision C.6)
- Manage Wastes from Cleaning Copper Architectural Features (Provision C.13.a)

#### Public Information/Participation Subcommittee:

- Public Information and Outreach (Provision C.7)
- Public Outreach for Pesticides Toxicity Control (Provision C.9.h)

#### Commercial, Industrial, and Illicit Discharge Control Subcommittee:

- Industrial and Commercial Site Controls (Provision C.4)
- Illicit Discharge Detection and Elimination (Provision C.5)
- Exempted and Conditionally Exempted Discharges (Provision C.15)
- Incorporate PCBs Identification into Existing Industrial Inspections (Provision C.12.a)
- Copper Controls – Manage Pool, Spa, Fountain Discharge Containing Copper (Provision C.13.b) and Industrial Sources (Provision C.13.d)

#### Municipal Maintenance Subcommittee

- Municipal Operations (Provision C.2)

#### Parks Maintenance and Integrated Pest Management Work Group

- Pesticides Toxicity Control (Provision C.9, except C.9h Public Outreach)

#### Trash Work Group

- Trash Load Reduction (Provision C.10)

#### Watershed Assessment and Monitoring

- Water Quality Monitoring (Provision C.8)

Mercury Control (Provision C.11)  
 Polychlorinated Biphenyls (PCBs) Controls (Provision C.12, except Provision  
 12.a Incorporate PCBs Identification into Existing Industrial Inspections)  
 Polybrominated Diphenyl Ethers (PBDE), Legacy Pesticides, and Selenium  
 (Provision C.14)

### MRP Requirements

The MRP describes most of the activities that the municipalities are required to conduct to comply with the NPDES permit. A copy of the MRP may be obtained from the Regional Water Board's website as follows:

[http://www.waterboards.ca.gov/sanfranciscobay/board\\_decisions/adopted\\_orders/2009/R2-2009-0074.pdf](http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf).

The 21 municipalities in San Mateo County and the San Mateo County Flood Control District are listed as copermittees under the MRP and have the responsibility for complying with the MRP's requirements. Certain of the MRP's requirements may be implemented more cost-effectively countywide or regionwide. Under direction of the TAC, some MRP compliance tasks may be conducted by the Countywide Program for the benefit of the municipalities, and other tasks may be conducted by funding the Bay Area Stormwater Management Agencies Association or similar groups to perform specific tasks at a regional or multi-countywide level.

### Funding

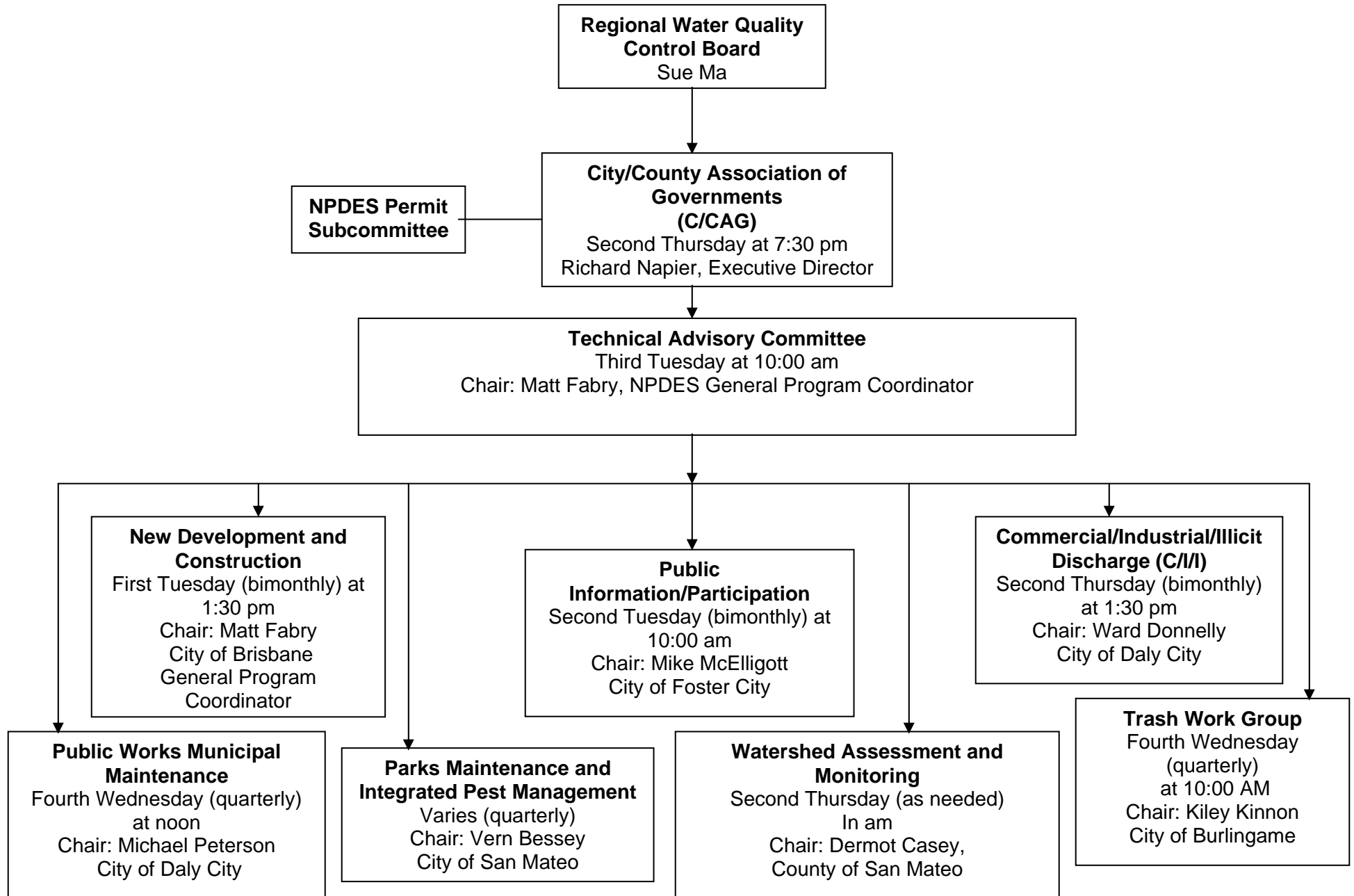
During the 1992 California Legislative Session, AB 2635 (Chapter 1208, Statutes of 1992) extended the authority of the San Mateo County Flood Control District Act. As a result, the Board of Supervisors, acting in its capacity as the Flood Control District Board of Directors, upon a two-thirds vote, may adopt an ordinance to impose charges in any zone or subzone. These charges may be used for the specific purposes of funding flood control, storm drainage, water conservation or supply, or water pollution abatement projects or programs. This ability to impose fees provided a central revenue source for Countywide Program activities that can also be used by local municipal programs to finance local NPDES permit program activities.

In July 2001 the County Board of Supervisors approved an additional fee, based on the findings of a C/CAG Task Force that evaluated a potential fee increase during FY 2000/01. The charges appear on the property tax rolls and are imposed as a separate line item on the property tax bill.



All of the municipalities except Woodside rely on the countywide collection of the basic fee to support their contribution to the Countywide Program. The Town of Woodside uses an alternative funding source to pay its Countywide Program cost share. The cities of Brisbane, Colma and San Mateo, and the Town of Portola Valley participate in the collection of the basic fee, but not the additional fee for supporting the Countywide Program. The cities of Belmont, Brisbane, Colma, Daly City , East Palo Alto, Hillsborough, Menlo Park, Millbrae, Pacifica, and South San Francisco have also established local fees to fund municipality-specific activities.

**SAN MATEO COUNTYWIDE WATER POLLUTION PREVENTION PROGRAM  
ORGANIZATIONAL STRUCTURE AND MEETINGS**



### **List of Stormwater-Related Acronyms**

ACL:	Administrative Civil Liability
BAHM:	Bay Area Hydrology Model
BAMBI:	Bay Area Macroinvertebrate Bioassessment Information Network
BASMAA:	Bay Area Stormwater Management Agencies Association
BMPs:	Best Management Practices
CASQA:	California Stormwater Quality Association
CEP:	Clean Estuary Partnership
CEQA:	California Environmental Quality Act
C/CAG:	City/County Association of Governments of San Mateo County
CII:	Commercial/Industrial/Illicit (Subcommittee)
CIPs:	Capital Improvement Projects
COAs:	Conditions of Approval
EPA:	Environmental Protection Agency
ERP:	Enforcement Response Plan
HM:	Hydromodification Management
IPM:	Integrated Pest Management
LID:	Low Impact Development
MRP:	Municipal Regional Stormwater Permit
MS4:	Municipal Separate Storm Sewer System
NDS:	New Development Subcommittee
NEPA:	National Environmental Policy Act
NOV:	Notice of Violation
NPDES:	National Pollutant Discharge Elimination System
PBDE:	Polybrominated Diphenyl Ethers
PCBs	Polychlorinated Biphenyls

PIP:	Public Information and Participation
POP:	Point of Purchase (PIP campaign)
POTW:	Publicly-Owned Treatment Works (sewage treatment plants)
RGO:	Retail Gasoline Outlets
RMP:	Regional Monitoring Program
SMCWPPP:	San Mateo Countywide Water Pollution Prevention Program
SWPPP:	Stormwater Pollution Prevention Plan
TAC:	Technical Advisory Committee
TMDL:	Total Maximum Daily Load
USA:	Unified Stream Assessment

## Useful Websites for BMP Information

The following Internet links offer useful information for stormwater best management practices. The links are organized by topic headings of General Stormwater Information; New Development; Public Information/Participation; Watershed Assessment and Monitoring; Commercial, Industrial and Illicit Discharge; Municipal Maintenance; and Integrated Pest Management.

### General Information:

[www.flowstobay.org](http://www.flowstobay.org) - home page of the San Mateo Countywide Stormwater Pollution Prevention Program.

[http://www.waterboards.ca.gov/sanfranciscobay/board\\_decisions/adopted\\_orders/2009/R2-2009-0074.pdf](http://www.waterboards.ca.gov/sanfranciscobay/board_decisions/adopted_orders/2009/R2-2009-0074.pdf) - text for the municipal regional stormwater permit from the San Francisco Bay Regional Water Quality Control Board's website

[www.museumca.org/creeks](http://www.museumca.org/creeks) - Oakland Museum of California Creek & Watershed Maps that also depict storm drains two feet or greater in diameter

[http://cfpub.epa.gov/npdes/faqs.cfm?program\\_id=6](http://cfpub.epa.gov/npdes/faqs.cfm?program_id=6) - USEPA's list of Stormwater Frequently Asked Questions.

<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm> - USEPA's Menu of Best Management Practices, including a wide range of BMP fact sheets.

[www.waterboards.ca.gov/sanfranciscobay](http://www.waterboards.ca.gov/sanfranciscobay) - The website of the San Francisco Bay Regional Water Quality Control Board.

[http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/basin\\_plan/docs/basin\\_plan07.pdf](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/basin_plan/docs/basin_plan07.pdf) - The San Francisco Bay Basin Plan (San Francisco Bay Regional Water Quality Control Board, 2006)

[www.basmaa.org](http://www.basmaa.org) - Home page for the Bay Area Stormwater Management Agencies Association (BASMAA).

[www.cabmphandbooks.com](http://www.cabmphandbooks.com) - The California Best Management Practice (BMP) Handbooks page of the California Stormwater Quality Association. The BMP handbooks may be downloaded from this site.

[www.smcmaad.org](http://www.smcmaad.org) - The San Mateo County Mosquito Abatement District

## New Development

[http://www.flowstobay.org/documents/business/new-development/C.3 2010/C3 Tech Guidance Version2 Oct20 2010.pdf](http://www.flowstobay.org/documents/business/new-development/C.3%202010/C3%20Tech%20Guidance%20Version2%20Oct20%202010.pdf) - The Program's C.3 Stormwater Technical Guidance, Version 2, dated October 20, 2010..

<http://www.cabmphandbooks.com/Development.asp> - California Stormwater Quality Association's Statewide New Development and Redevelopment BMP Handbook.

<http://www.cabmphandbooks.com/Construction.asp> - California Stormwater Quality Association's Statewide Construction BMP Handbook.

[www.flowstobay.org/pdfs/bmp/Construction%20Series/SiteDesignGuidebook.pdf](http://www.flowstobay.org/pdfs/bmp/Construction%20Series/SiteDesignGuidebook.pdf) - The countywide Guidebook of Post-Construction BMP Examples, which includes photographs and descriptions of site design measures and stormwater treatment measures in San Mateo County.

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml) - The web page of the State Water Resources Control Board's Construction Stormwater Program, with information about obtaining coverage under the statewide NPDES General Permit for construction activity.

## Public Information/Participation

[http://www.flowstobay.org/cs\\_p3\\_newsletter.php](http://www.flowstobay.org/cs_p3_newsletter.php) - the biannual "Pollution Prevention Post" newsletter published by SMCWPPP and San Mateo County Environmental Health.

## Watershed Assessment and Monitoring

[http://cleanwaterprogram.org/bambi\\_home/index.htm](http://cleanwaterprogram.org/bambi_home/index.htm) - Bay Area Macroinvertebrate Bioassessment Information Network. A network of scientists, watershed managers, regulators and community members interested in using biological communities as indicators of stream health in the San Francisco Bay Area.

## Commercial, Industrial and Illicit Discharge

<http://www.cabmphandbooks.com/Industrial.asp> - California Stormwater Quality Association's Statewide Industrial and Commercial BMP Handbook.

## Municipal Maintenance

<http://www.cabmphandbooks.com/Municipal.asp> - California Stormwater Quality Association's Statewide Municipal Maintenance BMP Handbook.

[http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/pdfs/management\\_ar\\_rwp/CTSW-RT-02-057.pdf](http://www.dot.ca.gov/hq/env/stormwater/special/newsetup/pdfs/management_ar_rwp/CTSW-RT-02-057.pdf) - Caltrans Stormwater Quality Handbook Maintenance Staff Guide May 2003

## Integrated Pest Management

[www.bayfriendly.org](http://www.bayfriendly.org) - The Bay-Friendly Landscaping page sponsored by Stopwaste.org, the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board operating as one public agency. A free copy of the Bay-Friendly Landscaping Guidelines may be ordered or downloaded from this site.

[www.birc.org](http://www.birc.org) - Home page of the Bio-Integral Resource Center, which provides up-to-date resources and information on Integrated Pest Management (IPM).

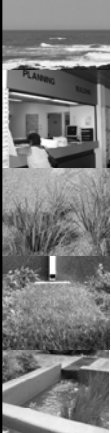
[www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu) - The University of California Online Statewide Integrated Pest Management Program, which provides up-to-date resources and information on IPM.

[www.ourwaterourworld.org](http://www.ourwaterourworld.org) - Website with fact sheets and information on alternative pest control strategies to help consumers manage home and garden pests in a way that helps protect water quality.



## Section 2 New Development and Redevelopment and Construction Site Controls



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## Stormwater Orientation: Requirements for New Development and Redevelopment


Laura Prickett,  
EOA, Inc.

January 25, 2011

## Outline of Presentation

- This is an overview!
- Why include stormwater controls in development projects?
- Defining post-construction controls
- Municipal Regional Stormwater Permit (MRP) requirements
- For more information...



## Warning: This is an Overview!

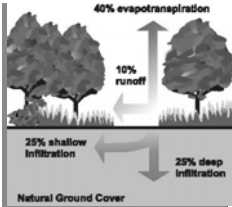
- This overview will introduce you to requirements for new development and redevelopment projects.
- We will focus on “the big picture” and will not cover requirements in detail.

## Why include stormwater controls in development projects?



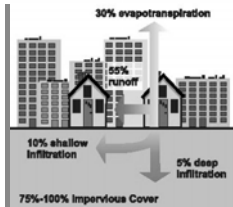
- San Francisco Bay and many local creeks are impaired for numerous pollutants.
- Stormwater runoff is the largest pollutant conveyance.

## Why include stormwater controls in development projects?



**Natural Ground Cover**

Little runoff before development



**75%-100% Impervious Cover**

Lots of dirty runoff after development

## Stormwater Quality and Quantity Matter






## What's the difference between construction and post-construction controls?



Construction BMPs are implemented during construction only



Post-construction controls are permanent features of the project design

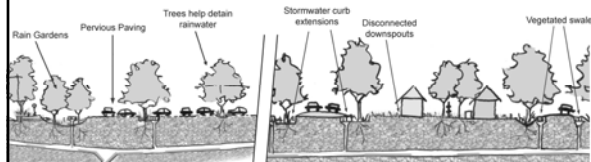
## Defining Post-Construction Controls



- Types of Post-construction controls required by Municipal stormwater permit (Provision C.3)
  - Low Impact Development
    - Source control measures
    - Site design measures
    - Stormwater treatment
  - Hydromodification management (HM)

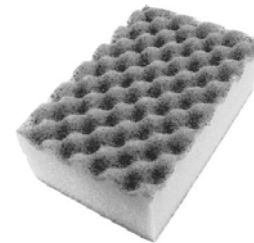
## Low Impact Development (LID)

- Reduce runoff and mimic a site's predevelopment hydrology by:
  - Minimizing disturbed areas and impervious surfaces.
  - Infiltrating, evapotranspiring, harvesting and using, or biotreating stormwater runoff close to its source.



## Low Impact Development (LID)

The landscape as a sponge



## LID Source Control Measures



Air conditioning condensate may need to drain to landscaping



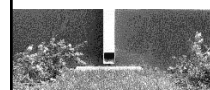
Choose less toxic products for your home and garden. Look for this symbol before you buy.

- Include in all projects, as appropriate
- Reduce pollutant sources
- Examples:
  - Some discharges drain to landscaping
  - Integrated pest management
  - Drought-tolerant native

## LID Site Design Measures



Permeable walkway



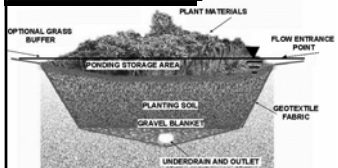
"Disconnected" downspout

- Include in all projects (as appropriate)
- Reduce imperviousness
- Examples
  - Direct runoff to landscaping
  - Preserve open space
  - Promote density

## Stormwater Treatment Measures



Bioretention/Rain Garden



- Remove pollutants using natural processes
- Hydraulically sized per Provision C.3.d of municipal stormwater permit
- Currently required for projects that create and/or replace 10,000 sq. ft. or more of impervious surface

## 4 Kinds of LID Treatment

1. Infiltration  
(includes bioretention areas that infiltrate the Provision C.3.d amount of stormwater)



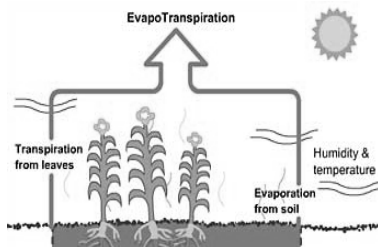
Infiltration trench



Bioretention area

## 4 Kinds of LID Treatment

2. Evapotranspiration  
(Evaporation and the transpiration of water from plants)



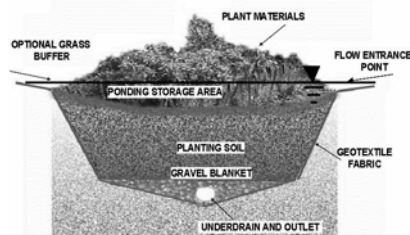
## 4 Kinds of LID Treatment

3. Rainwater harvesting and use



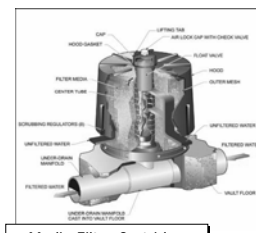
## 4 Kinds of LID Treatment

4. "Biotreatment"  
Bioretention areas that cannot infiltrate and evapotranspire the C.3.d amount of runoff



## Non-LID Treatment


- Beginning December 1, 2011, mechanical, vault-based stormwater treatment systems will not meet LID treatment requirements.



Media Filter Cartridge




Hydrodynamic separator



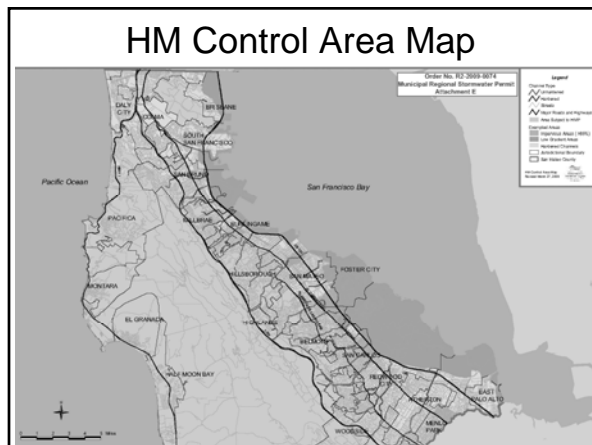
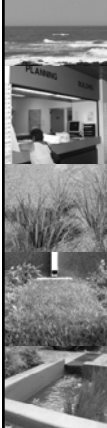
### LID Treatment Required Starting December 1, 2011

- Beginning 12/1/11 “treatment” is:
  - Infiltration,
  - Evapotranspiration,
  - Rainwater harvesting/reuse, or,
  - If the above are infeasible**, biotreatment.
- Regional feasibility criteria:
  - Are being developed.
  - Will be submitted to Regional Water Board on May 1.

### Hydromodification Management




- Reduce erosive flows**
  - Infiltration
  - Harvesting/reuse
  - Evapotranspiration
  - Detention
- Post-Project Rate and Volume of Runoff matches Pre-project (2-10 year storm)
- Required for projects in susceptible areas that create and/or replace 1 acre or more of impervious surface and increase impervious surface over pre-project condition

### Current C.3 Requirements

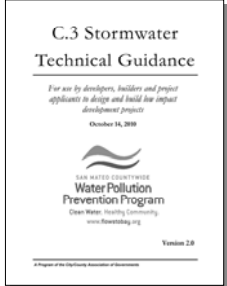
- Source control measures
  - All projects
- Site design measures
  - All projects
- Stormwater treatment
  - Projects that create and/or replace 10,000 square feet or more of impervious surface (stand-alone home exempt)
- Hydromodification Management
  - Projects in susceptible areas that create and/or replace 1 acre or more of impervious surface and increase impervious surface over pre-project condition



### New Requirements Starting December 1, 2011

- LID treatment required.
- Stormwater treatment threshold of 5,000 sq. ft. of impervious surface for:
  - Restaurants
  - Gas stations
  - Auto service facilities
  - Surface parking (even if part of other use)
- Some “special projects” may receive LID treatment reduction:
  - High density
  - Transit oriented development
  - Criteria to be determined

### For More Information...



- Material in this presentation is included in the Countywide Program's C.3 Technical Guidance

## For More Information...



- Municipal Regional Stormwater Permit
  - [www.flowstobay.org/ms\\_municipalities.php](http://www.flowstobay.org/ms_municipalities.php)
- New Development Web Page
  - [www.flowstobay.org/bs\\_new\\_development.php](http://www.flowstobay.org/bs_new_development.php)
  - C.3 Technical Guidance
  - HM Applicability Map
  - Informational flyers and forms

## Stormwater Orientation: Construction Site Control

Laura Prickett, EOA, Inc.

January 25, 2011



## Outline of Presentation

- This is an overview!
- Overall Construction Site Control Requirements
- Inspection Requirements
- Enforcement
- Data Tracking and Reporting
- For more information...



## Warning: This is an Overview!

- This overview will introduce you to construction site control requirements.
- We will focus on “the big picture” and will not cover requirements in detail.



## Overall Construction Site Control Requirements


- Provision C.6 of MRP requires your agency to:
  - Implement a construction site inspection and control program **at all construction sites**
  - Prevent discharges of pollutants and impacts on receiving waters



## Inspection Requirements


- During wet season stormwater inspection at least monthly of:
  - All sites disturbing 1 acre or more of land,
  - “High priority sites”
    - Consider slope, proximity to receiving water, project size and type, etc.
- Record stormwater inspection on inspection checklist!





### Increased Emphasis on Enforcement

- Violations must be corrected within 10 business days – OR record rationale for longer compliance.
- Follow your agency's Enforcement Response Plan, BUT
- Water Board staff has urged more Notices of Violation, less "verbal warnings."
- You can get a Notice of Violation for failing to enforce problems on a site.




### Tracking Data from Construction Site Inspections

- Agencies must track data in a spreadsheet or database
  - Data specified in Provision C.6.e.ii(4)
- The Countywide Program prepared a spreadsheet for data tracking.
- No need to submit the tracking spreadsheet (or database) to the Water Board, unless they request it.




### Reporting on Construction Site Inspections

- Totals from your tracking spreadsheet (or database) must be reported.
- The Annual Report form includes tables for summarizing the results of your construction site inspection program



### Statewide Construction General Permit

- Applies to all projects disturbing 1 acre or more of land.
- For your agency's projects, electronically submit Project Registration Documents, including:
  - Notice of Intent
  - Storm Water Pollution Prevention Plan (SWPPP)
- Verify that applicable private projects in your jurisdiction have obtained coverage



### For More Information...

- Municipal Regional Stormwater Permit  
[www.flowstobay.org/ms\\_municipalities.php](http://www.flowstobay.org/ms_municipalities.php)
- Construction Web Page (public)
  - [www.flowstobay.org/bs\\_construction.php](http://www.flowstobay.org/bs_construction.php)
  - Construction BMP flyers
  - Construction site inspection checklist
- Members Only ND Web Page
  - [http://www.flowstobay.org/log-in.php?page=ms\\_nd.php](http://www.flowstobay.org/log-in.php?page=ms_nd.php)
  - Construction site inspection tracking spreadsheet



### For More Information...

- Statewide Construction General Permit  
[http://www.swrcb.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.swrcb.ca.gov/water_issues/programs/stormwater/constpermits.shtml)





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510.832.2852 x 123

## 2.0 Orientation Information: New Development and Redevelopment and Construction Site Control

The municipal regional stormwater permit's (MRP) new development and construction requirements are directed at **minimizing the adverse impacts of land development** on water quality and beneficial uses, both during and after construction. The following paragraphs summarize the MRP's New Development and Redevelopment (Provision C.3) and Construction Site Control (Provision C.6) requirements and identify "tools" – guidance documents, forms and flyers – provided by the Countywide Program to help municipalities implement the requirements. The Countywide Program's New Development Subcommittee provides a forum for municipal staff to get help implementing these portions of the MRP and provide input on countywide and regional activities to achieve MRP compliance. Most of the Countywide Program's new development and construction tools are included in the online New Development Subcommittee MRP Sourcebook, described below.

### Post-Construction Stormwater Controls/Low Impact Development

Provision C.3 of the MRP includes extensive requirements for new development projects. The focus of the permit's Provision C.3 is for municipalities to require development projects to include **post-construction stormwater control or low impact development (LID) measures**, as summarized below. Municipalities are responsible for imposing these requirements during the development review process.

- **Site Design Measures.** All projects regardless of size should incorporate appropriate site design measures to protect water quality and the beneficial uses of local waters. Examples of site design measures include reducing impervious surfaces, draining rooftop downspouts to pervious areas, and using pervious paving to increase stormwater infiltration.
- **Source Control Measures.** All projects regardless of size should incorporate appropriate source control measures to help keep pollutants out of stormwater. Source controls are practices that prevent potential pollutant sources from contacting rainfall and stormwater. Examples include: roofed trash enclosures,

pest-resistant landscaping, and sanitary sewer connection drains for vehicle wash areas (with sewer district approval).

- **Post-Construction Stormwater Treatment / Low Impact Development (LID) Measures.** Projects that create and/or replace 10,000 square feet of impervious surface, or more, must incorporate stormwater treatment measures using the hydraulic sizing criteria provided in Provision C.3.d of the MRP. Stormwater treatment measures are engineered systems that remove pollutants from stormwater using natural processes. Examples of stormwater treatment measures include vegetated swales, extended detention basins, flow-through planters, and bioretention areas. These systems typically include an underdrain to direct treated runoff to the storm drain system.

Beginning December 1, 2011, all projects that are required to treat stormwater will need to treat the permit-specified amount of stormwater using the following low impact development (LID) methods: rainwater harvesting and reuse, infiltration, or evapotranspiration. When these types of methods are not feasible, traditional biotreatment methods (vegetated swales, bioretention areas, etc., with underdrains) may be used. BASMAA is currently developing criteria to identify projects where evapotranspiration, infiltration and rainwater harvesting/use are infeasible, and these criteria are due to the Water Board by May 1, 2011.

Also beginning December 1, 2011, projects that create and/or replace 5,000 square feet or more of impervious surface related to auto service facilities, retail gasoline outlets, restaurants, and/or surface parking lots will be required to provide LID treatment of stormwater.

Certain “special projects” (e.g., high density and transit-oriented developments) are proposed to receive LID treatment reduction credit and, subject to the Regional Water Board’s approval of this proposal, would be allowed to provide some onsite treatment with media filters and/or proprietary tree well filters. The proposed Special Projects criteria were submitted to the Water Board on December 1, 2010.

- **Hydromodification Management Measures.** Projects that create and/or replace one acre or more of impervious surface, and are located in susceptible areas, have to incorporate appropriate hydromodification management (HM) controls, designed to retain, detain or infiltrate runoff, so that post-project flows and durations match the pre-project condition. The purpose of HM is to minimize the erosion of creek banks that results when open land is covered with buildings and pavement, and the flow duration of runoff to creeks occurs at higher rates for longer periods creating creek channel erosion, flooding and habitat loss. In general, most hillside locations are susceptible to hydromodification, and most flat, Bayside locations are not susceptible.

- **Maintenance Assurance.** Post-construction stormwater treatment measures and/or HM controls require proper operation and maintenance (O&M) to ensure that they function as intended for the life of the project. Projects with post-construction stormwater treatment measures and/or HM controls are required to have a maintenance agreement or other maintenance assurance that assigns the long-term responsibility for maintenance to the property owner, or another responsible party approved by the municipality. Municipalities must have and implement a plan for conducting O&M verification inspections and must report the results of inspections in their annual reports to the Water Board.
- **Green Streets.** The MRP requires the 70-plus agencies that are subject to the MRP to implement, within the region as a whole, 10 green streets projects, which provide landscape-based stormwater treatment (sized according to the Provision C.3 requirements) of a portion of a roadway that is not otherwise subject to Provision C. 3 requirements. The Countywide Program initiated a Sustainable Green Streets and Parking Lots Program in 2007, to use revenues from countywide vehicle registration fees to help municipalities retrofit existing roadways and parking lots with landscape-based stormwater treatment measures. One of the four projects completed to date through this program may meet the specific MRP criteria for green street projects. Of the 10 green street projects required by the MRP, two are required to be located within San Mateo County.

To help the municipalities implement requirements for post-construction stormwater controls, the Countywide Program has developed numerous tools. As indicated in Table 1, a few of these tools are included in this Binder. These and other tools are posted on the Countywide Program's public website (go to [www.flowstobay.org](http://www.flowstobay.org), select the large "Business" tab near the top, then click on "New Development" in the left side menu). Some additional tools are available in the MRP Sourcebook which is available on the password protected portion of the Countywide Program's website. (Go to <http://www.flowstobay.org/>. Select the large "Municipalities" tab near the top. Along the left side menu, scroll down until you come to "Password Protected". To obtain a username and password, contact the website administrator.)

Table 2.1: New Development Tools				
Document Name	Description	Where Located		
		Public Website	MRP Sourcebook	This Binder
New Low Impact Development Requirements	Fact sheet that explains the new LID requirements that go into effect December 1, 2011	X	X	X
Changes to Stormwater Quality Control	Flyer that summarizes the Provision C.3 requirements and is	X	X	X

Table 2.1: New Development Tools				
Document Name	Description	Where Located		
		Public Website	MRP Sourcebook	This Binder
Requirements: Information for Developers, Builders and Project Applicants	intended for municipal staff to hand out to project applicants.			
Hydromodification Management (HM) Requirements	Flyer that explains the requirements for HM.	X	X	X
C.3 Stormwater Technical Guidance	Handbook to help project applicants meet requirements of Provision C.3 in their projects. Includes guidance for implementing site design, source control, treatment and HM measures.	X		
Project Applicant Checklist for NPDES Permit Requirements	Checklist to identify project-specific requirements for construction <u>and</u> post-construction stormwater controls.	X	X	
Impervious Surface Data Collection Worksheet	Form to calculate the area of impervious surface created and/or replaced by a project.	X	X	
Source Control Model List	Model list for municipalities to use as the basis for their local Source Control Measures Lists, which identify required source control measures	X	X	
Model Operation and Maintenance (O&M) Agreement	Model agreement for municipalities to require ongoing O&M of stormwater treatment, LID and/or HM measures.		X	
O&M Verification Inspection Plan Template	Template for municipalities to use to plan O&M verification inspections, as required by the MRP.		X	
Hydromodification Management (HM) Applicability Form	Form for municipal staff to determine if a project must comply with HM requirements.	X	X	
Sustainable Green Streets and Parking Lots Design Guidebook	Guidebook to help municipal staff and project applicants to retrofit streets and parking lots with landscape-based stormwater treatment measures	X		

### Construction-Phase Stormwater Controls

The municipalities' responsibilities for implementing construction-phase stormwater controls are listed in Provision C.6 of the MRP. In general, the municipalities are responsible for complying with the following requirements:

- Implement a construction site inspection and control program at all sites.
- Require all sites to implement site-specific, seasonally- and phase-appropriate, effective BMPs.
- Conduct stormwater inspections at least monthly during the wet season (October 1- April 30) at sites disturbing one acre or more, and at sites identified by your municipality or the Water Board as "high priority," based on factors such as soil erosion potential, site slope, project size or type, nearby receiving water bodies, etc.
- Track and record all inspection data in written or electronic form, including violations found, enforcement, correction, etc.
- Have and implement an Enforcement Response Plan, which identifies enforcement actions and timeframes for problem correction (typically no longer than 10 business days after discovery), and includes a structure for escalating enforcement response.
- Review and approve grading plans for appropriate BMPs.
- Send a pre-wet season letter to owners/developers of sites disturbing one acre or more, and verify Construction General Permit coverage for these sites.
- Provide totals from inspection tracking spreadsheets in annual reports to Water Board.
- Provide training to construction site inspectors at least every other year.

To help the municipalities implement requirements for construction-phase stormwater controls, the Countywide Program has developed the following tools, some of which are available for downloading at [www.flowstobay.org](http://www.flowstobay.org) (Select the large "Business" tab near the top. Along the left side menu, scroll down until you come to "Construction"). As indicated in Table 2.1, other tools may be downloaded from the online MRP Sourcebook on the password protected portion of the Countywide Program's website. (Go to <http://www.flowstobay.org/>. Select the large "Municipalities" tab near the top. Along the left side menu, scroll down until you come to "Password Protected". To obtain a username and password, contact the website administrator.)

<b>Table 2.2: Construction Site Control Tools</b>				
<b>Document Name</b>	<b>Description</b>	<b>Where Located</b>		
		<b>Public Website</b>	<b>MRP Sourcebook</b>	<b>This Binder</b>
Construction BMP Flyers	A series of flyers informs project applicants of BMPs for a wide range of issues, such as general construction and site supervision, heavy equipment operation, roadwork and paving, dewatering, and many more.	X		
A Plan-Sheet Size Copy of Construction BMP Flyers	This large flyer was prepared for contractors to post at construction sites	X		
Inspection Checklist for Construction Stormwater Controls	This form is for construction site inspectors to use when inspecting stormwater controls at active construction sites.	X	X	X
Construction Site Inspections Tracking Worksheet	This form is for tracking construction site inspections for record-keeping purposes.		X	
Enforcement Response Plan (ERP) Template	This template was prepared for municipalities to create their ERPs as required by the MRP.		X	
Pre-wet season letter to site developers/owners	This example letter was prepared for municipalities to notify site developers/owners of wet-season erosion and sediment control requirements.		X	

# Notice to Project Applicants

## Additional, New Stormwater Use and Treatment Requirements Will Go Into Effect December 1, 2011

Additional, new, regional requirements mandated by the Regional Water Quality Control Board will affect private development projects beginning December 1, 2011. The following is a summary of applicable new requirements in Provisions C.3.b.ii and C.3.c.i.2 of the San Francisco Bay Region Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (“Municipal Regional Permit” or “MRP”). The full text of the MRP may be downloaded at [www.flowstobay.org/ms\\_municipalities.php](http://www.flowstobay.org/ms_municipalities.php).

### New Restrictions on Methods of Stormwater Treatment

Beginning December 1, 2011, all projects that are required to treat stormwater will need to treat the permit-specified amount of stormwater runoff with the following low impact development methods: rainwater harvesting and reuse, infiltration, evapotranspiration, or biotreatment. However, biotreatment (filtering stormwater through vegetation and soils before discharging to the storm drain system) will be allowed only where harvesting and reuse, infiltration and evapotranspiration are infeasible at the project site. Criteria for determining infeasibility are scheduled to be developed by May 1, 2011. ***Vault-based treatment will not be allowed as a stand-alone treatment measure.*** Where stormwater harvesting and reuse, infiltration, or evapotranspiration are infeasible, vault-based treatment measures may be used in series with biotreatment, for example, to remove trash or other large solids. (See Provision C.3.c.i.2 of the MRP.)

### New Rules for Auto Service Facilities, Retail Gasoline Outlets, Restaurants, and Uncovered Parking

Beginning December 1, 2011, projects that create and/or replace 5,000 square feet or more of impervious surface related to auto service facilities<sup>1</sup>, retail gasoline outlets, restaurants<sup>2</sup>, and/or surface parking will be required to provide low impact development treatment of stormwater runoff. ***This requirement will apply to uncovered parking that is stand-alone, or included as part of any other development project,*** and it applies to the top uncovered portion of a parking structure, unless drainage from the uncovered portion is connected to the sanitary sewer (see Provision C.3.b.ii.1 of the MRP). For all other land use categories, 10,000 square feet will remain the regional threshold for requiring low impact development, source control, site design, and stormwater treatment, although municipalities may have the authority to require treatment to the maximum extent practicable for smaller projects.

### Will These Requirements Affect My Project?

- If you submitted a development application that was deemed complete before December 1, 2009, and you “diligently pursue<sup>3</sup>” the project, the additional, new requirements will not affect your project.
- If you submit a development application that is deemed complete after December 1, 2009, the additional, new requirements will not apply if the development application has received final discretionary approval before December 1, 2011.
- In all other cases, the additional, new requirements will apply.

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<sup>1</sup> Auto service facilities, described by the following Standard Industrial Classification (SIC) codes:

- 5013: Establishments primarily engaged in wholesale distribution of motor vehicle supplies, accessories, tools, equipment, and parts.
- 5014: Establishments primarily engaged in wholesale distribution of tires and tubes for passenger and commercial vehicles.
- 5541: Gasoline service stations primarily engaged in selling gasoline and lubricating oils.
- 7532: Establishments primarily engaged in the repair of automotive tops, bodies, and interiors, or automotive painting and refinishing.
- 7533: Establishments primarily engaged in the installation, repair, or sale and installation of automotive exhaust systems.
- 7534: Establishments primarily engaged in repairing and retreading automotive tires.
- 7536: Establishments primarily engaged in the installation, repair, or sales and installation of automotive glass
- 7537: Establishments primarily engaged in the installation, repair, or sales and installation of automotive transmissions.
- 7538: Establishments primarily engaged in general automotive repair.
- 7539: Specialized automotive repair such as fuel service (carburetor repair), brake relining, front-end and wheel alignment, and radiator repair.

<sup>2</sup> Restaurants described by SIC code 5812: Retail sale of prepared food and drinks for on-premise or immediate consumption.

<sup>3</sup> Diligent pursuance may be demonstrated by the project applicant’s submittal of supplemental information to the original application, plans, or other documents required for any necessary approvals of the project.





# Changes to Stormwater Quality Control Requirements

Information for Developers, Builders and Project Applicants

## Why Are New Requirements Needed?

Stormwater runoff from urbanized areas remains the largest source of pollution to San Francisco Bay. Local agencies in urbanized portions of the Bay Area are responsible for controlling stormwater pollution by complying with the new Municipal Regional Stormwater Permit, issued by the State Regional Water Quality Control Board (Water Board) in October 2009.



*Rain garden collects and filters parking lot runoff in Brisbane.*

## Overview of Stormwater Requirements

During development review, local agencies require projects to include stormwater controls, including site design measures, source controls, treatment measures, low impact development, hydromodification management, and construction BMPs, as described below. Many of these requirements have existed for years and are unchanged. See the side bar at right for new requirements.

## Site Design for Water Quality

Site design measures to reduce water quality impacts include:

- Reduce impervious surfaces.
- Direct runoff from impervious surfaces to vegetated areas.

## Source Controls

Source controls prevent potential pollutant sources from contacting rainfall and stormwater. Examples include:

- Roofed trash enclosures.
- Pest-resistant landscaping.
- Sanitary sewer drains for vehicle wash areas (with sewer district approval).

Contact the city where your project is located for its Local Source Control Measures list (see Contact Info on page 2).

## Stormwater Treatment

Stormwater treatment measures are engineered systems that remove pollutants before stormwater reaches the storm drain system, and ultimately San Francisco Bay. Examples of stormwater treatment measures include:

- Bioretention areas / rain gardens,
- Flow-through planters,
- Vegetated swales.

Since 2006, projects that create and/or replace 10,000 square feet or more of impervious surface have required hydraulically-sized, post-construction, stormwater treatment measures. Beginning December 1, 2011, new stormwater treatment requirements, described in the sidebar at right, will go into effect.

## Summary of New Requirements

*The following requirements begin December 1, 2011:*

- *Stormwater treatment requirements will have to be met using evapotranspiration, infiltration, and/or rainwater harvesting and reuse. Where this is infeasible, landscape-based treatment measures with underdrains may be used. (More information under "Low Impact Development," below.)*
- *The threshold for requiring stormwater treatment will drop from 10,000 to 5,000 square feet, or more, of impervious surface for the following project categories: uncovered parking areas (stand-alone or part of another use), restaurants, auto service facilities<sup>1</sup>, and retail gasoline outlets.*

## Low Impact Development

The goal of low impact development (LID) is to reduce stormwater runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring (evaporating stormwater into the air directly or through plant transpiration), and/or biotreating stormwater runoff close to its source, or onsite.



**SAN MATEO COUNTYWIDE**  
**Water Pollution Prevention Program**  
Clean Water. Healthy Community.

LID reduces water quality impacts by preserving and re-creating natural landscape features, minimizing imperviousness, and using stormwater as a resource, rather than a waste product.

This may be accomplished by installing rain barrels or cisterns, green roofs, permeable pavement, or stormwater treatment measures designed to infiltrate or detain stormwater runoff, so that 100 percent of the amount of rainwater runoff specified in Provision C.3.d of the Municipal Regional Stormwater Permit soaks into the ground, is stored for use, evaporates, or is taken up by plants. If this is infeasible, landscape-based treatment (“biotreatment,” such as bioretention areas or vegetated swales with underdrain systems that flow to the storm drain system) is allowed.

Criteria and procedures to determine feasibility are scheduled to be available in May 2011. The use of vault-based systems will be restricted, and regional criteria will be developed that may allow vault-based systems in limited types of projects.

### **Hydromodification Management (HM)**

When land is covered with buildings and pavement, runoff enters creeks at higher



*A vegetated swale in San Bruno slows and treats runoff from roadway.*

rates and volumes, resulting in channel erosion, flooding and habitat loss. These changes to waterways are known as hydromodification. Hydromodification management (HM) measures are detention and/or infiltration facilities that are constructed with special discharge structures to match pre-project runoff patterns. HM requirements are different from stormwater treatment, LID, and flood control requirements. If a project creates and/or replaces one acre or more of impervious surface, AND is located in a susceptible area, HM requirements apply. You can view the Countywide Program’s HM Control Area Map, and a flyer on HM requirements, on the Countywide Program’s New Development webpage (see Contact Information).

### **Maintaining Treatment and HM Measures**

Stormwater treatment measures and HM measures need ongoing maintenance to keep working properly. Applicants must prepare a maintenance plan and sign, with the applicable local agency, a maintenance agreement that runs with the land.

### **Construction Site Controls**

Project sites are required to use construction BMPs, such as:

- Prepare and use sediment and erosion control plans.
- Minimize exposed soil by stabilizing slopes.

Projects disturbing one acre or more must comply with the statewide Construction General Permit. Visit [www.swrcb.ca.gov/water\\_issues/programs/stormwater/construction.shtml](http://www.swrcb.ca.gov/water_issues/programs/stormwater/construction.shtml) for more information.

### **Will New Requirements Affect My Project?**

If your permit application was deemed complete before December 1, 2009, and you “diligently pursue<sup>2</sup>” the project, the new requirements do not apply. If a permit application is deemed complete after December 1, 2009, and final discretionary approval is received before December 1, 2011, the new requirements will not apply. Contact the municipality for project-specific information.



*Bioretention area in Daly City collects and filters runoff from adjacent impervious surfaces.*

### **Contact Information:**

- San Mateo Countywide Water Pollution Prevention Program: 650/363-4305, [www.flowstobay.org](http://www.flowstobay.org). (For New Development webpage, click on “Businesses,” then “New Development.” For a list of local new development contacts, click “local permitting agency.”)
- Regional Water Board staff: 510/622-2300.

<sup>1</sup> Auto service facilities are identified using Standard Industrial Classification Codes listed on the Countywide Program’s New Development webpage (click on “New Low Impact Development requirements.”)

<sup>2</sup> Diligent pursuance may be demonstrated by submitting supplemental plans or other documents needed for project approval.

## 2009 Update of the Construction Site Inspection Report Checklist

The San Mateo Countywide Water Pollution Prevention Program's Construction Site Inspection Report checklist has been updated to help municipalities comply with requirements in the Municipal Regional Stormwater Permit (MRP), adopted October 14, 2009, with an effective date of December 1, 2009.

### New Requirements in the Municipal Regional Stormwater Permit (MRP)

The MRP includes new requirements for construction site inspections, tracking and reporting. The checklist has been updated to help you comply with new requirements, including:

- **Inspect High Priority Sites monthly during wet season.** Checklist Item 7 identifies High Priority Sites (sites with significant threat to water quality). MRP Provision C.6.e.i(2) lists the following factors to consider when identifying high priority sites: (i) soil erosion potential or soil type, (ii) site slope, (iii) project size and type, (iv) sensitivity of receiving water bodies, (v) proximity to receiving water bodies, (vi) non-stormwater discharge, and (vii) any other relevant factors as determined by local agency or Water Board.
- **Report on violations within six BMP categories.** The Construction BMPs (Checklist Items 9 –14) are now organized according to six BMP categories in Provision C.6.c of the MRP: erosion control, sediment control, run-on and run-off control, active treatment systems, good site management, and non-stormwater management. Municipalities will need to report on the number and percentage of violations within the six categories.
- **Data tracking and reporting.** The following table identifies other checklist items that collect data required for tracking and/or reporting. The Countywide Program will prepare a separate spreadsheet for tracking and reporting.

Checklist Item	Data for Tracking and/or Reporting
1	Inspection date
1a	Weather during inspection
1b	Rainfall with runoff since last inspection (yes/no)
2	Project name
6	Sites disturbing 1 acre or more of soil
7	High priority site? (yes/no)
9-14	Problems within the construction BMP categories
15	Problems with illicit discharges
16	Date problem first identified
16	Comments
16	Enforcement response level (to correspond with Enforcement Response Plan, which has not been developed yet, but must be implemented by April 1, 2010)
17	Resolution of problems
17	Date problem resolved
17	Rain with runoff after problem identified and before resolution? (yes/no)

## CONSTRUCTION SITE INSPECTION REPORT

1. Inspection Date: \_\_\_\_\_ 1a. Current weather conditions: \_\_\_\_\_ 1b. Rainfall with runoff since last inspection? ☐ Yes ☐ No
2. Name of Project: \_\_\_\_\_ 2a. Project No./Permit No. \_\_\_\_\_
3. Project Location: \_\_\_\_\_
4. Inspection Type: ☐ Routine ☐ Pre-Rain ☐ During Rain ☐ After Rain ☐ Follow-up ☐ Other
5. Permit Type: ☐ Building Permit ☐ Grading Permit ☐ Site Development ☐ CIP Project
6. Project disturb 1 acre or more?: \_\_\_\_\_ (yes/no) NOI Required: \_\_\_\_\_ (yes/no) SWPPP dated \_\_\_\_/\_\_\_\_/\_\_\_\_  
Project covered under Statewide General Construction Activity Permit? \_\_\_\_\_ (yes/no) SWPPP on site? \_\_\_\_\_ (yes/no)
7. High Priority Site (significant threat to water quality)? \_\_\_\_\_ (yes/no)  
NOTE: Sites disturbing 1 acre or more AND High Priority Sites require monthly inspections during the wet season (from Oct. 1 thru April 30).
8. Project Type: ☐ Commercial/Industrial ☐ Residential ☐ Street Improvement ☐ Landscaping  
☐ Utility (water, sewer, PG&E) ☐ Grading ☐ Demolition ☐ Other
9. Erosion Control Measures:  
☐ Jute Netting / Fiber Blankets ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Mulch ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Hydroseed/Soil Binder/Compost Blanket ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Mark Areas to be Preserved ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Tree Protection Fencing ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Riparian Area Barrier ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable
10. Sediment Control Measures  
☐ Wattles / Fiber Rolls /Compost Socks ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Silt Fences / Compost Berms ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Sedimentation Basin ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Inlet filters (Bags, sand, gravel) ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Dust Control ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Stabilized construction entrance ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Check Dams ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Street Sweeping ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Earth Dikes / Drainage Swales ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable
11. Run-on and Runoff Control  
☐ Earth Dikes / Drainage Swales ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Sampling is conducted, if required ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable
12. ☐ Active Treatment System (if any) ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Comments: \_\_\_\_\_
13. Good Site Management  
☐ Construction Materials (wood, cement, etc) ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Petroleum Products (oil, fuel) ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Hazardous materials (paint, solvents) ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Waste Systems Management ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Soil Stockpiles ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Vehicle Servicing ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable
14.  
☐ Concrete washout area ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable  
☐ Other: \_\_\_\_\_ ☐ Adequate ☐ Requires Maintenance ☐ Non-Compliant ☐ Not Applicable
15. Are the discharge points free of any evidence of illicit discharge? ☐ Yes ☐ No Comments: \_\_\_\_\_

16. <b>Enforcement/Follow-Up</b>	Date problem first identified: _____	Next follow-up inspection date: _____
Comments: _____		
Enforcement: <input type="checkbox"/> None/In Compliance <input type="checkbox"/> Verbal Notice <input type="checkbox"/> Notice to Comply <input type="checkbox"/> Notice of Violation <input type="checkbox"/> Stop Work <input type="checkbox"/> Administrative Fine		

17. Resolution: <input type="checkbox"/> Problem Fixed <input type="checkbox"/> Need More Time (include rationale in comments) <input type="checkbox"/> Escalate Enforcement <input type="checkbox"/> Date resolved: _____
Was there rain with runoff after problem identified and before resolution? <input type="checkbox"/> Yes <input type="checkbox"/> No _____ / _____ / _____

18. Inspector's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

19. Name of Project Manager (Print) \_\_\_\_\_ Phone Number \_\_\_\_\_

Signature of Project Manager \_\_\_\_\_ Date: \_\_\_\_\_

## **Section 3   Public Information and Outreach**

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## C.7 Public Information and Outreach



Environmental Health

[PollutionPrevention@co.sanmateo.ca.us](mailto:PollutionPrevention@co.sanmateo.ca.us)

650-372-6245

### C.7.a. Storm Drain Inlet Marking

No Contractor Support

Co-Permittees:



- Inspect and maintain at least 80% of municipality maintained inlets
- New streets marked
- 2013 Annual Report: report % maintained & new streets marked

### C.7.b. Advertising Campaigns

2 Regional Campaigns targeted on trash/litter in waterways & reducing impact of urban pesticides

- SMCWPPP contributes \$40,000 per year
- Environmental Health staff attends monthly BASMAA PIP meetings
- PIP Subcommittee provides input/feedback to campaign development



[http://www.basmaa.org/BoardandCommittees/  
PublicInformationParticipationCPIP.aspx](http://www.basmaa.org/BoardandCommittees/PublicInformationParticipationCPIP.aspx)

### C.7.c. Media Relations – Use of Free Media

BASMAA PIP:

6 Regional Media Relations Pitches

SMCWPPP PIP:

At least 2 Local Media Relations Pitches

### C.7.c continued...

**Local Press Releases 2010-2011**

**California Coastal Cleanup Day, Saturday,  
September 25, 2010**

**Community Action Grants Available to  
Enhance and Protect Water Quality,  
November 1, 2010**

[www.flowstobay.org/press](http://www.flowstobay.org/press)

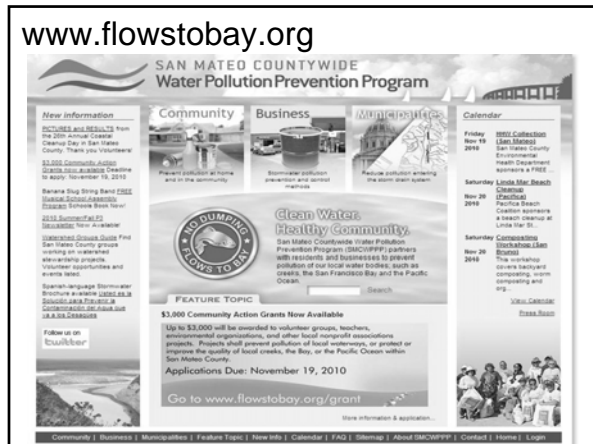
### C.7.d. Stormwater Point of Contact

SMCWPPP:

- Website
- Respond to calls and emails
- Respond to media inquiries

Co-Permittees:

- Contact for Illicit Discharge Coordinator
- Contact for Stormwater Business Inspector



## C.7.e. Public Outreach Events

Co-Permittees:  
Number of events  
based on population  
Table 7.1 page 61 of  
Municipal Regional  
Permit,  
Order No.  
R2-2009-0074

SMCWPPP:  

- Countywide Event
- 2 Daly City
- 1 Redwood City
- 1 Unincorporated Co
- 1 San Mateo
- 1 San Bruno
- 1 So. San Francisco
- 2 others by request



## Outreach Materials www.flowstobay.org/brochures



## Car Wash Outreach



SMCWPPP:  

- Development of "Bay" and "Ocean" Tip Cards
- Car Wash Discount Card (Spring 2011)
- Bus Ads (Spring 2011)

## C.7.f. Watershed Stewardship Collaborative Efforts





### C.7.g. Citizen Involvement Events

#### Co-Permittees:

- Sponsor and/or host the number of citizen involvement events according to population as shown in Table 7.2
- CCCD counts as one Countywide Event

#### SMCWPPP:

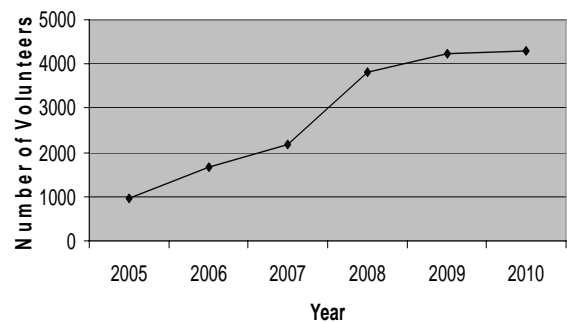
- California Coastal Cleanup Day Coordinator, 3<sup>rd</sup> Saturday in Sept.
- \$15,000 Community Action Grants Awarded

### Coastal Cleanup Day 2010

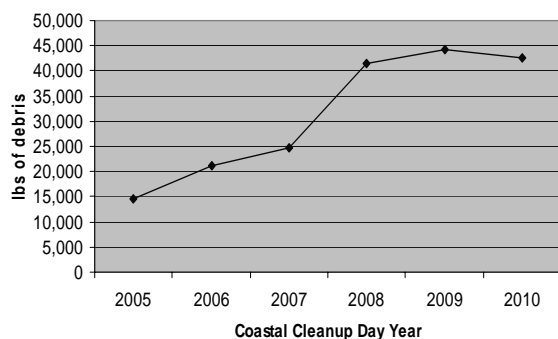
- 5<sup>th</sup> year SMCWPPP coordinated; over 30 cleanup locations, both beach & creek
- Diverted from Waterways: 42,311 lbs of trash & recyclables picked up.
- 4,296 Volunteers
- BYO Campaign (bucket and/or gloves) Reduce amount of trash created by the cleanup itself: 589 volunteers participated



CCCD San Mateo County Volunteers



CCCD Debris Removed San Mateo County



### C.7.h. School Age Children Outreach

- Elementary School Assembly "We All Live Downstream" (K-6<sup>th</sup> grade)
- High School Presentation "Water Pollution Prevention and Your Car" (10<sup>th</sup>-12<sup>th</sup> grade)



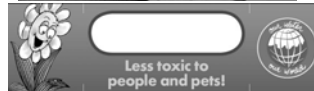
### C.7.i. Outreach to Municipal Officials

Co-Permitees:

- At least once per permit cycle conduct outreach to municipal officials to increase overall awareness of stormwater and/or watershed message(s)

### C.9.h.i. Pesticides Public Outreach: Point of Purchase

Our Water, Our World Retail Partnership



### C.9.h.iii. Pest Control Contracting Outreach

Green Gardener Training Program



## 3.0 Orientation Information: Public Information and Outreach

The primary goals of this component are to:

- Educate the public about the causes of stormwater pollution and its serious effects on the quality of local creeks, lagoons, shorelines and neighborhoods;
- Encourage residents to adopt less polluting and more environmentally beneficial practices; and
- Increase residents' hands-on involvement in the Countywide Program's activities.

Public information and outreach is essential for controlling pollution at the source because most pollutants originate from preventable, everyday activities. Pollutants in stormwater may be reduced by educating residents about the benefits of preventing stormwater pollution and motivating them to do their share to reduce pollution. This approach is recognized as being both cost-effective and efficient in meeting the goal of reducing pollutants in stormwater to the maximum extent practicable.

The municipal regional stormwater permit's (MRP) Public Information and Outreach requirements are proscribed in Provisions C.7 and C.9, and assistance to the municipalities in complying with these requirements is provided by the Countywide Program's Public Information/Participation Subcommittee. Some of the MRP's requirements, such as conducting advertising campaigns on trash/litter in waterways and pesticides and conducting media relations, are conducted more cost-effectively at the regional level through BASMAA.

Each fiscal year the municipalities are responsible for reporting on their implementation of their local Public Information and Outreach section of the Annual Report. The municipality-driven performance standards are summarized below:

- "Marking and maintaining at least 80 percent of municipally-maintained storm drain inlets with an appropriate stormwater pollution prevention message, such as "No dumping, drains to Bay" or equivalent." (Provision C.7.a.i)
- Create and maintain a point of stormwater "contact, e.g., phone number or website, to provide the public with information on watershed characteristics and stormwater pollution prevention alternatives." (Provision C.7.d)
- Participate in and/or host outreach "events, such as fairs, shows, workshops, (e.g., community events, street fairs, and farmers' markets), to reach a broad spectrum of the community with ... stormwater runoff pollution prevention messages." (Provision C.7.e.) The number of public outreach events that each permittee is responsible varies depending on population from 2 to 5 and is listed in the MRP's Table 7.1. Permittees may claim credit for all events in which their Countywide

Program or BASMAA participates, supports, and/or hosts, which are publicized to reach the Permittees jurisdiction.

- “Support citizen involvement events, which provide the opportunity for citizens to directly participate in water quality and aquatic habitat improvement, such as creek/shore clean-ups...” (Provision C.7g) The number of involvement events required varies depending on population from 1 to 3 and is listed in the MRP’s Table 7.2. Permittees can claim individual credit for all events sponsored or hosted by their Countywide Program or BASMAA where the events have been publicized to reach the Permittee’s jurisdiction.
- Conduct outreach at least once per five-year permit cycle to municipal officials in order to significantly increase overall awareness of stormwater and/or watershed message(s) among regional municipal officials (Provision C.7.i).

Public Information and Participation Subcommittee Members				
AGENCY	NAME	ALTERNATE	EMAIL	PHONE
Atherton	Tiffany Telles		<a href="mailto:ttelles@ci.atherton.ca.us">ttelles@ci.atherton.ca.us</a>	752-0544
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Brisbane	Matthew Fabry (Program Coordinator)		<a href="mailto:mfabry@ci.brisbane.ca.us">mfabry@ci.brisbane.ca.us</a>	415-508-2134
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Colma	Muneer Ahmed	Jason Chen	<a href="mailto:muneer.ahmed@colma.ca.gov">muneer.ahmed@colma.ca.gov</a>	757-8888
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Pacifica	Lizzy Claycomb		<a href="mailto:claycombe@ci.pacifica.ca.us">claycombe@ci.pacifica.ca.us</a>	738-7361
Portola Valley	Howard Young		<a href="mailto:hyoung@portolavalley.net">hyoung@portolavalley.net</a>	851-1700 x 14
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San Bruno	Jim Shannon		<a href="mailto:jshannon@sanbruno.ca.gov">jshannon@sanbruno.ca.gov</a>	616-7046
San Carlos	Jill Lewis		<a href="mailto:jlewis@cityofsancarlos.org">jlewis@cityofsancarlos.org</a>	802-4361
San Mateo City	Vern Bessey	Alan Atwater	<a href="mailto:vbessey@cityofsanmateo.org">vbessey@cityofsanmateo.org</a>	522-7342
San Mateo County	Carole Foster		<a href="mailto:cfoster@co.sanmateo.ca.us">cfoster@co.sanmateo.ca.us</a>	599-1219
South San Francisco	Daniel Fulford	Shoshana Wolff	<a href="mailto:daniel.fulford@ssf.net">daniel.fulford@ssf.net</a>	829-3881
Woodside	Gratien Etchbehere		<a href="mailto:getchebehere@woodsidetown.org">getchebehere@woodsidetown.org</a>	851-6790

PIP Consultants:				
Environ. Health	Sarah Schrader	Timothy Swillinger		372-6245
Environ. Health	Mary Bell Austin			372-6259
Environ. Health	Ana Clayton			372-6214
Environ. Health	Mae Gardner			372-6291

## Manage Pests without Harming People, Pets, and our Environment

As part of a program called “Our Water Our World”, the San Mateo Countywide Water Pollution Prevention Program has partnered with retail stores to make less toxic pest control and gardening products more available to consumers. Participating stores (shown below) provide fact sheets and Shelf Talkers to make it easy for you to choose a less or non-toxic product.

### How can the “Our Water, Our World” program help you?

Fact sheets, shelf talkers, less toxic product lists, and online help are all tools to help you manage your home and garden pests.

**Fact Sheets** – 15 fact sheets (Ants, Weeds, Aphids, Roses, and more) designed to assist you in good pest management — preventing pest problems in your home, yard, and garden without harmful effects to non-

target organisms, people and pets. Look for literature racks displaying fact sheets in the pesticide and garden aisle's of participating retail stores listed below. Fact sheets can also be found online at [www.ourwaterourworld.org](http://www.ourwaterourworld.org) or by requesting hard copies at (650) 599-1325.



SHELF TALKERS ARE PLACED BENEATH A LESS TOXIC (OR NON TOXIC) PRODUCT ON THE STORE SHELF.

**Shelf Talkers** – Are small tags placed beneath less toxic products on store shelves that indicate the product is less- or non-toxic to people and pets, but formulated to control and get rid of the targeted pest problem.

**Less Toxic Product Lists** – The products on this list are based on the Bio-Integral Resource Center ([www.birc.org](http://www.birc.org)) directory of less toxic products and the criteria defined by water quality protection agencies. Product Lists and Product List Criteria can be downloaded at [www.ourwaterourworld.org](http://www.ourwaterourworld.org).

**Ask the Expert** – Online help allows you to ask a specific pest control question and receive a personal reply. Your question will be answered by staff at the Bio-Integral Resource Center in Berkeley, California. The Center is a nonprofit organization offering over 25 years of experience in the development and communication of least-toxic methods. Click on “Ask the Expert” at [www.ourwaterourworld.org](http://www.ourwaterourworld.org).

### Pest Control Products to Avoid

- **Aerosols and Home Foggers** disperse chemicals in a way that significantly increase the risk of exposure to people and pets.

- **Metaldehyde Snail Baits** contribute to hundreds of pet poisonings per year.
- **Pyrethroids** are a threat to water quality and are highly toxic to aquatic insects and crustaceans. Avoid products that end in “thrin”. The exception to this is pyrethrin which is produced naturally from the chrysanthemum flower.
- **Lawn Pesticides** are rarely, if ever, needed for home lawns. Chemicals in them are linked to adverse long term health effects. In particular “weed and feed” type products, which mix fertilizers with pesticides, result in unnecessary pesticide use.

### Our Water, Our World Participating Stores in San Mateo County

Store Name	Address	City
<b>North County</b>		
Home Depot	2 Colma Blvd	Colma
Home Depot	303 E. Lake Merced Blvd	Daly City
Orchard Supply Hardware	2245 Gellert Blvd	So. San Francisco
Sloats Garden Center	675 El Camino Real	San Bruno
Orchard Supply Hardware	900 El Camino Real	Millbrae
Orchard Supply Hardware	1010 Metro Center Blvd	Foster City
Home Depot	2001 Chess Dr	San Mateo
Golden Nursery	1122 Second Ave	San Mateo
<b>South County</b>		
CarlmontAce Hardware	1029 Alameda De Las Pulgas	Belmont
Carlmont Nursery	2029 Ralston	Belmont
Brisbane Hardware	1 Visitacion Ave	Belmont
Home Depot	1125 Old County Rd	San Carlos
The Garden Shed	1136 El Camino Real	San Carlos
Wegman's Nursery	492 Woodside Rd	Redwood City
Orchard Supply Hardware	2110 Middlefield Rd	Redwood City
Ace Hardware	700 Santa Cruz Ave	Menio Park
Roger Reynolds Nursery	133 Encinal Ave	Menio Park
Al's Nursery	900 Portola Rd	Portola Valley
Home Depot	1781 East Bayshore Rd	East Palo Alto
<b>Coast</b>		
Linda Mar Hardware	560 San Pedro Ave	Pacifica
Half Moon Bay Nursery	11691 SanMateoRd	Half Moon Bay
Ocean Shore Hardware	111 Main St	Half Moon Bay

**Public Information and Participation Subcommittee**  
**Outreach Materials Available for Spring/Summer 2010**

Please send request to [PollutionPrevention@co.sanmateo.ca.us](mailto:PollutionPrevention@co.sanmateo.ca.us) at least 2 weeks before your event.

**General Stormwater**

<input type="checkbox"/>	"You're the Solution" brochure
<input type="checkbox"/>	Spanish "You're the Solution" brochure
<input type="checkbox"/>	Pollution Prevention Post
<input type="checkbox"/>	The Bay - Car Wash Tip Card
<input type="checkbox"/>	The Ocean - Car Wash Tip Card

**Display**

<input type="checkbox"/>	Inland Watershed Model (Enviroscape)
<input type="checkbox"/>	Coastal Watershed Model (Enviroscape)
<input type="checkbox"/>	Pull up Displays (3) with stormwater messages
<input type="checkbox"/>	Table Cloth with SMCWPPP Logo

**Pesticides Toxicity Control**

<input type="checkbox"/>	Bay Friendly Garden Guides
<input type="checkbox"/>	10 most wanted bugs brochure
<input type="checkbox"/>	OWOW business card
<input type="checkbox"/>	OWOW pocket guide
<input type="checkbox"/>	OWOW Magnet
<input type="checkbox"/>	Fact Sheet Booklet (all factsheets)
<input type="checkbox"/>	Individual Fact Sheets, available in English and Spanish: (please circle the ones you need)

Ants      Aphids      Fleas  
Roses    Cockroaches    Lawns  
Spiders   Mosquitoes   Yellowjackets  
Weeds      Snails & Slugs  
Use and Disposal of Pesticides  
Finding a Pest Control Company  
Pesticides and Water Pollution  
Growing a Health Garden to Manage Pests Naturally

**Children's Activity Guides**

<input type="checkbox"/>	Blue Fish Activity Book
<input type="checkbox"/>	Pest or Pal Activity Book
<input type="checkbox"/>	Watershed Protection Activity Book
<input type="checkbox"/>	Healthy Water/People Activity Book
<input type="checkbox"/>	Stormwater Activity Book
<input type="checkbox"/>	Don't Be a Litterbug Activity Guide

**Litter Reduction**

<input type="checkbox"/>	Pocket Ashtray
<input type="checkbox"/>	This is Litter Too sign, 8 1/2" x 11"
<input type="checkbox"/>	This is Litter Too sign, 5" x 8 1/2"

**Promotional Items**

<input type="checkbox"/>	Fish Sponge
<input type="checkbox"/>	Bookmark
<input type="checkbox"/>	Pencils
<input type="checkbox"/>	Fish Eraser
<input type="checkbox"/>	Crayons
<input type="checkbox"/>	Paper Bags

**Environmental Health**

<input type="checkbox"/>	Household Hazardous Waste brochure
<input type="checkbox"/>	Household Hazardous Waste business card
<input type="checkbox"/>	Fluorescent Light Recycling brochure
<input type="checkbox"/>	Used Oil Recycling brochure
<input type="checkbox"/>	Used Oil Recycling Coloring book
<input type="checkbox"/>	Less Toxic Cleaning Alternatives

## **Section 4 Industrial and Commercial Site Controls, Illicit Discharge Detection and Elimination and Pollutants of Concern**



## Specific Requirements of Municipal Regional Stormwater Permit

### *Stormwater Orientation for Municipal Staff*

Fred Jarvis, EOA, Inc. January 25, 2011

Industrial and Illicit Discharge Controls



Trash & IPM



Municipal Maintenance



## Outline of Presentation

- Maintenance Operations Requirements
- Trash Load Reduction
- Pesticides Toxicity Control
- Industrial & Commercial Site Controls
- Illicit Discharge Detection & Elimination



## Maintenance Operations Requirements

MRP Includes Following:

- Street repair & maintenance
- Sidewalk/plaza maintenance & pavement washing
- Corporation yard BMPs
- Storm drain pump station maintenance



## Street Repair & Maintenance

**Even if your agency contracts out this work, agency is responsible for making sure the contractor uses BMPs**



## Street Repair & Maintenance MRP Requirements

- Implement appropriate BMPs to control debris and waste materials
- Avoid discharge to storm drains of concrete slurry and wastewater, pavement cutting, and maintenance materials
- Use sweeping or vacuuming to remove debris or sediment residues upon completion of work



## Sidewalk/Plaza Maintenance & Pavement Washing

MRP requires implementation of BASMAA's Mobile Surface Cleaner Program BMPs

- Municipalities whose staff surface clean should obtain BASMAA online training
- BASMAA website is listed in binder under useful websites



## Corporation Yard BMPs

- **Countywide Program developed a template for corporation yard Stormwater Pollution Prevention Plan**
- Each agency with corporation yard or parks maintenance facility needs a SWPPP
- SWPPP has general good housekeeping BMPs and activity specific, e.g., vehicle fueling
- Wash all vehicles/equipment on **designated wash pad**



## Corporation Yard Waste & Recycling Storage BMPs

- Keep waste storage areas clean
- Inspect, sweep, and pick up waste storage areas daily during work days
- Store street sweeping and inlet cleaning wastes on **impervious surface** under cover, if possible



Store wastes as far as possible from storm drain inlet



Inspect corporation yard weekly to make sure BMPs are being used



## Stormwater Pump Station MRP Requirements

- Inspect and collect dissolved oxygen data twice a year during dry season –
- If dissolved oxygen is below 3 mg/l take corrective actions
- Inspect pump stations min. of 2x during wet season 1<sup>st</sup> business day following  $\geq \frac{1}{4}$  inch of rainfall
- Remove trash and replace oil absorbent booms as needed



## Trash Load Reduction MRP Requirements



## Trash Load Reduction MRP Requirements

- Major new, expensive requirements compared to previous permits
- Each agency will need to achieve a 40% trash load reduction from MS4 by 7-1-14
- 70% trash load reduction by 2017 & 100% by 2022



## Trash Load Reduction MRP Requirements

Identify and annually clean up trash hotspots



## Most Agencies Have to Install and Maintain Full Trash Capture Devices

- MRP requires installation of full trash capture devices equivalent to 30% of retail/wholesale land area by 7-1-14
- Can install trash capture devices where will do most good



## Pesticides Toxicity Control MRP Requirements

- Agencies had similar requirements under previous permit
- MRP lists specific pesticides that are a concern for stormwater quality
  - Organophosphorous pesticides
  - Pyrethroids
  - Carbamates (e.g. carbaryl)
  - Fipronil
- Each agency must have an IPM Policy or ordinance

### Pesticides Toxicity Control MRP Requirements

- Need to train municipal employees who use pesticides about IPM
- Parks Maintenance and IPM Work Group sponsors annual training – next training will be held on Feb. 24
- Even if agency contracts out pest control work, agency is responsible contractor following IPM policy



### Industrial and Commercial Site Control MRP Requirements

- San Mateo County Environmental Health has contract with most cities to inspect businesses & facilities
  - Inspect retail food facilities
  - Inspect hazardous waste generators and users of hazardous materials
- Are additional businesses MRP requires be inspected and any problems resolved, documented, and reported

### Industrial and Commercial Site Control MRP Requirements

- Cities are responsible for meeting the MRP requirements even if have a contract with another agency
- Cities' staffs need to make sure all businesses required by MRP are included in inspection program
- Cities' staffs may need to do enforcement of non-hazmat/retail food regulation violations found



### Illicit Discharge Detection and Elimination MRP Requirements

- Most non-stormwater discharges disallowed by MRP and previous permits
- Agencies need to have an effective program of prohibiting illicit discharges
- Countywide Program developed reporting spreadsheet to document MRP compliance

### Examples of Illicit Discharges

#### ■Washwaters- Account for almost one-half of illicit discharges

- Vehicle cleaning – 16%
- Building sidewalk washwaters – 10%
- Other washwaters – 14%
- Concrete cutting slurry/washwater – 6%



## Examples of Illicit Discharges



### ■ Construction Related- Accounts for 17% of illicit discharges

- Concrete debris - 7%
- Paint - 6%
- Concrete 3%
- Wall compound - 1%



## Examples of Illicit Discharges

- Sewage - 12%
- Food Wastes - 7%



## Examples of Illicit Discharges

- Automotive fluids - 8% of discharges



## Conditionally Exempted Non-Stormwater Discharges

- Permit Allows Some Minor Discharges if Best Management Practices Are Used
- Examples:
  - Uncontaminated pump groundwater
  - Dechlorinated potable water
  - Air conditioning condensate
  - Landscape irrigation
- Information in MRP's Provision C.15 - **Many new requirements for agencies that are potable water purveyors**



## **4.0                   Orientation Information: Industrial and Commercial Site Controls, Illicit Discharge Detection and Elimination, And Pollutants of Concern**

The Countywide Program's Commercial, Industrial, and Illicit Discharge Control Subcommittee is primarily responsible for assisting the member agencies to implement the following MRP Provisions:

- Industrial and Commercial Site Controls (Provision C.4).
- Illicit Discharge Detection and Elimination (Provision C.5).
- Specific pollutants of concern requirements listed under Polychlorinated Biphenyls (PCBs) Controls – Implement Project throughout the Region to Incorporate PCBs and PCB-Containing Equipment Identification into Existing Industrial Inspections (Provision C.12.a); and Copper Controls – Industrial Sources (Provision C.13.d),

### Industrial and Commercial Site Controls

Sixteen of the municipalities in San Mateo County (Atherton, Belmont, Brisbane, Burlingame, Colma, East Palo Alto, Half Moon Bay, Hillsborough, Menlo Park, Millbrae, Pacifica, Redwood City, San Bruno, San Carlos, Portola Valley, and Woodside) have contracts with San Mateo County Environmental Health to conduct stormwater inspections of retail food facilities and facilities that use hazardous materials or generate hazardous wastes.

Municipalities are responsible for inspecting and correcting problems found at businesses and facilities in a timely manner (typically no longer than 10 business days after discovery) as described in the MRP (Provision C.4.c.ii.(2)).

There are some businesses and facilities that meet the MRP's criteria for inspection that are not hazmat or retail food facilities. The MRP requires that businesses and facilities having a reasonable potential to contribute pollutants to stormwater runoff be

inspected. Examples of non-hazmat and non-retail food facilities that may contribute pollutants to stormwater include limousine services; marble and other stone cutters and fabricators; cleaning business, such as carpet cleaners and mobile auto detailers; non-retail food preparers; and corporation yards. Some municipalities supplement the inspections that County Environmental Health staff conducts with their own business and facility inspections. County Environmental Health staff is exploring the possibility of providing additional inspection services to municipalities for those businesses and facilities that it currently does not inspect, but require inspection under the MRP.

County Environmental Health also relies on the assistance of the municipalities it has inspection contracts with to forward information about hazmat and retail food facilities that are new or have not been included on County Environmental Health's lists for inspection. Most municipalities have identified businesses that should be inspected, but were not included on County Environmental Health's list of retail food facilities or hazmat businesses.

The following table contains information about a number of useful Provision C.4 guidance materials. The table is excerpted from the FY 2009-2010 Annual Report. Guidance materials available on the password protected portion of the Countywide Program's website at [http://www.flowstobay.org/ms\\_annual\\_report.php](http://www.flowstobay.org/ms_annual_report.php).

<b>Table 4.1: Provision C.4 Industrial and Commercial Site Controls</b>		
<b>Section</b>	<b>Support Document</b>	<b>Download or Link</b>
C.4.c.ii.(5)	Template Enforcement Response Plan for the Municipal Stormwater Program Agency	<a href="#">Enforcement Response Plan</a> (word)
	Benicia's ERP	<a href="#">Benicia ERP</a> (pdf)
	Milpitas' ERP	<a href="#">Milpitas ERP</a> (pdf)
	Selina T. Louie, SF Bay Regional Water Quality Control Board, ERP email; Daly City's Notice of Violation Form	<a href="#">Selina T. Louie ERP</a> (word) <a href="#">Daly City Notice of Violation</a>
C.4.b.i.	Industrial and Commercial Business Inspection Plan Template	<a href="#">Inspection Plan Template</a> (word)
C.4.b.iii.(1)	For cities with a contract with County Environmental Health	<a href="#">C.4.b.iii.(1) Potential Facilities List</a> (excel)
C.4.b.iii.(2)	For cities with a contract with County Environmental Health	<a href="#">C.4.b.iii.(2) Facilities Scheduled for Inspection</a> (excel)
C.4.c.iii.(1)	Hazardous Materials and Food Stormwater Inspections Reports from Environmental Health	<a href="#">Link to Inspection Table on TAC webpage</a>
C.4.d.iii.	POC Commercial/ Industrial Inspector Training Material	<a href="#">POC Training Manual</a> (pdf)
	Inspecting Industrial/Commercial Facilities for Pollutants of Concern – presentations	<a href="#">Presentation</a> (pdf) or <a href="#">Presentation</a> (PowerPoint)

### Illicit Discharge Detection and Elimination

Illicit discharges are non-stormwater discharges that are disallowed to be discharged to the municipal separate stormwater system by the MRP's Discharge Prohibition A.1. The most commonly encountered illicit, non-stormwater discharges and their percent occurrence based on Countywide Program reporting in FY 2008/09 include the following:

1. Washwaters 46%
  - Vehicle cleaning washwaters 16%
  - Building/sidewalk washwaters 10%
  - Concrete cutting slurry/washwaters 6%
  - Other washwaters 14%
2. Construction Materials 17%
  - Construction debris 7%
  - Paint 6%
  - Concrete 3%
  - Wall compound 1%
3. Sewage 12%
4. Automobile Fluids 8%
  - Used motor oil 6%
  - Fuel 1%
  - Antifreeze 1%
5. Food Wastes 7%
6. Other 6%

Non-stormwater discharges should be discharged to the sanitary sewer system after obtaining permission from the local sanitary sewer agency or some other alternative method should be identified to eliminate the generation of the waste water/wastes or prevent its discharge to the storm drain system.

Provision C.5 describes Illicit Discharge Detection and Elimination requirements that each Countywide Program member agency is required to meet. Three of the essential requirements of this provision include:

- Spill and Dumping Response, Complaint Response, and Frequency of Inspections (Provision C.5.c);
- Collection System Screening – Municipal Separate Storm Sewer System (MS4) Map Availability (Provision C.5.e); and
- Tracking and Case Follow-up (Provision C.5.f)



Municipal staff should have a copy of the spill/dumping response flow chart and phone contact list that the MRP required each agency to prepare and keep updated. Municipal staff that perform field work in or near the municipal separate storm sewer system, such as maintenance staff, should be familiar with their agency's screening program for identifying, tracking, recordkeeping, and eliminating illicit discharges.

The following table contains information about a number of useful guidance materials. The table is excerpted from the FY 2009-2010 Annual Report Guidance materials available on the password protected portion of the Countywide Program's website at [http://www.flowstobay.org/ms\\_annual\\_report.php](http://www.flowstobay.org/ms_annual_report.php).

<b>Table 4.2: Provision C.5 Illicit Discharge Detection and Elimination</b>		
<b>Section</b>	<b>Support Document</b>	<b>Download or Link</b>
C.5.b.ii.(4)	Same as C.4.c.ii(5)	
C.5.c.iii.	Stormwater Illicit Discharge Contacts	<a href="#">Link to Contact Page</a> (link)
C.5.e.iii.	C.5e – Storm System Screening Form	<a href="#">C.5.e Form</a> (excel)
	Summary of Stormwater Collection System Screening Program for Illicit Discharges and Illegal Dumping	<a href="#">Screening Program</a> (word)
C.5.f.iii.(1),(2),(3)	Complaint/Spill/Discharge Tracking Spreadsheet	<a href="#">Tracking Spreadsheet</a> (excel)
	California Emergency Management Agency Hazardous Materials Spill Report, San Mateo County	<a href="#">Spill and Discharge Complaint Tracking</a> (excel)

It is important to understand that County Environmental Health staff does not assist the municipalities it has contracts with to comply with the Illicit Discharge Detection and Elimination requirements other than for illicit discharges it may find as part of its contracted business and facility inspections. Even when County Environmental Health finds an illicit discharge, such as washwaters, it may need the local municipality to take the lead by enforcing its local stormwater ordinance and using its local Enforcement Response Plan to achieve compliance.

Except for a certain types of non-stormwater discharges specifically described in Provision C.15 Exempted and Conditionally Exempted Discharges, the MRP disallows most non-stormwater discharges to the municipal separate storm sewer system. The MRP allows some types of unpolluted discharges that have not been identified by the permittees or Water Board's Executive Officer as sources of pollutants to receiving waters. Examples in this exempted category include uncontaminated and unpolluted groundwater infiltration; single family homes' pumped groundwater; foundation drains; and water from crawl space pumps and footing drains; pumped groundwater from drinking water aquifers; and National Pollutant Discharge Elimination System (NPDES) permitted discharges.

Provision C.15 also conditionally allows some types of non-stormwater discharges as prescribed in Provision C.15.b. The conditionally exempted non-stormwater discharges may include pumped groundwater from non drinking water aquifers; foundation drains; and water from crawl space pumps and footing drains; planned, unplanned, and emergency discharges of potable water; swimming pool, hot tub, spa, and fountain water discharges; air conditioning condensate; and individual residential car washing.

The conditions that must be met to qualify these discharges as exempted is extensive for potable water discharges. Any municipality that is a potable water provider needs to make sure its staff are thoroughly familiar with and implement the MRP's extensive monitoring, record keeping, and reporting requirements (Provision C.15.b.iii) for planned and unplanned discharges. The list of required monitoring, information collection and reporting is significant as described in the MRP. There are also some situations where the MRP will require immediate ("as soon as possible, but no later than two hours of becoming aware..." –Provision C. 15.b.iii.(2).(c)(i)) notifications to the State Office of Emergency Services, such as an unplanned potable water discharge that causes a fish kill. The Water Board needs to be notified under the following conditions: a planned potable water discharge has a flow rate of 250,000 gallons per day or more, or a total volume of 500,000 gallons or more, and where unplanned discharge of approximately 50,000 gallons or more has a chlorine residual greater than 0.05 mg/L.

#### Incorporate PCBs and PCB-Containing Equipment Identification into Existing Industrial Inspections (Provision C.12.a)

The MRP requires that permittees "to identify, during the course of their existing inspections, PCBs or PCB-containing equipment." The MRP also requires that "where inspectors identify during inspections PCBs or PCB-containing equipment, the Permittees shall document incidents in inspection reports and refer to appropriate regulatory agencies... as necessary."

BASMAA has prepared training materials to assist business inspectors to meet the MRP's requirements for identifying during existing inspections PCBs or PCB-containing equipment. These training materials are available on the password protected portion of the Countywide Program's website at [http://www.flowstobay.org/ms\\_annual\\_report.php](http://www.flowstobay.org/ms_annual_report.php).

#### Ensure BMPs To Control Copper During Inspections

The MRP's Provision C.13.d Industrial Sources requires that as part of their business inspections "permittees include facilities that use or have sources of copper (e.g., plating facilities, metal finishers, auto dismantlers)..." The owners and operators of

these facilities need to be educated about proper BMPs in order to ensure that proper BMPs are being used to minimize the discharge of copper to storm drains. As part of the inspections of these businesses, the adequacy of the copper controlling BMPs needs to be checked “including the consideration of roof runoff that might accumulate copper deposits from ventilation systems on-site.”

## Stormwater Business Inspectors

Municipal Stormwater Inspectors visit commercial and industrial businesses to help them understand and comply with stormwater pollution control requirements.

Municipality	Contact Hazardous Materials (HM), (Food)	Phone
City of Atherton	Steve Lowe (HM); Ngai Wong (Food)	372-6200
City of Belmont	Robert Keliiaa(HM); Brent Guier (Food)	372-6200
City of Brisbane	Matthew Fabry	415-508-2130
City of Burlingame	Dermot Casey(HM); Lyna Nguyen (Food); Kiley Kinnon	372-6200 342-3727
Town of Colma	Robert Reed (HM); Edmond Tong (Food)	372-6200
City of Daly City	Ward Donnelly	991-8208
City of East Palo Alto	Sabrina Mih (HM); Joanne San Jose (Food)	372-6200
City of Foster City	Robert Keliiaa (HM); Frobie Ernest (Food)	372-6200
City of Half Moon Bay	Patrick Ledesma (HM); Michelle Bilodeau (Food)	372-6200
Town of Hillsborough	Dermot Casey (HM); Lyna Nguyen (Food)	372-6200
City of Menlo Park	Sabrina Mih (HM); Ngai Wong (Food)	372-6200
City of Millbrae	Bev Baldwin(HM); Christina Hum (Food)	372-6200
City of Pacifica	Patrick Ledesma (HM); Edmond Tong (Food)	372-6200
Town of Portola Valley	Sabrina Mih (HM); Ngai Wong (Food)	372-6200
Redwood City	Steve Lowe (HM);Christine Khine, Joanne San Jose, (Food)	372-6200
City of San Bruno	Bev Baldwin (HM); Cristina Hum (Food)	372-6200
City of San Carlos	Marjorie Terrel (HM); Brent Guier (Food)	372-6200
San Mateo County (unincorporated)	Dermot Casey (HM); Michelle Bilodeau & Elizabeth Villarreal (Food)	372-6200
City of San Mateo	John Moore, Vern Bessey	522-7343 522-7342
City of South San Francisco	Daniel Fulford	829-3848
Town of Woodside	Sabrina Mih (HM); Brent Guier (Food)	372-6200

## Stormwater Illicit Discharge Coordinators

Municipal stormwater illicit discharge coordinators should be contacted if a suspected illicit discharge is found that is or may reach a municipal separate storm sewer system.

Municipality	Illicit Discharge Coordinators	Email	Phone
City of Atherton	Steve Tyler	<a href="mailto:styler@ci.atherton.ca.us">styler@ci.atherton.ca.us</a>	(650) 752-0541
City of Belmont	Bozhena Palatnik	<a href="mailto:Bpalatnik@belmont.gov">Bpalatnik@belmont.gov</a>	(650) 595-7463
City of Brisbane	Dale Allen Diane Cannon	<a href="mailto:dallen@ci.brisbane.ca.us">dallen@ci.brisbane.ca.us</a> <a href="mailto:dcannon@ci.brisbane.ca.us">dcannon@ci.brisbane.ca.us</a>	(650) 219-0757 (415) 508-2130
City of Burlingame	Kiley Kinnon Eva Justimbaste	<a href="mailto:Kiley.kinnon@VeoliaWaterNA.com">Kiley.kinnon@VeoliaWaterNA.com</a> <a href="mailto:Eva.Justimbaste@VeoliaWaterNA.com">Eva.Justimbaste@VeoliaWaterNA.com</a>	(650) 342-3727 office (650) 333-1554 cell (650) 342-3727
Town of Colma	Muneer Ahmed	<a href="mailto:muneer.ahmed@colma.ca.gov">muneer.ahmed@colma.ca.gov</a>	(650) 757-8894
City of Daly City	Cynthia Royer Ward Donnelly	<a href="mailto:croyer@dalycity.org">croyer@dalycity.org</a> <a href="mailto:wdonnelly@dalycity.org">wdonnelly@dalycity.org</a>	(650) 991-8203 (650) 991-8208
City of East Palo Alto	Lucy Chen Jay Farr	<a href="mailto:lchen@cityofepa.org">lchen@cityofepa.org</a> <a href="mailto:jfarr@cityofepa.org">jfarr@cityofepa.org</a>	(650) 853-3191 (650) 250-0308
City of Foster City	Norm Dorais	<a href="mailto:ndorais@fostercity.org">ndorais@fostercity.org</a>	(650) 286-3279
City of Half Moon Bay	Charlie Voos Mo Sharma	<a href="mailto:cvoos@hmbcity.com">cvoos@hmbcity.com</a> <a href="mailto:mosharma@hmbcity.com">mosharma@hmbcity.com</a>	(650) 504-8142 (650) 726-8265
Town of Hillsborough	Craig West Dave Bishop	<a href="mailto:cwest@hillsborough.net">cwest@hillsborough.net</a> <a href="mailto:dbishop@hillsborough.net">dbishop@hillsborough.net</a>	(650) 375-7515 (650) 375-7588
City of Menlo Park	Virginia Parks	<a href="mailto:vkfparks@menlopark.org">vkfparks@menlopark.org</a>	(650) 330-6752
City of Millbrae	Catherine Allin-Tollstrup Kevin Cesar	<a href="mailto:callin@ci.millbrae.ca.us">callin@ci.millbrae.ca.us</a> <a href="mailto:kcesar@ci.millbrae.ca.us">kcesar@ci.millbrae.ca.us</a>	(650) 259-2397 (650) 259-2392
City of Pacifica	Elizabeth Claycomb Raymond Donguines	<a href="mailto:claycombe@ci.pacifica.ca.us">claycombe@ci.pacifica.ca.us</a> <a href="mailto:donguinesr@ci.pacifica.ca.us">donguinesr@ci.pacifica.ca.us</a>	(650) 738-7361 (650) 738-3768
Town of Portola Valley	Howard Young	<a href="mailto:hyoung@portolavalley.net">hyoung@portolavalley.net</a>	(650) 851-1700 ext 214
Redwood City	Ray Bartolo Marilyn Harang	<a href="mailto:Rbartolo@redwoodcity.org">Rbartolo@redwoodcity.org</a> <a href="mailto:Mharang@redwoodcity.org">Mharang@redwoodcity.org</a>	(650) 780-7470 (650) 780-7477
City of San Bruno	Gary Lepori	<a href="mailto:glepori@sanbruno.ca.gov">glepori@sanbruno.ca.gov</a>	(650) 616-7020
City of San Carlos	Paul Baker	<a href="mailto:pbaker@cityofsancarlos.org">pbaker@cityofsancarlos.org</a>	(650) 802-4143
San Mateo County (unincorporated)	Dermot Casey	<a href="mailto:djcasey@co.sanmateo.ca.us">djcasey@co.sanmateo.ca.us</a>	(650) 372-6257
San Mateo County Flood Control	Julie Casagrande	<a href="mailto:jcasagrande@co.sanmateo.ca.us">jcasagrande@co.sanmateo.ca.us</a>	(650) 599-1457

Municipality	Illicit Discharge Coordinators	Email	Phone
City of San Mateo	Vern Bessey Alan Atwater	<a href="mailto:bessey@cityofsanmateo.org">bessey@cityofsanmateo.org</a> <a href="mailto:aatwater@cityofsanmateo.org">aatwater@cityofsanmateo.org</a>	(650) 522-7342 (650) 522-7343
City of South San Francisco	Cassie Prudhel Rob Lecel Hotline	<a href="mailto:cassie.prudhel@ssf.net">cassie.prudhel@ssf.net</a> <a href="mailto:rob.lecel@ssf.net">rob.lecel@ssf.net</a>	(650) 829-3840 (650) 829-3882 (650) 829-3848
Town of Woodside	Gratien Etchebehere Eunejune Kim	<a href="mailto:getchebehere@woodsidetown.org">getchebehere@woodsidetown.org</a> <a href="mailto:ekim@woodsidetown.org">ekim@woodsidetown.org</a>	(650) 851-6790 (650) 851-6790

\*Where two names are provided, the first name is the primary contact and the second name is the alternate.



**SAN MATEO COUNTYWIDE**  
**Water Pollution Prevention Program**  
Clean Water. Healthy Community.

City: \_\_\_\_\_ ☐ Unincorporated

Date: \_\_\_\_\_ ☐ Food ☐ Haz Mat

**Standard Stormwater Facility Inspection Report Form**

Reason for Inspection: ☐ First Inspection ☐ Routine Inspection ☐ Response to Complaint ☐ Follow-up

**Follow-up /  
Re-Inspection Due:**

NAME OF FACILITY

SITE ADDRESS

CONTACT NAME

PHONE

BUSINESS TYPE/ACTIVITY

SIC

Pollutants of Concern Used at Facility? ☐ yes ☐ no If yes, indicate which ones: ☐ PCBs ☐ Mercury ☐ Copper ☐ Other \_\_\_\_\_

Is the facility covered under any other programs or permits? (Check all that apply.)

☐ Air quality

☐ Hazmat business plan

☐ None

☐ Sanitary sewer

☐ Fire department (hazmat storage)

☐ Hazmat waste generator

☐ Underground storage tanks

☐ Above ground storage tanks

☐ Retail food facility

☐ Other \_\_\_\_\_

Is the facility covered under a storm water permit?

☐ Does not need coverage

☐ No, but may need to be (Refer to Water Board staff)

☐ Individual

☐ General:

Does the facility have a SWPPP? ☐ yes ☐ no

N/A = Not Applicable; **PTNL** = POTENTIAL for Pollutant Discharge: 1 = low potential, 2 = medium potential, 3 = high potential **NSW** = Non-Stormwater Discharge

**BMP** effectiveness: 0 = BMPs are effective, 1 = BMPs are fairly/almost effective, 2 = BMPs are not effective, 3 = No BMPs are implemented

ACTIVITY AREAS		Poten- tial	Effect- iveness	Actual Discharge	<input type="checkbox"/> Check box if educational outreach material is distributed and provide title(s) of outreach material(s):  <b>Follow-Up Action Required:</b> If NSW is found, or total score for <b>PTNL</b> plus <b>BMP</b> is 4 or more, note <b>Enforcement Level</b> below and assign date for <b>Follow-up / Re-Inspection Due</b> above.
	N/A	PTNL	BMP	NSW	
A. Outdoor Process/Manufacturing Areas					
B. Outdoor Material Storage Areas					
C. Outdoor Waste Storage/Disposal Areas					
D. Outdoor Vehicle and Heavy Equipment Storage, Maintenance Areas					
E. Outdoor Parking Areas and Access Roads					
F. Outdoor Wash Areas					
G. Rooftop Equipment					
H. Outdoor Drainage from Indoor Areas					
I. Other (describe):					

**COMMENTS/REMARKS/REQUIREMENTS** Structural control present ☐ Maintenance required in storm drain system ☐ yes ☐ no

☐ See attached for more comments.

<b>PRIORITY ROUTINE INSPECTION:</b> <input type="checkbox"/> High - Annual		<input type="checkbox"/> Medium – every	<input type="checkbox"/> Low – every 5	<input type="checkbox"/> Referred to:
Businesses with a follow-up/re-inspection should be assigned High		2 yrs.	yrs.	
<b>ENFORCEMENT LEVELS:</b> <input type="checkbox"/> None	1. <input type="checkbox"/> Verbal Warning	2. <input type="checkbox"/> Warning Notice or Admin. Action	3. <input type="checkbox"/> Admin. Action with Penalty &/or Cost Recovery	4. <input type="checkbox"/> Legal Action

Were violations corrected ≤10 days or otherwise deemed resolved in a longer, but still timely manner? ☐ N/A ☐ yes ☐ no or ☐ see Follow-Up Inspection Report

Facility Representative: \_\_\_\_\_ Inspector: \_\_\_\_\_

## **Section 5 Maintenance Operations, Pesticides Toxicity Control, and Trash Load Reduction**



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## 5.0 Orientation Information:

# Municipal Operations, Pesticides Toxicity Control, and Trash Load Reduction

The Countywide Program's Municipal Maintenance Subcommittee, Parks Maintenance and Integrated Pest Management (IPM) Work Group, and Trash Work Group are primarily responsible for assisting the member agencies to comply with the following MRP Provisions:

- Municipal Operations (Provision C.2) – Municipal Maintenance Subcommittee.
- Pesticides Toxicity Control (Provision C.9) – Parks Maintenance and IPM Work Group (except Provision C.9.h. Public Outreach is handled by PIP Subcommittee)
- Trash Load Reduction (Provision C.10) – Trash Work Group

### Municipal Operations

Municipalities are responsible for conducting the following MRP prescribed maintenance activities in ways that “control and reduce non-stormwater discharges and polluted stormwater to storm drains and watercourses during operation, inspection, and routine repair and maintenance activities of municipal facilities and infrastructure” (Provision C.2).

- street and road repair and maintenance;
- sidewalk/plaza maintenance and pavement washing;
- bridge and structure maintenance and graffiti removal;
- corporation yard maintenance;
- storm drain pump station maintenance, if the municipality owns or operates a storm drain pump station; and
- rural public works construction and maintenance, if the municipality fits the MRPs' definition of rural<sup>1</sup>.

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<sup>1</sup> “For the purpose of this provision, rural means any watershed or portion thereof that is developed with large lot home-sites, such as one acre or larger, or with primarily agricultural, grazing or open space uses.” (Provision C.2.2.i)

The Municipal Maintenance Subcommittee is responsible for sharing information about how agencies are meeting these requirements and for developing model materials to help member agencies to comply with Provision C.2's municipal operations requirements. The following table contains links to a number of useful Provision C.2 guidance materials, some of which were developed by agencies or entities other than the Countywide Program. The table is based on the FY 2009-2010 Annual Report guidance materials located on the password protection portion of the Countywide Program's website at [http://www.flowstobay.org/ms\\_annual\\_report.php](http://www.flowstobay.org/ms_annual_report.php).

<b>Table 5.1: Provision C.2 Municipal Operations</b>		
<b>Section</b>	<b>Support Document</b>	<b>Download or Link</b>
C.2.a. Street and Road Repair and Maintenance	Caltrans Storm Water Quality Handbook Maintenance Staff Guide	<a href="#">CalTrans Guide</a> (link to pdf)
	California Stormwater Quality Association Stormwater Best Management Practice Handbook Municipal	<a href="#">CASQA Handbook</a> (link to pdf)
	Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction-Related Activities	<a href="#">Blueprint for a Clean Bay</a> (pdf)
C.2.b. Sidewalk/Plaza Maintenance and Pavement Washing	BASMAA's Pollution from Surface Cleaning	<a href="#">Surface Cleaning</a> (link to pdf)
C.2.e. Rural Public Works Construction & Maintenance	FishNet 4C Roads Manual	<a href="#">Roads Manual</a> (link)
C.2.f. Corporation Yard BMP Implementation	Template: Site Specific Stormwater Pollution Prevention Plan for Corporation Yard/Maintenance Facility	<a href="#">SPPP for Corp Yard Facility</a> (word)

The Countywide Program has encouraged the use of good practices at corporation yards for more than fifteen years. Best management practices for common corporation yard practices include: washing vehicles and equipment so that there is no discharge to the storm drain; dispensing fuel to prevent spillage; and storing and using chemicals to prevent contact with rainfall runoff. Required good housekeeping practices include periodic corporation yard inspections to ensure that illicit discharges are not occurring and that best management practices are being used. The Program developed a Template: Site Specific Stormwater Pollution Prevention Plan for Corporation Yards for municipalities to use in creating their own plans (Table 5.1).

## Pesticides Toxicity Control

The Parks Maintenance and IPM Work Group was created because of the general lack of overlap between the staffs responsible for streets, sidewalks, plazas, bridges, and storm drain pump stations maintenance and the staff responsible for parks and median maintenance. This work group focuses on meeting the IPM requirements proscribed in the MRP's Provision C.9. The work group discusses maintenance and MRP compliance issues common to parks maintenance staff. Staff who attends the work group is typically responsible for the following types of activities: grounds and playing fields maintenance including landscape irrigation and water conservation; landscaped median maintenance; park maintenance; and dog park maintenance.

The work group hosts an annual IPM and Parks Maintenance Workshop with assistance from the staff of the County Agriculture/Weights & Measures Department. In addition, parks maintenance and other municipal employees responsible for using pesticides or hiring contractors to apply pesticides are trained at the workshop about how to use integrated pesticide management or hire contractors that will use integrated pesticide management.

The MRP requires that each municipality must adopt and implement an IPM policy and/or ordinance that requires the use of IPM techniques in the municipality's operations, minimizes pesticide use, and restricts the use of pesticides that threaten water quality<sup>2</sup>. The MRP requires that municipalities hire IMP-certified contractors or that contract specifications require that contractors implement IPM. In addition, employees who apply pesticides for a municipality must be trained about the municipality's IPM policy and/or ordinance and the latest IPM techniques.

The following table contains links to a number of useful Provision C.9 guidance materials, some of which were developed by entities other than the Countywide Program. The table is based on the FY 2009-2010 Annual Report guidance materials located on the password protection portion of the Countywide Program's website at [http://www.flowstobay.org/ms\\_annual\\_report.php](http://www.flowstobay.org/ms_annual_report.php)

<b>Table 5.2: Provision C.9 Pesticides Toxicity Controls</b>		
<b>Section</b>	<b>Support Document</b>	<b>Download or Link</b>
C.9.a.Adopt IPM Policy or Ordinance	Model Integrated Pest Management (IPM) Policy	<a href="#">IPM Policy</a> (word)

<sup>2</sup> "Pesticides of concern include: organophosphorous pesticides (Chlopyrifos, diazinon, and malathion); pyrethroids (bifenthrin, cyfluthrin, beta-cyfluthrin, cypermethrin, deltamethrin, esfenvalerate, lambda-cyhalothrin, permethrin, and tralomethrin); carbamates (e.g., carbaryl); and fipronil." (Provision C.9)

**Table 5.2: Provision C.9 Pesticides Toxicity Controls**

Section	Support Document	Download or Link
C.9.b. Implement IPM Policy or Ordinance	Standard Operating Procedures for Pesticide Use and Implementation of Municipality's IPM Policy Template	<a href="#">Standard Operating Procedures</a> (pdf)
C.9.c. Train Municipal Employees	IPM Training Attendance Sheet	<a href="#">IPM Workshop signin Feb 2010</a> (pdf)
C.9.d. Require Contractors to Implement IPM	EcoWise IPM Contracting Toolkit	<a href="#">Toolkit</a> (link to Eco Wise website)
	EcoWise Certified IPM Service Providers	<a href="#">IPM Providers</a> (link to Eco Wise website)

### Trash Load Reduction

Currently municipalities have been reducing trash loading through street sweeping, the maintenance of storm drain inlets and conveyance systems, the maintenance of trash receptacles, and the support for trash clean up events. The MRP places a high priority on requiring additional, new trash reduction efforts (Provision C.10). The municipalities are required to demonstrate a 40% decrease in trash loading from their municipal separate storm sewer systems by July 1, 2014. This decrease in trash loading is to be followed by achieving a 70% reduction by 2017 and 100% by 2022. BASMAA is conducting a study to determine what the current baseline trash loading is and the amounts of trash reduction that should be credited for implementing different types of trash reduction measures.

The MRP also includes a new, significant trash reduction requirement to select and clean up to "no visual impact" trash hot spots along creeks and/or shorelines (Provision C.10.b). In 2010 municipalities selected trash hot spots, conducted at least one clean up of each of its hotspots, documented the trash condition before and after clean up, and quantified the volume of material removed and identified the dominant types of trash.

The Countywide Program created a Trash Work Group in 2010 to assist municipalities to understand and comply with the MRP's trash load reduction requirements. The work group has also shared information about trash clean up partnerships that are being created with non-governmental organizations. In addition, the Trash Work Group has shared information about the San Francisco Estuary Partnership's trash clean up demonstration project that allows municipalities to use grant funds to install full-trash capture devices using vendors approved by the Association of Bay Area Governments.

The following table contains links to a couple of useful Provision C.10 guidance materials. The table is based on the FY 2009-2010 Annual Report guidance materials

located on the password protection portion of the Countywide Program's website at [http://www.flowstobay.org/ms\\_annual\\_report.php](http://www.flowstobay.org/ms_annual_report.php)

Table 5.3: Provision C.10 Trash Load Reduction		
Section	Support Document	Download or Link
C.10.b.iii.	Trash Hot Spot Cleanup Data Collection Form	<a href="#">Hot Spot Form</a> (word)
	Photograph Documentation Protocol for Creek and Shoreline Trash Hot Spots	<a href="#">Photo Documentation</a> (word)



## TEMPLATE

*Instructions for modifying and completing the template are shown as italicized text below*

### **SITE SPECIFIC STORMWATER POLLUTION PREVENTION PLAN FOR CORPORATION YARD/MAINTENANCE FACILITY CITY OF \_\_\_\_\_**

*[Add your municipality's name]*

**Date Originally Prepared:** \_\_\_\_\_ *[Add date that the SWPPP was originally prepared]*

**Date Last Updated:** \_\_\_\_\_ *[Add date of last update, if any, to SWPPP if there has been no update write "none"]*

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#### **1.0 Introduction**

This site specific stormwater pollution prevention plan (SWPPP) serves as the city of \_\_\_\_\_'s *[insert the name of your municipality and modify language if the SWPPP covers more than one corporation yard/maintenance facility]* SWPPP for its corporation yard. This SWPPP is based on experience that the city has gained since the San Mateo Countywide Water Pollution Prevention Program (Countywide Program) prepared its "Model Stormwater Pollution Prevention Plan for Corporation Yards" (Model Plan) in 1995. The Model Plan provided a general framework for assisting municipalities to identify any stormwater pollutant generation problems at their corporation yards and to plan for needed improvements. The 1995 Model Plan encouraged each municipality to describe existing and planned best management practices (BMPs) for common corporation yard activities. The Model Plan was developed to improve corporation yard practices based on the following deficiencies commonly found at that time:

1. A number of wash racks at corporation yards were connected to the storm drain system instead of receiving pre-treatment and being discharged to the sanitary sewer<sup>1</sup>;
2. There was an inadequate use of BMPs for the outdoor storage of materials and wastes, including lack of containment of waste materials collected from sweeping streets and cleaning storm drain systems; and
3. There was a lack of spill kits at fueling areas.

The San Francisco Bay Regional Water Quality Control Board adopted a municipal regional stormwater permit (MRP) on October 14, 2009, and the MRP became effective on December 1, 2009. One of the requirements of the MRP is for municipalities to implement the Corporation Yard BMP Implementation section of the permit (Provision C.2.f). These requirements are summarized as follows:

"prepare, implement, and maintain a site specific Stormwater Pollution Prevention Plan (SWPPP) for corporation yards, including municipal vehicle maintenance, heavy equipment and maintenance vehicle parking areas, and material storage facilities to comply with water quality standards. Each SWPPP shall incorporate all applicable

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<sup>1</sup> The San Mateo Countywide Stormwater Pollution Prevention Program's Fiscal Year 1994/95 Annual Report stated that eight of the nineteen municipalities inspected had wash racks connected to the storm drain system

BMPs that are described in the California Stormwater Quality Association's Handbook for Municipal Operations and the Caltrans Storm Water Quality Handbook Maintenance Staff Guide, May 2003, and its addenda, as appropriate."

The site specific SWPPP is required to be completed by July 1, 2010. In addition, municipalities are required to:

"(1) Implement BMPs to minimize pollutant discharges in stormwater and prohibit non-stormwater discharges, such as wash waters and street sweeper, vactor, and other related equipment cleaning wash water. Pollution control actions shall include, but not be limited to, good housekeeping practices, material and waste storage control, and vehicle leak and spill control.

(2) Routinely inspect corporation yards to ensure that no non-stormwater discharges are entering the storm drain system and, during storms, pollutant discharges are prevented to the maximum extent practicable. At a minimum, an inspection shall occur before the start of the rainy season."

## **2.0 Related Pollution Prevention Plans**

In addition to this SWPPP, there are two *[modify number as appropriate for your municipality]* other existing plans that describe pollution prevention activities at the corporation yard facility. A Spill Prevention Control and Countermeasure (SPCC) Plan was prepared in accordance with requirements set forth in Title 40 of the Federal Code of Regulations. The SPCC Plan contains operating guidelines for spill prevention and control of petroleum hydrocarbons stored at the facility. In addition, spill response procedures and an inventory of the hazardous materials stored at this facility are described in the facility's Hazardous Materials Business Plan (AB 2185 Business Plan).

This site specific SWPPP was developed by considering the SPCC plan; the facility's Hazardous Materials Business Plan; the Countywide Program's Template Site Specific SWPPP Plan; specific activities conducted at the corporation yard; the Countywide Program's existing BMPs<sup>2</sup>; and the new MRP's requirements including all applicable and appropriate BMPs described in the California Stormwater Quality Association's Handbook for Municipal Operations (2003) and Caltrans' Storm Water Quality Handbook Maintenance Staff Guide (2003).

## **3.0 Facility Description**

The corporation yard is located at \_\_\_\_\_ *[insert the address of the corporation yard covered by this SWPPP]* and comprises approximately \_\_\_\_\_ acres *[add information]*. The following activities are conducted at the corporation yard:

1. Vehicle and equipment washing;
2. Vehicle and equipment maintenance and repair;
3. Fuel dispensing;
4. Municipal vehicle, heavy equipment, and employee parking;
5. Waste and recycling storage; and
6. Outdoors materials storage.

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<sup>2</sup> The Countywide Program's "Tips for a Cleaner Bay How Your Business Can Prevent Stormwater Pollution" and the "Vehicle Service Facility BMPs" are particularly relevant.



*[Modify the above list based on the specific types of activities that occur at your corporation yard.]*

The city *[or change to county, if appropriate]* uses appropriate BMPs to minimize the potential contribution of pollutants to stormwater and to prevent the possibility of creating a nonstormwater discharge disallowed by the MRP.

The facility site map (Figure 1) depicts the corporation yard and provides the following information:

- Boundaries of the corporation yard;
- Footprint of all buildings, structures, and paved areas including parking lots.
- Location of activities that could potentially contribute pollutants to stormwater or cause a nonstormwater discharge;
- Stormwater collection and conveyance system including the direction of stormwater drainage to storm drain inlets at the facility;
- On-site surface water bodies, if any;
- Portions, if any, of the corporation yard impacted by run-on from surrounding areas;
- Locations of any BMPs that prevent stormwater pollution, treat stormwater runoff, or recycle washwaters for discharge to the sanitary sewer.

*[Insert a figure showing the corporation yard with the appropriate information or modify the list of items included on the figure to cover what is reasonably available or delete above text that refers to having a facility site map]*

#### **4.0 Corporation Yard Pollution Prevention Team**

The stormwater pollution prevention team responsible for assisting the corporation yard's management to implement, maintain, provide training, and update this site-specific SWPPP and conduct corporation yard inspections consists of the following individual(s):

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Corporation Yard Manager

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Vehicle Maintenance Facility Manager

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Corporation Yard SWPPP Lead

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Corporation Yard BMP Inspector

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Corporation Yard BMP Trainer

*[list name, job title, and role for each person who has an essential role in assuring the implementation of the SWPPP. Roles other than those listed may be used, so modify list of roles as appropriate]*

## **5.0 Corporation Yard BMPs**

The following sections describe general BMPs and activity specific BMPs that are used at the corporation yard to minimize the discharge of pollutants in stormwater to the maximum extent practicable and to effectively prohibit non-stormwater discharges that are disallowed by the MRP.

### **5.1 General Good Housekeeping BMPs**

Good housekeeping, such as maintaining a clean and orderly facility, is practiced at the corporation yard in order to minimize the risk of contributing litter and other pollutants to stormwater. In addition, pollution prevention practices are used at the corporation yard to prevent pollutants from coming in contact with stormwater runoff. Examples of good housekeeping and pollution prevention practices employed include the following BMPs:

- A clean and orderly corporation yard is maintained.
- Materials that have the potential to discharge pollutants to stormwater are covered prior to predicted rains and during rainfall events if these materials cannot be stored permanently under a roofed or covered area.
- Container lids are closed when not in use.
- Storm drain inlet labels are maintained.
- A sufficient number of covered litter receptacles are provided at the corporation yard and they are cleaned out frequently enough to prevent overflow and spillage.
- Materials and wastes that may be spilled or mobilized by stormwater are stored as far away from storm drain inlets as practical.
- Vehicles and equipment are maintained to minimize drips and leakage.
- Drip pans or absorbent pads are used under leaking vehicles and equipment to capture fluids.
- Spill clean up occurs promptly.
- Spill containment kits are stored in locations that have the potential for spills.
- Washwaters and other non-stormwater discharges disallowed by the MRP are prevented from being discharged to the storm drain system.
- Maintenance staff who work at the corporation yard have been trained on the use of these general good housekeeping BMPs.
- The corporation yard is inspected weekly to make sure BMPs are being appropriately used.

*[modify this list of BMPs as appropriate to your corporation yard.]*

### **5.2 Activity Specific BMPs**

The following BMPs or their equivalent are implemented at the city's corporation yard in order to comply with the MRP's requirements. *[Delete any of the following activities and associated lists of BMPs if they are not applicable to your corporation yard.]*

#### Vehicle and Equipment Washing

The following vehicle and equipment washing BMPs are used at the corporation yard.

1. Vehicle and equipment washing activities are located under a roof or in a building equipped with a municipal sewer connection or closed loop system.
2. There is an outdoor equipment washing area that has the following characteristics: The area is paved and surrounded by berms or graded to prevent washwaters from flowing off and stormwater from adjoining areas from flowing onto the wash area. The wash area is sloped for washwater collection. Washwaters drain to a dead-end sump or to an oil-water separator and the sanitary sewer.
3. The wash area is adequately sized to minimize drag-out from washed vehicle so that there is no flow to storm drain inlets and to allow the washing of large vehicles entirely within the wash area containment system.
4. All vehicle washing systems are maintained and cleaned out on a regular schedule.
5. A trash container is provided in or nearby the wash area.
6. Staff responsible for washing vehicles and equipment have been trained on proper cleaning and wash water disposal procedures and refresher training occurs on a regular basis.

*[Modify as needed to tailor to your corporation yard. For example, describe how vehicles and/or equipment are cleaned in a way that prevents washwaters from draining to the storm drain system. One possible option is that vehicles and/or equipment are only washed or steam cleaned offsite at a location that flows to the sanitary sewer.]*

#### Vehicle and Equipment Maintenance and Repair

The BMPs listed in this section are used to prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment maintenance and repair activities.

1. Vehicle and equipment maintenance and repair activities are conducted indoors whenever feasible.
2. Maintenance activity areas are kept clean, well organized, and equipped with clean up supplies.
3. Vehicles and equipment are maintained to minimize drips and leakage.
4. Used fluids are promptly transferred to the proper waste or recycling drums/containers. Drain and drip pans or open containers are not left lying around.
5. Dry clean up methods, such as sweeping, vacuuming, and/or a damp mop, are used. Vehicle equipment and maintenance and repair areas are never hosed down unless all of the washwater is collected and disposed to the sanitary sewer.
6. The vehicle and equipment maintenance and repair area is swept at least weekly.
7. Drip pans are used under leaky vehicles and equipment, and absorbent pads and materials are used as appropriate.
8. Used absorbent material from cleaning small spills is promptly and properly removed.
9. All fluids from wrecked vehicles are drained immediately using a drain or drip pan that is adequately sized.
10. Outdoor vehicle and equipment maintenance are not performed during rain events unless required by emergency conditions.
11. If temporary work must be conducted outdoors, a tarp, ground cloth, or drip pan is placed under the vehicle or equipment to capture spills and drips.
12. Staff responsible for vehicle and equipment maintenance and repair has been trained on the use of these BMPs and refresher training occurs on a regular basis.

*[Modify as needed to tailor to your corporation yard.]*

### Fuel Dispensing

Vehicle and equipment fueling procedures and BMPs are used to minimize or eliminate the discharge of spilled or leaked fuel to stormwater.

1. The fueling area is covered with a roof or canopy so that rainwater cannot come into contact with the fueling area.
2. The fueling area is paved with Portland cement concrete (or an equivalent smooth, impervious surface) with a 2 to 4% slope to prevent ponding, and it is separated from the rest of the site by a grade break that prevents run-on of stormwater to the extent practicable.
3. Signs are posted to remind employees not to top of the fuel tank.
4. The fuel dispensing area is kept clean using dry cleanup methods, such as sweeping or vacuuming to remove litter and debris and rags or absorbents to spot clean leaks and drips.
5. Spill containment kits are kept readily accessible in the fueling area.
6. A current spill response plan is maintained for fueling operations.
7. The fueling area is inspected daily during use and any deficiencies found are corrected.
8. Staff responsible for fueling has been trained on the use of these BMPs and the SPCC Plan. Refresher training occurs on a regular basis.

*[Modify as needed to tailor for your corporation yard.]*

### Municipal Vehicle, Heavy Equipment, and Employee Parking

The following BMPs for municipal and employee parking areas are used to control potential stormwater pollutants, such as litter and oil from leaking vehicles.

1. Parking lots are kept clean and orderly. Litter and debris are removed in a timely fashion.
2. Trash receptacles are provided in the parking lot to discourage littering.
3. Parking lots are swept weekly to prevent the accumulation of litter and debris.
4. When surface cleaning is needed, BASMAA's<sup>3</sup> "Pollution from Surface Cleaning" BMPs are used.
5. Paving and other equipment that have the potential to drip have drip pans or absorbent materials placed under the equipment to contain any leaks or spills.
6. Heavy equipment is inspected for leaks during each work day and repairs are made as soon as possible.
7. Drip pans or absorbent material are used under leaking vehicles and equipment to capture fluids until repairs can be made.
8. Parking lots are inspected at least weekly to assure compliance with these BMPs.
9. Staff who park municipal vehicles, heavy equipment, and private vehicles at the corporation yard have been trained on the use of these BMPs.

*[Modify as needed to tailor for your corporation yard.]*

### Waste and Recycling Storage

The following waste handling and storage BMPs are used to prevent wastes and recyclables from contributing pollutants to stormwater or causing a non-stormwater discharge disallowed by the MRP.

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<sup>3</sup> Bay Area Stormwater Management Agencies Association.

<http://www.basmaa.org/Portals/0/documents/pdf/Pollution%20from%20Surface%20Cleaning.pdf>

1. Waste collection and recycling areas are kept clean.
2. Dumpster and waste recycling areas are inspected, swept, and picked up daily during work days.
3. Rubbish and recyclables that have been collected from streets and storm drains are stored under a roof or cover, if possible. Dumpsters and recycling containers are not overfilled, and lids are kept closed when not in use.
4. Street sweeping wastes and materials removed during storm drain cleaning are stored on a concrete or asphalt pad in a contained area as far away from storm drain inlets as practical. Water, including decanted water from vacuum trucks, drains to the sanitary sewer or is allowed to evaporate so that it does not flow to storm drain inlets.
5. Hazardous wastes are stored in compliance with hazardous waste regulations including the use of appropriate containers constructed of compatible materials with the lids securely closed when not in use.
6. An ample supply of appropriate spill cleanup materials is located near waste storage areas.
7. In the event of a spill, dry clean up methods are used.
8. Staff responsible for waste storage has been trained on the use of these BMPs, and refresher training occurs on a regular basis.

*[Modify as needed to tailor for your corporation yard.]*

#### Outdoor Material Storage

The BMPs listed below are used to control pollutants from the outdoor storage of raw material at the corporation yard:

1. To the extent feasible raw materials are stored inside.
2. To the extent feasible materials that must be stored outside are stored in a roofed area that is bermed to prevent contact with stormwater.
3. Stockpiles of raw materials that cannot be stored under a roof are kept covered when the material is not being used. Temporary waterproof covering may be made of polyethylene, poly propylene or hypalon.
4. If stockpiles are so large that they cannot feasibly be stored under a roof or covered, erosion control BMPs are used at the perimeter of the stockpile and at any storm drain inlet to prevent erosion of stockpiled material off site.
5. Fluids are stored within secondary containment to prevent accidental release.
6. Caution and control are used when transferring liquids to minimize potential spills.
7. Container lids, caps, and openings are kept closed when not in use.
8. Containers are kept out of pooled or standing water, and storage areas are kept clean.
9. Storage area pavements have sufficient slope to avoid pooling of water in areas where materials, such as compost and wood chips, may leach pollutants into stormwater.
10. Tanks are surrounded by berms that provide secondary containment.
11. Regular inspections of storage areas are conducted to detect leaks and spills.
12. Spill containment kits are kept in outdoor material storage areas.
13. Staff responsible for raw material storage and handling outdoors has been trained on the use of these BMPs including spill clean up procedures, and refresher training occurs on a regular basis.

*[Modify as needed to tailor for your corporation yard.]*

## Section 6 Watershed Assessment and Monitoring

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# Orientation Information

## Watershed Assessment and Monitoring

### Introduction

Watershed Assessment and Monitoring (WAM) is a key facet of the San Mateo Countywide Water Pollution Prevention Program (Countywide Program). The WAM component addresses important provisions of the municipal regional stormwater permit (MRP) by focusing on water quality monitoring - MRP Provision C.8 - and certain stormwater pollutants of concern (POC) - primarily tasks required by the MRP's Provisions C.11 (mercury) and C.12 (PCBs).

In contrast to other Countywide Program components, most WAM-related activities are implemented by the Countywide Program on behalf of its municipalities. Although the municipalities do not have day-to-day responsibility for implementing WAM component tasks,<sup>1</sup> municipal staff may assist with WAM component projects in their jurisdiction. Since adoption of the MRP in November 2009, WAM component work is generally performed in collaboration with other Bay Area stormwater programs. These regional collaborative activities are facilitated by the Bay Area Stormwater Management Agency Association (BASMAA). BASMAA committees and work groups oversee various regional projects related to water quality monitoring and POC, especially mercury, PCBs, and other sediment-bound POC associated with stormwater runoff.



### Water Quality Monitoring (MRP Provision C.8)

The Countywide Program's water quality monitoring program is performed in collaboration with other Bay Area municipal stormwater programs through BASMAA's Regional Monitoring Coalition (BASMAA RMC). The BASMAA RMC improves the cost-effectiveness of

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<sup>1</sup>An exception is that MRP Provision C.12.a requires that municipalities incorporate identifying PCBs and PCB-containing equipment into routine commercial/industrial facility inspections. For more information see the below section entitled "Other MRP Requirements Addressing Pollutants of Concern."



monitoring projects by sharing knowledge and experience and realizing economies of scale. Consistent with MRP requirements, the RMC is focusing on monitoring receiving waters for stormwater runoff discharges from municipal storm drain systems (primarily creeks) rather than the stormwater runoff itself.

The Countywide Program and RMC are primarily implementing two types of creek monitoring, as required by MRP Provision C.8: 1) Creek Status Monitoring and 2) Pollutants of Concern Monitoring.

### **Creek Status Monitoring**

The primary objectives of the Creek Status Monitoring program are to address the following questions:

- Are numeric and narrative water quality objectives met in creeks?
- Are conditions supportive of beneficial uses (e.g., aquatic habitat, recreational uses)?

The Creek Status Monitoring program focuses on collecting screening-level biological, physical and chemical water quality data from creeks. These data are often referred to as "environmental indicators" for characterizing creek aquatic ecosystem health and water quality conditions. Field activities include biological community sampling (benthic macroinvertebrate and algae bioassessments), continuous water quality monitoring using multi-parameter probe measurements (e.g., pH, temperature, and dissolved oxygen), collecting grab water and sediment samples (for toxicity testing and chemical and bacterial analysis), and stream physical condition surveys using the Unified Stream Assessment (USA) protocol or equivalent.

### **Pollutants of Concern Monitoring**

The primary objectives of the Pollutants of Concern Monitoring program are to:

- Quantify POC loads for Total Maximum Daily Load (TMDL)<sup>2</sup> purposes.
- Identify which small tributaries (local creeks and rivers) to the bay contribute the highest POC loads.



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<sup>2</sup>A TMDL is a cleanup plan for a water body impaired by one or more POC (e.g., PCBs in San Francisco Bay). TMDLs examine water quality problems, identify sources of pollutants, and specify actions to restore water quality.

- Determine whether management actions are reducing POC loads from small tributaries to the bay.

The Pollutants of Concern Monitoring program focuses on collecting wet weather water samples from creeks and analyzing for POC, with mercury and PCBs being the highest priority (lower priority POC include copper, PBDEs, legacy pesticides, and PAHs).<sup>3</sup>

### Regional Standardization of Methods

The Countywide Program is participating in various BASMAA RMC projects to standardize methods and reporting in support of both Creek Status Monitoring and Pollutants of Concern Monitoring. These regional projects include developing:

- Experimental designs for the field monitoring procedures including Sampling and Analysis Plans (SAPs).
- Field and laboratory Quality Assurance (QA) procedures, including Quality Assurance Project Plans (QAPPs) that conform to the existing templates and guidance for data comparability from the statewide Surface Water Ambient Monitoring Program (SWAMP).
- Standard Operating Procedures (SOPs) that describe all aspects of field operations including equipment set-up and maintenance, sampling protocols, ancillary data collection in the field, and sample handling and delivery to the lab.
- Laboratory contracting language and standard reporting formats.
- Information Management System (IMS) development to store and manage water quality monitoring data and allow for ready access to data, quality assurance reviews, and querying data to facilitate interpretation and reporting.

### Other MRP Water Quality Monitoring Requirements

The above-described Creek Status Monitoring and Pollutants of Concern Monitoring programs comprise the bulk of the water quality monitoring work required by Provision C.8 of the MRP. Other requirements include conducting stressor/source identification studies when creek status monitoring results are above certain trigger levels described in the MRP. The Countywide Program will coordinate with other RMC



<sup>3</sup>BASMAA is coordinating this work with implementation of the Small Tributaries Loading Strategy of the San Francisco Estuary RMP (the RMP is described in the below section entitled “Other Collaborative Programs”).

members to conduct a maximum of 10 such studies across the region during the permit term. Per MRP Provision C.8 requirements, the RMC will also prepare a region-wide estimate of sediment loading to the Bay from local tributaries and urban drainages. Finally, consistent with other C.8 requirements, the Countywide Program will conduct a “Best Management Practice effectiveness study” and a “Geomorphic Project,” in San Mateo County and encourage citizen participation in any applicable aspects of the water quality monitoring program.

### Other Collaborative Programs

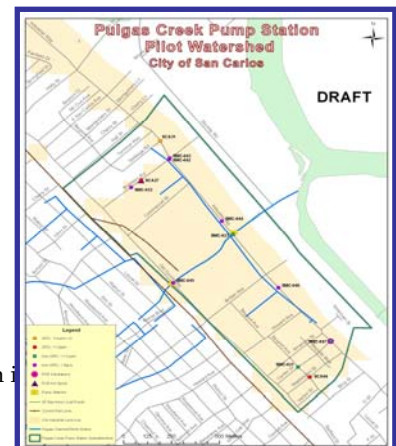
The Countywide Program and other BASMAA RMC members also participate in other long-standing regional water quality collaborations, including the Bay Area Macroinvertebrate Bioassessment Information Network (BAMBI) and the San Francisco Estuary Regional Monitoring Program (RMP). BAMBI ([http://cleanwaterprogram.org/bambi\\_home/index.htm](http://cleanwaterprogram.org/bambi_home/index.htm)) is assisting Bay Area municipal stormwater agencies to standardize bioassessment protocols, coordinate bioassessment fieldwork, and manage and interpret bioassessment data. The RMP ([www.sfei.org/rmp](http://www.sfei.org/rmp)) primarily monitors pollutant concentrations in water, sediments, and fish and shellfish tissue in San Francisco Bay. A major goal is to provide information on how pollutant concentrations in the Bay are responding to management measures. MRP Provision C.8 requires permittees to participate in the RMP Bay monitoring program or equivalent. The RMP also monitors local creeks and rivers to help calculate pollutant loadings to the Bay.

### Mercury/PCBs (MRP Provisions C.11/12)

The MRP requires extensive activities (primarily through Provisions C.11 and C.12) to identify sources and control discharges of POC, especially mercury, PCBs and other sediment-bound POC associated with stormwater runoff. The Countywide Program will comply with most MRP Provision C.11/12 requirements through participation in two efforts: 1) a grant-funded BASMAA collaboration called Clean Watersheds for a Clean Bay (CW4CB), and 2) projects coordinated by BASMAA to divert stormwater to local Publicly Owned Treatment Works (POTWs), including a diversion project in San Mateo County led by the Countywide Program.

### Clean Watersheds for a Clean Bay

CW4CB is a four-year regional project that addresses many of the requirements in MRP Provisions C.11 and C.12. The project will pilot test methods to reduce loadings of mercury, PCBs, and other sediment-bound pollutants to the Bay and thereby help implement the mercury and PCBs TMDLs water quality restoration programs. CW4CB is funded by a \$5-



million grant from USEPA to BASMAA and about \$2-million in matching funding from BASMAA, BASMAA agencies (including the Countywide Program), and municipal and industrial wastewater dischargers to the Bay. It includes the following major tasks:

1. Select Project Watersheds and Identify Properties that are Sources of PCBs and/or Mercury and Refer to Regulatory Agencies for Abatement - five Bay Area watersheds have been selected for pilot pollution abatement efforts, including the Pulgas Creek pump station watershed in San Carlos. The pilot watersheds have relatively high levels of PCBs in sediments collected from roadway and stormwater drainage infrastructure and possess other desirable attributes (e.g., old industrial land use). This task focuses on identifying PCB and mercury source properties within the pilot watersheds and referring these properties to regulatory agencies for cleanup and abatement. The methodology requires several steps, including a review of property/business records and spill site databases, a driving/walking survey of the watershed, inspections of selected facilities, and testing surface sediments/soils from the public right-of-way and private properties for mercury, PCBs, and other sediment-bound pollutants. Where laboratory data confirm the presence of elevated pollutant concentrations, the properties will continue to be referred to the Regional Water Board and for cleanup and abatement.
2. Enhance Municipal Sediment Removal and Management Practices - this task will evaluate ways to enhance removal of sediment with PCBs and mercury, mainly during existing municipal street and storm drain system operation and maintenance activities. The evaluation will include typical routine municipal operation and maintenance practices such as street sweeping, catch basin cleaning, and stormwater conveyance system cleaning, and will also include consideration of street flushing and routing the wash water to the sanitary sewer.
3. Urban Runoff Treatment Retrofits - this task will retrofit stormwater runoff treatment systems into the existing storm drain infrastructure at eight to 10 locations throughout the Bay Area and evaluate their effectiveness. It is anticipated that some, but not all, of the retrofits will be sited within the five pilot watersheds identified above. The MRP requires installing at least one retrofit in each of the five major Bay Area counties covered by the MRP (Santa Clara, San Mateo, Alameda, Contra Costa, and Solano).
4. Risk Communication and Exposure Reduction - this task will facilitate development and implementation of a regional risk communication and exposure reduction program. This task will focus on providing "mini-grants" to selected community groups in an



attempt to overcome cultural and language barriers to educating appropriate communities about the San Francisco Bay fish advisories related to PCBs and mercury.

### **Stormwater Diversion to Publicly Owned Treatment Works**

MRP Provision C.11/12.f. requires that Bay Area stormwater management agencies perform pilot projects to assess the feasibility of diverting dry weather and first flush stormwater flows to sanitary sewers for treatment at local POTWs. These provisions require diversions in each of the five major Bay Area counties covered by the MRP (Santa Clara, San Mateo, Alameda, Contra Costa, and Solano) and strongly encourage diversions located at existing stormwater pump stations located in old industrial drainage areas where elevated levels of PCBs are known to be present. BASMAA's December 2010 Feasibility Evaluation Report (FER) includes a feasibility and cost-benefit analysis of diverting stormwater to POTWs and criteria to inform selection of five diversion sites across the region. Using the FER as guidance the Countywide Program is working with San Mateo County municipalities to select an appropriate site to pilot test a diversion. There are a number of technical, regulatory, and institutional challenges to address including obtaining funding, limited sanitary sewer collection system capacity, and uncertainty regarding the ability and willingness of local POTWs to accept stormwater diversion flows.

### **Other MRP Requirements Addressing Pollutants of Concern**

The above-described projects (CW4CB and diversion of stormwater to local POTWs) comprise most of the work required by the MRP to address specific POC. Other requirements include incorporating identification of PCBs and PCB-containing equipment into routine commercial/industrial facility inspections. Training materials to assist inspectors with identifying PCBs have been distributed to municipal representatives and reviewed and discussed through the Countywide Program's CII Subcommittee. BASMAA is conducting several other regional projects to address other MRP POC requirements. These projects include coordinating with the RMP to study the fate and transport of mercury and PCBs in urban runoff, developing a TMDL mercury allocation sharing scheme with Caltrans, and beginning to develop information on sources and control measures for PBDEs, legacy pesticides, and selenium. BASMAA is also working with the San Francisco Estuary Project (SFEP) to implement SFEP's grant-funded project to characterize PCB levels in Bay Area building materials and develop Best Management Practices to prevent release of PCBs during building demolition, maintenance, or renovation.



## Monthly Meetings

Each municipality is encouraged to provide a representative to Countywide Program WAM Subcommittee to help plan and oversee implementation of the WAM component's activities. Municipal staff is also welcome to participate in any of the various BASMAA committees and work groups that oversee implementation of the various regional collaborative projects described above related to water quality monitoring and POC. The current meeting schedules of the WAM Subcommittee and the related BASMAA committees and work groups are as follows:

- The Countywide Program Watershed Assessment and Monitoring (WAM) Subcommittee meets approximately quarterly (second Thursday AM).
- The BASMAA Monitoring and Pollutants of Concern Committee (MPC) meets monthly (first Wednesday AM/PM).
- The BASMAA Clean Watersheds for a Clean Bay (CW4CB) Project Management Team meets monthly (second Wednesday AM).
- The BASMAA Stormwater Diversion to POTW oversight committee meets monthly (second Wednesday PM).
- The BASMAA Regional Monitoring Coalition (RMC) Work Group meets monthly (fourth Monday PM).

