



# SECTION 5

## WATERSHED MANAGEMENT MEASURES

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## 5. WATERSHED MANAGEMENT MEASURES

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### INTRODUCTION

During FY 08-09, the Program conducted a variety of watershed-related management measures and activities. They included conducting watershed assessment activities and special studies, and participating in and coordinating with the Santa Clara Basin Watershed Management Initiative (SCBWMI) sub and core groups. Activities described in this section are consistent with Provision C.10 (i.e., Watershed Management) of the Program's NPDES Permit.

The Program's watershed management strategy (pursuant to NPDES Permit Provision C.10) is to integrate its watershed management efforts with the SCBWMI. Activities that include implementing environmental monitoring and assessment measures are necessary components needed to fully integrate our efforts. Therefore, it is important to note that watershed management measures described in this section are not entirely independent from activities described in Section 4 – Monitoring Activities. Information gained from conducting studies and implementing activities/measures described in both sections have been used (and will continue to be used) in concert to meet objectives outlined in Permit Provisions C.7, C.9, and C.10. They include: (1) characterizing watersheds and stormwater discharges; (2) assessing existing or potential adverse impacts to beneficial uses; (3) identifying potential sources of pollutants of concern; (4) aiding in developing and implementing strategies for controlling adverse impacts on beneficial uses; and (5) assessing the effectiveness of pollutant prevention/control measures.

### BACKGROUND

The Water Board encouraged starting the SCBWMI in 1996. The first meetings of the SCBWMI's Core Group and subgroups were held in 1997. During FY 98-99, SCBWMI stakeholders formally joined in a signatory document outlining the SCBWMI's mission, goals and objectives. The Santa Clara Valley Water District and the Cities of San Jose, Sunnyvale and Palo Alto committed additional funds and other resources to the SCBWMI. A Report Preparation Team (RPT) consisting of staff from these agencies developed a plan, schedule, and outline for a Watershed Assessment Report (WAR). The RPT and the SCBWMI subgroups began preparing sections of the WAR soon after.

In late 1999, the Program prepared *Watersheds 2000: A Vision of the Santa Clara Valley Urban Runoff Program's Role in Watershed Management and the Santa Clara Basin Watershed Management Initiative*. This document outlines the Program's long-term vision, roles and responsibilities with regard to the SCBWMI and provides a monitoring/continuous improvement and outreach strategy.

The Program's involvement in the SCBWMI is organized by the concept of continuous improvement, as described in the Program's Urban Runoff Management Plan (URMP). The SCBWMI identifies specific watershed issues and recommendations that are brought to the Program's Management Committee for consideration and action as appropriate. In addition, results from SCVURPPP studies related to watershed monitoring, assessment and management are frequently distributed, presented and discussed with SCBWMI subgroups. This approach creates an informed and coordinated partnership between the Program and SCBWMI.

**FY 08-09 SCVURPPP ACCOMPLISHMENTS*****Bay Area Macroinvertebrate Bioassessment Information Network (BAMBI)***

The increased interest in bioassessment within the Bay Area spawned the formation of the Bay Area Macroinvertebrate Bioassessment Information Network (BAMBI) in February 2002. BAMBI is a network of scientists, watershed managers, regulators and community members interested in using biological communities as indicators (i.e., benthic macroinvertebrates) of stream health in the San Francisco Bay Area. The goal of BAMBI is to maximize the utility of aquatic bioassessment in the Bay Area by developing a programmatic and analytical framework for the collection, sharing, analysis and use of bioassessment data. Specific activities conducted by BAMBI in FY 08-09 are presented below. Additional information on BAMBI is provided at the following website:

[www.bayareabugs.org](http://www.bayareabugs.org).

**BAMBI 2009 Annual Meeting**

Since 2002, Program staff has coordinated an Annual BAMBI meeting where bioassessment data and analyses can be presented from a local, regional or state perspective. On January 29, 2009, the seventh annual BAMBI meeting was held. Presentations included an update on the development of the Index of Biotic Integrity (IBI) for San Francisco Bay Area creeks, development of stream algal bioassessments, and an update on Bay Area bioassessment activities. Presenters included a UC Berkeley PhD candidate and Program staff. The meeting agenda for the January 29 meeting and presentations by Program staff are included within Appendix D-1.

**Index of Biotic Integrity (IBI) for San Francisco Bay Area Creeks (SCVURPPP)**

In collaboration with Alameda Countywide Clean Water Program and Water Board staff, Program staff developed a draft Work Plan to outline tasks that should be completed during the development of a Benthic Macroinvertebrate Index of Biotic Integrity (B-IBI) for creeks in the San Francisco Bay Area. An IBI serves as an easy-to-use scorecard for determining the condition of water quality and stream habitat (i.e., stream health) using biological communities. The IBI approach is designed to maximize detection of degradation by controlling for natural variation in biological communities. The San Francisco Bay Area IBI Work Plan was included in the Program's *FY 04-05 Annual Report*.

The Work Plan has six main tasks listed in sequential order:

1. Form Technical Advisory Group;
2. Compile Existing BMI Data from Participating Agencies/Organizations;
3. Standardize Datasets and Import into Database;
4. Develop Reference Conditions;
5. Select Metrics for the IBI; and
6. Develop, Validate and Refine IBI.

Tasks 1 through 3 have been completed. During 08-09, Program staff contributed substantial in-kind services towards the completion of tasks 4 and 5. The following are status summaries for these tasks:

**Task 4: Develop Reference Conditions** – The development of biological reference conditions for Bay Area creeks is an integral step in completing the B-IBI. Reference conditions provide a way for comparing biological data from a potentially impacted site to a “least disturbed” site. They

are also used to determine the degree of impact of a site. On June 21, 2006, the TAG met to begin discussing reference conditions development. As a next step, Program staff began working with UC Berkeley PhD candidates to conduct a GIS based land use analysis to define “least disturbed sites” that will form the pool of reference sites used to establish the B-IBI. As of 08-09 this task is still in progress.

Task 5: Select Metrics for the B-IBI – In FY 07-08, Program staff began conducting analyses to select, score and confirm metrics that will be used in the B-IBI. This task has continued into FY 08-09.

In FY 09-10, Program staff plans to continue supporting and actively participating in BAMB I activities, with specific objectives to complete a Draft Provisional B-IBI for San Francisco Bay Area creeks.

### ***Develop Strategies for Controlling Impacts of Land Use on Beneficial Uses***

The Santa Clara Basin Watershed Management Initiative Land Use Subgroup (SCBWMI LUS) was created to identify and address land use planning interests and issues that need to be considered within the SCBWMI Watershed Action Plan. The Plan discusses environmental protection programs in seven areas and outlines eight strategic objectives for the Santa Clara Basin; and provides next steps for the SCBWMI, described in the context of a vision for the Basin. During FY 08-09, the Program collaborated with the SCBWMI LUS on the following activities:

- Coordinated with Santa Clara Valley Water District, City of San Jose and Water Board staff regarding stormwater treatment requirements for trails.
- Notified LUS meeting attendees of technical information regarding low impact development and sustainable stormwater practices, including the San Mateo Countywide Pollution Prevention Program’s green streets and parking lots program.
- The Program, in collaboration with the LUS, assisted with developing the PowerPoint presentation entitled “Top Ten Development Tips to Protect Creeks”. The presentation was based on information presented within the two-page fact sheet finalized in June 2008. The final version of the presentation was distributed to SCBWMI LUS members on October 10, 2008. The presentation will be made to city planners and Co-permittee staff at future meetings and training sessions.
- In January 2009, Program staff shared a PowerPoint presentation entitled “SUDS: Low Impact Development (LID) Implementation in Spain” at a LUS meeting.
- The Program assisted with developing the advanced track of the Program’s annual C.3 Workshop held on June 17, 2009. Specific tasks included identifying and coordinating workshop participation with five speakers on the topics of green buildings, watershed protection and rainwater harvesting; moderating the advanced track; and preparing the presentation on rainwater harvesting at the Mills College Natural Sciences Building. Program staff also assisted in preparing a poster on LUS activities for display at the C.3 workshop, and included copies of the two-page fact sheet in the workshop packet provided to attendees.

### ***Controlling Sources of Pollutants Through Support of Product Stewardship***

Many pollutants identified as “pollutants of concern” by SCVURPPP are contained in products that are required by federal and state law to be disposed of as hazardous or universal waste. In addition, consumer products make up a large percentage of wastes disposed of in landfills. In

recent years, due to legislative bans and rising environmental awareness, the quantity of household hazardous waste (HHW) being disposed of at local HHW collection programs has increased significantly. Most HHW programs are not equipped or funded sufficiently to handle this increasing demand.

In September 2007, the SCBWMI Core Group identified product stewardship as a priority and formed a Product Stewardship Subgroup to address these issues in Santa Clara Valley watersheds. A representative of SCVURPPP is participating on this Subgroup. In FY 08-09, the Subgroup continued to encourage agencies to join the CPSC, adopt EPR resolutions and send letters in support of legislation related to product stewardship. The Subgroup also discussed developing fact sheets to aid local agencies in implementing bans/restrictions on the municipal use of certain products (such as triclosan-containing soaps and single-serve water bottles). If the WMI Core Group approves, the fact sheets will be developed in FY 09-10.

The current list of Co-permittees and local organizations that have signed the CPSC Pledge of Support is provided below:

- Cupertino
- Los Altos
- Los Altos Hills
- Los Gatos
- Mountain View
- Monte Sereno
- Palo Alto
- San Jose
- Santa Clara County
- Santa Clara Valley Water District
- Sunnyvale
- SCVURPPP
- West Valley Clean Water Program
- CLEAN South Bay

Co-permittees with adopted Extended Producer Responsibility Resolutions include:

- Campbell
- Cupertino
- Los Altos
- Los Altos Hills
- Los Gatos
- Monte Sereno
- Santa Clara County
- Saratoga
- Sunnyvale

**Table 5-1  
Status of FY 2008-2009 Watershed Management Measures Projects<sup>1</sup>**

Title	Category/ Monitoring Priority (MP) <sup>1</sup> / Permit Provision	Capsule Scope	Product(s) <sup>2</sup>	Status Schedule
Support Bay Area Macroinvertebrate Bioassessment Information Network (BAMBI) Annual Meeting	MP #4	Coordinate annual BAMBI meeting where bioassessment data and analyses can be presented from a local, regional or state perspective.	BAMBI Annual Meeting – coordinated annual meeting and provided one PowerPoint presentation <sup>4a</sup>	Completed January 2009
Benthic Macroinvertebrate Index of Biotic Integrity (B-IBI) for San Francisco Bay Area Creeks	MP #4	Collaborate with other BASMAA member agencies to develop regional bioassessment tools necessary to provide context to bioassessment data collected in Santa Clara Basin creeks.	Draft Provisional B-IBI for San Francisco Bay area creeks	Ongoing. Target Completion Date FY 09-10
Support for Land Use Subgroup	WMI Subgroups  MP# 1, 3c, 3d	Provide administrative support and leadership for the Land Use Subgroup. Maintain the subgroup mailing list; prepare and distribute agendas; chair meetings; edit and distribute meeting summaries; liaison to, and correspond with, the SCBWMI Core Group other subgroups as needed; update workplans; facilitate interaction between consultants and the subgroup; summarize, compile, and convey subgroup products.	Presentation – <i>Top Ten Development Tips to Protect Creeks.</i>  Presentation – <i>SUDS: Low Impact Development (LID) Implementation in Spain</i>  Identified and coordinated C.3 Workshop; moderated C.3 Workshop advanced track.  Presentation – <i>Mills College Natural Sciences Building: Rainwater Harvesting</i>	Completed October 2008  Completed January 2009  Completed June 2009  Completed June 2009

<sup>1</sup> Monitoring Priorities (updated at Monitoring AHTG meeting November 8, 1999):

- 1) New projects needed to implement the results, and achieve the goals, of current projects.
- 2) New projects that implement continuous improvement items identified through the annual review process.
- 3) Projects that support the Santa Clara Basin Watershed Management Initiative in one of the following ways:
  - a) Investigate Beneficial Uses and Causes of Impairment (including field work)
  - b) Review and Compile Environmental Data and Make it Accessible
  - c) Develop Strategies for Controlling Impacts of Land Use on Beneficial Uses
  - d) Facilitate and Support WMI Subgroups (including coordination with other agencies)
- 4) Projects identified through participation in regional monitoring collaborative efforts, including the Regional Monitoring Program and BASMAA.

<sup>2</sup> Refer to Appendix C-1 for additional details.

**Table 5-1  
Status of FY 2008-2009 Watershed Management Measures Projects<sup>1</sup>**

Title	Category/ Monitoring Priority (MP) <sup>1</sup> / Permit Provision	Capsule Scope	Product(s) <sup>2</sup>	Status Schedule
Controlling Sources of Pollutants through Support of Product Stewardship	MP# 3d	Provide administrative support to SCBWMI Product Stewardship Subgroup	SCVURPPP meeting summaries	Ongoing