



SECTION 8

NEW AND REDEVELOPMENT CONTROL MEASURES

8. NEW AND REDEVELOPMENT CONTROL MEASURES

INTRODUCTION

This section describes the Program's efforts during FY 05-06 to assist Co-permittees to control the impacts of development on stormwater quality and flow through the development project planning, review and approval process. Tasks related to construction inspection are described under Section 2, Co-permittee Guidance, and Section 2, Performance Standards.

BACKGROUND

On October 17, 2001, the Water Board adopted Order 01-119 which amended the Program's Permit Provision C.3. (New and Redevelopment Requirements) to contain significant new requirements. These requirements include:

- Numeric design standards for sizing stormwater treatment controls;
- Limits on increases in peak stormwater discharge rates and/or durations from new or redevelopment sites ("hydromodification") that may result in increased potential for erosion or other adverse impacts in creeks;
- Requirements for operation and maintenance of stormwater controls;
- Requirements for site design and source control measures;
- Definition of a minimum project size, based on amount of impervious surface created, for which the design standards, control measures, peak flow limitations, and maintenance requirements apply;
- Requirements for changes to General Plans and environmental review processes to provide authority to implement the requirements; and
- Reporting requirements.

These requirements are applicable to "Group 1" projects (those with one acre or more of impervious surface) and later to "Group 2" projects (those with 10,000 square feet or more of impervious surface).

To assist Co-permittees in completing and implementing these requirements, Program staff prepared the *Guidance for Work Plan Tasks Related to Implementation of Permit Provision C.3. (New and Redevelopment Requirements)*. This guidance identified proposed actions to meet the requirements of Provision C.3. and whether the actions would be implemented at the Program level, Co-permittee level or both. All of the Program and Co-permittee "start up" tasks have been completed, and Co-permittees are in the ongoing implementation phase.

In February 2003, the Water Board adopted and/or amended the stormwater permits for the Contra Costa, Alameda, and San Mateo countywide stormwater programs with different requirements than those in the Program's permit. The Water Board Executive Officer stated the Board's intention to make all of the permits consistent, and as a result, extended the deadlines for implementation of certain C.3. provisions¹. In addition, the Program submitted a letter to the Water Board on September 22, 2003 proposing an alternative Group 1 and Group 2 project

¹ Letter to Beau Goldie, SCVURPPP Management Committee Chair, from Loretta K. Barsamian, Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, Re: Extension of Specified Deadlines in Order 01-119, May 12, 2003.

definition consistent with the other stormwater programs' permits², which was accepted by the Water Board in a letter dated January 29, 2004³. On July 20, 2005, the Water Board adopted a Tentative Order⁴ (which amended portions of Provision C.3. in Order 01-119) to further conform the permit language to that of the other permits in the region, amend the Group 2 requirements to include a revised alternative Group 2 definition, and incorporate key provisions in the Hydromodification Management Plan (HMP) Report.

The adopted Order No.R2-2005-0035 allows a phased implementation of C.3. at Group 2 projects based on land use and potential for pollution. Group 2A consists of projects under one acre and greater than 10,000 square feet of impervious surface that have one of the following land use categories: gas stations; auto wrecking yards; loading docks or parking lots greater than 10,000 square feet; and other industrial or commercial uses where potential pollutant loading cannot be mitigated by post-construction source control and site design practices. Implementation for Group 2A projects began on October 20, 2005. Group 2B consists of all other land uses in the same size category and implementation for Group 2B began on August 15, 2006.

Order R2-2005-0035 also adopted the key provisions of the Program's HMP Report. The key provisions, including management standard, performance criteria, and applicability criteria, are presented in Attachment A to the Order, and an applicability map is presented in Attachment B. The Order required Co-permittees to begin implementation of the HMP on October 20, 2005.

To summarize, on October 15, 2003, Co-permittees began implementing the C.3. requirements for Group 1 projects (i.e., those projects that included creation or replacement of one acre or more of impervious surface). On October 20, 2005, Co-permittees began implementing the HMP requirements and C.3. requirements for Group 2A, and by August 15, 2006, Co-permittees will be implementing C.3. requirements for all Group 2 projects.

IMPLEMENTATION OF FY 05-06 C.3. TASKS

During FY 05-06, Program efforts were focused on assistance to Co-permittees with C.3. and HMP implementation, conducting training workshops for municipal staff and the development community, and participation with Water Board staff on the development of the new and redevelopment requirements for the Municipal Regional Permit.

Table 8-1 presents the status of the Program's new and redevelopment (C.3.) tasks scheduled for completion in FY 05-06. The table includes tasks outlined in the *FY 05-06 Work Plan*, including some remaining tasks from the original *C.3. Work Plan Guidance* (the numbered tasks) and some new tasks identified for FY 05-06.

Highlights of accomplishments and evaluation of effectiveness of some of the key tasks are provided below.

² Letter to Loretta Barsamian, Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, from Beau Goldie, Chair, SCVURPPP Management Committee, Re: Revised Request for Regional Board Approval of an Alternative "Group 2 Project" Definition, September 22, 2003.

³Letter to Beau Goldie, SCVURPPP Management Committee Chair, from Bruce Wolfe, Executive Officer, California Regional Water Quality Control Board, San Francisco Bay Region, Re: Approval of the Proposed Alternate Group 2 Project Definition, January 29, 2004.

⁴Order No. R2-2005-0035, NPDES Permit No. CAS029718, Amendment Revising Order No. 01-119 (Provision C.3., New and Redevelopment Requirements), July 20, 2005.

Ad Hoc Task Group and Work Group Participation

In FY 01-02, the Program formed the C.3. Provision Oversight Ad Hoc Task Group (C3PO AHTG) to oversee, coordinate, and discuss Program guidance on implementation of C.3. tasks. During FY 05-06, the C3PO AHTG continued to meet approximately bimonthly and received updates on C.3. and HMP issues and projects; reviewed fact sheets and updates to C.3. Handbook; helped plan the annual workshop; and shared information on implementation of C.3. The C3PO AHTG provided valuable assistance to Program staff in development of the C.3. implementation tools and continues to be a useful forum for discussion of experience with implementing the C.3. requirements.

A number of work groups were formed to work on specific issues under C.3. The list of AHTG and work group members, and the missions of each group, is provided in Section 2, Table 2-2. During FY 05-06, two work groups were active: the HMP Implementation Phase Work Group and the BMP O&M Verification Work Group.

C.3. Implementation Products

After revisions to Provision C.3 were adopted in July 2005, Program staff updated Chapters 1 and 2 of the SCVURPPP C.3. *Stormwater Handbook* to reflect changes related to Group 2 requirements and the adoption of the HMP. The updated pages are available as inserts to the Handbook on the Program website www.scvurppp.org. The updates include changes to the "Summary of Major Changes to the Development Review Process" table, the development review process flow charts and the C.3.Provisions Fact Sheet, as well as the development of a new HMP Fact Sheet. Copies of the fact sheets are provided within Attachment G-1. Program staff also drafted a Chapter 5 for the Handbook containing a summary of HMP requirements. This chapter is currently being reviewed by the HMP Implementation Work Group. Program staff also updated the Planning Procedures Performance Standard (PPPS) to include the Group 2 and HMP requirements.

In 2004, the Program completed a document entitled *Developments Protecting Water Quality: A Guidebook of Site Design Examples* (Guidebook) that provides information on local projects or areas where innovative design measures which protect water quality have been applied (available at www.scvurppp.org). In FY 05-06, Program staff collected information on approximately ten additional projects installed after the completion of the original Guidebook and are in the process of updating the Guidebook to include these examples.

In 2006, the Program sponsored an awards program for exemplary site designs to protect water quality. This awards program will recognize Santa Clara Valley's public agency and private development community leaders who are solving site design challenges, reducing stormwater pollution and runoff quantity, and meeting the requirements of the NPDES permit. Applications for the awards program will also help provide information on additional site design examples for updating the Guidebook. Awards will be given to one residential, one commercial and one public project including site design measures that reduce the volume and velocity of stormwater runoff, provide stormwater treatment, serve as a visual amenity and can be easily maintained. An Awards Committee will meet in August 2006 to review the submittals. The award winners will be announced by August 31, 2006.

C.3. Workshops

During FY 05-06, the Program conducted one workshop to assist Co-permittees with implementation of Provision C.3. The workshop, entitled *Constructing, Maintaining and Inspecting Stormwater Treatment BMPs*, was held on June 6, 2006 and attracted 117 participants. The workshop was designed to address topics of interest to two audiences: 1) municipal and private planning/engineering staffs and 2) municipal inspectors. The morning sessions presented case studies of design and construction of BMPs at Stanford University and at residential and institutional projects in the City of San Jose, as well as information on design of biofiltration treatment controls. The afternoon sessions focused on how to conduct BMP operation and maintenance inspections and provided information on how to identify vector problems. It also included a case study of lessons learned during inspection of a commercial facility in Sunnyvale. The workshop also featured exhibits for five stormwater control measure vendors. The agenda and evaluation summary for the workshop are presented within Appendix A-7.

Guidance for Treatment BMP Operation and Maintenance Verification Programs

Provision C.3.e of the Program's NPDES permit requires each Co-permittee to implement a stormwater treatment BMP Operation and Maintenance (O&M) Verification Program. To address Provision C.3.e, the BMP O & M Verification Work Group was formed (by the C3PO AHTG) to develop guidance for implementing an O&M verification program. The Work Group consists of Program staff and representatives from the following jurisdictions: Cupertino, Los Gatos, Mountain View, Milpitas, Palo Alto, San Jose, West Valley Communities, Santa Clara Valley Water District, Sunnyvale, Stanford University, and the Santa Clara County Vector Control District.

In FY 02-03 and FY 03-04, Program staff developed (and the Work Group reviewed) a total of eight guidance documents to assist Co-permittees in implementing a BMP O&M Verification Program. Information from these documents was included in Chapter VI of the *C.3. Stormwater Handbook* (May 2004). The memoranda and the Handbook are available at www.scvurppp.org. In FY 04-05, the Program provided assistance to Co-permittees that were setting up verification programs, conducted a training workshop on O&M verification; and continued work on defining database and reporting requirements. Program staff and the BMP O&M Verification Work Group developed an approach to use standardized data fields to track treatment BMPs and relevant inspection results, ensured consistent data collection among Co-permittees, and began developing a data collection form which includes the standardized fields.

During FY 05-06, Program staff and the Work Group completed the "Standard Stormwater Treatment BMP Inspection Data Collection Form" (Attachment G-2) and guidance on what inspection data should be included in future Annual Reports. Co-permittees are expected to use the form or a form with similar standardized fields while conducting BMP O&M verification inspections. The June 2006 C.3. Workshop featured a session for inspectors on how to use the standardized form.

The BMP O&M Verification Work Group continued to coordinate efforts and share information with the Santa Clara County Vector Control District. District staff regularly attends Work Group and C3PO AHTG meetings. The Program provides the Vector Control District a copy of the Annual Report tables that list the locations of BMPs. In addition, Co-permittee inspection staff is instructed to refer problem BMP sites (e.g., those with standing water) to the Vector Control District. The Standard Stormwater Treatment BMP Inspection Data Collection Form includes

fields to indicate when the BMP being inspected appears to provide potential mosquito breeding habitat.

Hydromodification Management Plan

Background

Provision C.3.f. requires the Co-permittees to manage increases in runoff peak flows and volumes from Group 1 development projects through the implementation of a Hydromodification Management Plan (HMP). The following provides a history of the Program's HMP development. All products are available on the Program's website (www.scvurppp.org)

FY 01-02: The HMP Draft Work Plan was developed by the Program's consultant, Geosyntec, in consultation with Program staff and the Santa Clara Valley Water District (SCVWD), and submitted to the Water Board on March 1, 2002. A response to Water Board staff comments received May 14, 2002 and a revised HMP Work Plan was submitted to the Water Board on September 13, 2002.

FY 02-03: The GeoSyntec consultant team was expanded to include Philip Williams & Associates and Balance Hydrologics, Inc. to provide expanded expertise in geomorphology, stream function and hydrologic/hydraulic modeling. The consultant team also recruited a panel of experts to provide outside technical review of HMP Work Plan products⁵. The Program formed an HMP Work Group to start reviewing products developed as part of the Plan. The consultant team developed a watershed assessment methodology and applied it to the first test subwatershed, Lower Silver-Thompson Creek (part of Coyote Creek watershed). The assessment methodology consists of four elements: 1) problem area and reach characterization, 2) geomorphic assessment, 3) hydrologic modeling, and 4) stability assessment.

FY 03-04: The consultant team completed the assessment of two additional watersheds, the Ross Creek Subwatershed (representing the Guadalupe River watershed) and the San Tomas Aquino Creek Subwatershed (representing the characteristics of the western watersheds). The results of these assessments indicated that the methodology works in watersheds with different characteristics and that the watersheds studied are not significantly different to warrant separate hydromodification standards, criteria, and thresholds. Differences between watersheds are accounted for in the assessment methodology.

The Program and the consultant team also completed six technical memoranda describing the technical analyses performed to address key issues for the HMP. These included the range of storm events to be considered for HMP criteria; effectiveness of volume control, discrete storm hydrograph matching, and flow duration control techniques for mitigating hydromodification techniques; and examples of flow duration basin sizing for local projects. The list of technical memoranda completed includes⁶:

- TM #1 — HMP Assessment Methodology (completed in October 2002)
- TM #2 — Exempt Areas (draft incorporated into Chapter 4 of HMP Report)

⁵ The expert panel included Brian Bledsoe of Colorado State University, Thomas Dunne of University of California at Santa Barbara and Matt Kondolf of University of California at Berkeley.

⁶ Copies of the technical memoranda are available within Appendix C of the HMP Report provided on the Program's website (www.scvurppp.org).

- TM #3 — HMP Standards and Criteria (draft incorporated into Chapter 4 of HMP Report)
- TM #4 — Evaluation of the Range of Storms for HMP Performance Criteria
- TM #5 — Evaluation of Volume Control Effectiveness
- TM #6 — Volume Control Sizing Example and Cost Analysis
- TM #7 — Flow Duration Control Example
- TM #8 — Sizing Flow-Duration Controls for a Small Development Project in San Jose

During FY 03-04, the Program also completed four HMP interim and draft reports, including the *HMP Draft Interim Report, Assessment of the Lower Silver-Thompson Creek Subwatershed* (July 30, 2003), and the *Hydromodification Management Plan, Public Review Draft* (July 9, 2004).

FY 04-05: After the release of the *Hydromodification Management Plan (Public Review Draft)*, the Program conducted a series of public meetings (during July and August 2004) to get input from the development community (developers and engineering consulting firms) and other interested parties on the *Public Review Draft*. These meetings also served to update and get input from the Bay Area Stormwater Management Agencies Association (BASMAA) and Santa Clara Basin Watershed Management Initiative (SCBWMI) members on the HMP. Comments received were incorporated into a *Hydromodification Management Plan Report (Revised Public Review Draft)* released on November 4, 2004. After the release of the *Hydromodification Management Plan Report (Revised Public Review Draft)*, one additional public meeting was held.

The Final *Hydromodification Management Plan Report* was completed in March 2005 and approved by the Management Committee for submittal to the Water Board on April 21, 2005.

FY 05-06 Accomplishments

Following submittal of the Final *Hydromodification Management Plan Report*, Water Board staff issued a Tentative Order that adopted the key provisions of the Report. The Tentative Order was approved by the Water Board on July 20, 2005. The Order requires Co-permittees to implement the HMP provisions within three months of adoption (by October 20, 2005).

Implementation of the HMP: To assist Co-permittees with implementation of the approved HMP, the Program formed a HMP Implementation Phase (HIP) Work Group that met several times during FY 05-06. With direction and assistance from the HIP Work Group, Program staff developed the following products during FY 05-06: 1) an HMP fact sheet; 2) a draft update to Chapter V of the *C.3. Stormwater Handbook* that includes the key provisions of the HMP and implementation guidance; 3) and a Request for Qualifications (RFQ) for consulting firms that can design stormwater flow and treatment controls, in order to develop a list of qualified firms for use by Co-permittees and developers. The RFQ was mailed in June 2006. A total of nine firms submitted Statements of Qualifications, and the list was finalized in August 2006. The HIP Work Group also discussed the HMP requirements for several San Jose projects. In addition, Program staff conducted a "HMP 101" workshop for Co-permittee staff that covered the basic principles of hydromodification management. The workshop was conducted for West Valley Communities in Monte Sereno on January 26, 2006 and for other Co-permittees in San Jose on March 27, 2006.

During FY 05-06, the City of San Jose approved one project subject to HMP measures in conformance with City Policy 8-14, and had several Group 1 projects in the conceptual design stage for which HMP requirements will apply. Program staff has helped with the review of flow

control facility designs, and have observed that developers' engineers are following the design guidance provided in the HMP.

The City of San Jose has been implementing the HMP as part of the Smart Growth Strategy in the Evergreen area (eastern edge of San Jose), which addresses the future development of several non-contiguous properties. The City of San Jose, Water District and Program staff have met with the team of consultants representing the property owners and assisted them in evaluating how to meet the HMP requirements for the proposed developments. San Jose staff has also been addressing stormwater and HMP issues in the development of the Coyote Valley Specific Plan. The Land Use Plan Concept for Coyote Valley presented to City Council in January 2005 includes a lake that will be used for flood control and flow control purposes and other site design measures that will help to reduce increases in flow from the development.

Other Co-permittees have had very few Group 1 projects. None were subject to HMP requirements in FY 05-06. However, all Co-permittees have policies and/or ordinances in place requiring the implementation of the HMP, if applicable.

Bay Area Hydrology Model (BAHM): The Program, along with the San Mateo and Alameda County stormwater programs, is jointly funding the development of a tool for simulating pre- and post-project hydrology and automatically sizing flow control facilities to meet HMP requirements. Clear Creek Solutions (CCS), the consulting firm who developed the Western Washington Hydrology Model, has been contracted to develop a Bay Area version, based on the HSPF watershed hydrology model. The regional component of the BAHM is near completion and has been calibrated for Alameda County watersheds. A joint stormwater program demonstration of the Alameda version of the BAHM was conducted on May 19, 2006.

The Program contracted separately with CCS to perform local calibration of the model to two watersheds in Santa Clara Valley. Local calibration is anticipated to be completed by early September 2006, and training workshops on the BAHM will be conducted in fall 2006. The BAHM will include the ability to model common site design and treatment control measures and quantify the reduction in flow duration due to these measures.

The Program recently contracted with GeoSyntec Consultants to conduct studies comparing flow basin sizing using the HEC-HMS (the hydrology model used to develop the SCVURPPP HMP) and HSPF models, in order to provide guidance on model use and sizing procedures and to assist development of the BAHM.

Next Steps

The HMP Report will continue to be improved through lessons learned from implementation experiences and review of approaches proposed by other Bay Area stormwater programs. Chapter 7 of the Final HMP Report, HMP Implementation Guidance, describes the anticipated next steps towards addressing remaining implementation issues, refining the guidance and coordinating with other Bay Area programs and Water Board staff in development of a consistent, regional approach. A list and schedule of next steps is provided in Table 8-2.

Other Tasks

Other tasks that Program staff accomplished during FY 05-06 include the following:

- Program staff participated in the Water Board's New Development Work Group for development of the Bay Area Municipal Regional Permit, the Water Board's Stormwater Subcommittee Workshop, and several other stakeholder meetings in which new development issues were discussed. Program staff also spent significant effort preparing and reviewing work products of the MRP New Development Work Group.
- Program staff gave the following presentations on the permit requirements for new and redevelopment projects and other Program elements:
 - "Hydromodification Management Plan for Santa Clara Valley", presented by Jill Bicknell at the Floodplain Managers Association Conference, Sacramento, September 8, 2005.
 - "Development of a Hydromodification Management Plan for Santa Clara Valley – Guidance for Local Implementation", presented by Jill Bicknell at the Hydromodification Workshop, CASQA Conference, Ontario, CA, October 3, 2005.
 - "Development of a Hydromodification Management Plan for Santa Clara Valley – Guidance for Local Implementation: Part 2", presented by Jill Bicknell at the CASQA Conference, Ontario, CA, October 4, 2005.
- Program staff reported on the Program's C.3. implementation progress at BASMAA New Development Committee meetings.
- Program and some Co-permittee staff attended two meetings (February 8 and April 5, 2006) with other Bay Area stormwater program representatives to discuss consistent strategies for implementation of the HMP.
- Program staff chaired the BASMAA BMP Sizing Tools Work Group, a group overseeing a BASMAA Task of Regional Benefit to develop an automated BMP sizing tool. The Program is helping to fund the project and overseeing the consultant contract. In FY 04-05, Phase 1 of the project, which established a set of design parameters for seven BMPs, was completed. During FY 05-06, Program staff worked with the consultant and work group to develop and approve a scope of work for Phase 2 (development of a web-based design tool), and solicited funding. The scope is currently being revised to adjust to the level of funding available from participating programs.

Evaluation of Effectiveness

The process for working with the Co-permittees to implement C.3. has worked well. As mentioned above, the C3PO AHTG and its work groups have provided valuable assistance to Program staff in development of the C.3. implementation tools. In addition, the C3PO AHTG has also been a useful forum for discussion of development review processes used by the various Co-permittees and sharing of ideas and lessons learned about implementing C.3. requirements.

During FY 05-06, a significant amount of Program and Co-permittee staff time was expended working with Water Board staff on the development of the MRP, including participation in the New Development Work Group, in special BASMAA meetings, and in MRP stakeholder meetings. While this work was important and usually productive, this shifting of resources prevented the Program from making more progress on C.3. and HMP implementation tasks.

The evaluation summary from the Program workshop entitled *Constructing, Maintaining and Inspecting Stormwater Treatment BMPs* is provided within Appendix A-7. This workshop was conducted in response to a request from the Management Committee and previous workshop attendees to follow-up the June 2005 workshop with one that was targeted to maintenance staff with more detail on the actual inspection process. As a result, many inspection staff attended the workshop. Based on the evaluations, the workshop was successful overall and the

expectations of most attendees were met. Comments on the evaluation forms will be used in planning subsequent workshops.

Program staff will continue to work with the Co-permittees and Water Board staff to evaluate the C.3. planning and implementation process and products during future C3PO AHTG meetings and C.3. workshops.

**Table 8-1
Status of FY 05-06 C.3. Implementation Tasks**

<u>Task</u>	<u>Updated Schedule</u>	<u>Status</u>
<u>C.3.c. Requirements for Group 1 and Group 2 Projects</u>		
c.9. Update guidance manual and performance standards for Group 2 projects as needed.	6/06	Completed – The <i>C.3. Stormwater Handbook</i> and Planning Procedures Performance Standard (PPPS) were updated to include the most recent Group 2 definition per the adopted Tentative Order (Order R2-2005-0035). <i>Guidance on Group 2 implementation will assist Co-permittee compliance with regulatory requirements in C.3.c. and C.3.d.</i>
Other Tasks: Develop model standards and specifications for preferred BMPs.	6/07	To Be Done – This task was deferred until FY 06-07 due to staff time needed to participate in work groups for the Municipal Regional Permit (MRP).
Conduct workshop on implementation and design of BMPs, (e.g., bioretention, planter boxes, green roofs, etc.).	6/06	Completed – The Program's annual C.3. workshop, held on June 6, 2006 featured presentations covering the design and maintenance of various treatment BMPs, including bioretention, vegetated swales, etc.
Supervise BASMAA project for developing automated BMP sizing/design tool.	6/06; ongoing	Completed/Ongoing – During FY 05-06, Program staff chaired a BASMAA work group that selected a consultant to develop the sizing tool, worked with the consultant and work group to develop and approve a scope of work, and solicited funding. The scope is currently being revised to adjust to the level of funding available from participating programs.
Promote/facilitate regional roundtable meetings with SCVURPPP agency staff and other stormwater programs to share information about implementation strategies and experience.	6/06; ongoing	Completed/Ongoing – Co-permittees shared information on the implementation of C.3. specific projects at internal meetings of the C.3. Provision Oversight (C3PO) Ad Hoc Task Group (AHTG) and the HMP Implementation Phase (HIP) Work Group. In addition, Program and some Co-permittee staff attended two meetings (February 8 and April 5, 2006) with other Bay Area stormwater program representatives to discuss strategies for implementation of the HMP. Staff also attended a joint stormwater program demonstration of the Bay Area Hydrology Model (May 19, 2006).

**Table 8-1, continued
Status of FY 05-06 C.3. Implementation Tasks**

<u>Task</u>	<u>Updated Schedule</u>	<u>Status</u>
<u>C.3.e. Operation and Maintenance of Treatment BMPs</u>		
e.6. Report on the Co-permittee's treatment BMPs O&M verification program in each annual report, including organizational structure, evaluation of effectiveness, and planned improvement to the program. Include a list or summary of treatment BMPs inspected during the year, inspection results, and any required follow-up and correction.	Annually	<p>Completed/Ongoing – Co-permittees began reporting on their progress with this task in the <i>FY 03-04 Annual Report</i>. Since the C.3. implementation start date was October 15, 2003, Co-permittees have few, if any, BMP verification inspections to report because Group 1 projects proposed in FY 03-04 are either not yet constructed or only recently constructed. Program staff helped develop an inspection data collection form (see Appendix G-2), a model database format, and guidance for compilation of data, and will continue to assist Co-permittees with this task.</p> <p><i>Guidance on O&M annual reporting assisted Co-permittee compliance with regulatory requirements in C.3.e. and C.3.n.</i></p>
Other Tasks: Continue to provide assistance with Co-permittee implementation of BMP O&M verification programs (provide follow-up guidance to Spring 2005 workshop).	6/06	<p>Completed/Ongoing – On June 6, 2006, the Program conducted a workshop on the design and maintenance of treatment BMPs and inspection of BMPs to verify maintenance. The afternoon of the workshop was geared toward inspectors and provided information on BMP maintenance needs, what to look for during inspections, and how to use the data collection form. See Section 2 and Appendix A-7 for additional workshop details.</p>

**Table 8-1, continued
Status of FY 05-06 C.3. Implementation Tasks**

<u>Task</u>	<u>Updated Schedule</u>	<u>Status</u>
<u>C.3.f. Hydromodification Management Plan</u>		
<p>f.2. Develop guidance to the Co-permittees on implementation of the HMP as part of requirements for Group 1 projects that may cause increased erosion or other related impacts:</p> <ul style="list-style-type: none"> - Fact sheets - <i>C.3. Stormwater Handbook</i> update - Workshops 	<p>Report completed 4/05; additional guidance 6/06</p>	<p>Completed/Ongoing – Guidance on HMP implementation is provided within Chapter 7 of the HMP Report. Additional guidance developed during FY 05-06 includes: 1) C.3. and HMP fact sheets for training Co-permittee staff and outreach to the development community (Appendix G-1); 2) a draft update to Chapter V of the <i>C.3. Stormwater Handbook</i> that includes the key provisions of the HMP and implementation guidance; 3) and a “HMP 101” workshop for Co-permittee staff that covered the basic principles of hydromodification management, conducted for West Valley Communities in Monte Sereno on January 26, 2006 and for other Co-permittees in San Jose on March 27, 2006.</p> <p><i>Guidance on HMP implementation will assist Co-permittee compliance with regulatory requirements in C.3.f.</i></p>
<p>Other Tasks:</p> <p>Continue development of the Bay Area Hydrology Model (BAHM), both regional and local aspects.</p> <p>Continue to develop the approach for quantifying flow control benefits of site design and treatment control measures.</p>	<p>12/06</p>	<p>In Progress – The Program participated in the development of the regional component of the BAHM by Clear Creek Solutions (CCS), which is near completion. The Program also contracted with CCS to perform local calibration of the model to two watersheds. Local calibration is anticipated to be completed by early September 2006, and training workshops on the BAHM will be conducted in Fall 2006. The BAHM will include the ability to model common site design and treatment control measures and quantify the reduction in flow duration due to these measures.</p>

**Table 8-1, continued
Status of FY 05-06 C.3. Implementation Tasks**

<u>Task</u>	<u>Updated Schedule</u>	<u>Status</u>
Conduct additional implementation studies for example sites in Santa Clara Valley.	9/06; ongoing	In Progress – The Program recently contracted with GeoSyntec Consultants to conduct studies comparing flow basin sizing using the HEC-HMS and HSPF models, in order to provide guidance on model use and sizing procedures and to assist development of the BAHM.
Continue to coordinate with other Bay Area stormwater programs to work toward a consistent HMP approach for the Bay Area.	Ongoing	In Progress -- Program and San Jose staff attended one meeting (February 8, 2006) with other Bay Area stormwater program representatives and one meeting (April 5, 2006) with Water Board and Contra Costa Program staff to discuss strategies for implementation of the HMP and differences between program approaches. Program staff also served on the MRP New Development Work Group and discussed the need for a consistent approach in the MRP. On July 12, 2006, the Contra Costa HMP was adopted by the Water Board, and that HMP contains different provisions than the SCVURPPP HMP. Program staff will continue to work with other Bay Area programs and Water Board staff during FY 06-07 to resolve these differences.

**Table 8-1, continued
Status of FY 05-06 C.3. Implementation Tasks**

<u>Task</u>	<u>Updated Schedule</u>	<u>Status</u>
<p>f.3. Upon adoption by the Water Board, begin implementation of HMP requirements for Group 1 projects that may cause increased erosion or other related impacts.</p>	<p align="center">10/05</p>	<p>In Progress – On July 20, 2005, the Water Board adopted a Tentative Order approving key provisions of the HMP Report (Order R2-2005-0035). The Order requires implementation of HMP requirements by October 20, 2005. In order to implement the HMP, Co-permittees amended their ordinances and policies as needed. San Jose has begun implementation by requiring flow controls in the conceptual planning phases of large development projects. (Other Co-permittees have not had any projects for which the HMP was applicable.)</p> <p>Program staff have assisted with guidance on implementation (see Task f.2.); reviewed several conceptual design submittals to meet HMP requirements for projects in San Jose; and developed a Request for Qualifications for consulting firms that can design stormwater flow and treatment controls, in order to develop a list of qualified firms for use by Co-permittees and developers.</p>
<p>f.4. Provide assistance and input as needed to District study to evaluate potential regional treatment and/or flow control projects.</p>	<p align="center">As needed</p>	<p>Completed/Ongoing – Program staff are continuing to review District products and participate in discussions with District and San Jose staffs and developers regarding requirements for the Evergreen Specific Plan Area, Coyote Valley Specific Plan and other major development projects. Program staff has also been participating with District and San Jose staff on an HMP In-Stream Projects Work Group, exploring technical feasibility and financing of in-stream projects to help meet HMP requirements.</p>

**Table 8-1, continued
Status of FY 05-06 C.3. Implementation Tasks**

<u>Task</u>	<u>Updated Schedule</u>	<u>Status</u>
<u>C.3.g. Waiver and Compensatory Mitigation Program</u>		
g.3 Assist Co-permittees to track and report information on waivers granted, including project name, location, type, percent impervious surface, reasons for and terms of waiver, and the alternative benefit project and completion date.	Each Annual Report	<p>Completed/Ongoing – Program staff developed a reporting form for projects granted a waiver and alternative compliance, which is included in Attachment 6 to the Planning Procedures Performance Standards and Attachment VII-3, Part 3 of the <i>C.3. Stormwater Handbook</i>.</p> <p><i>Guidance on waiver reporting assisted Co-permittee compliance with regulatory requirements in C.3.g.</i></p>
<u>C.3.n. Reporting Requirements</u>		
n.1. Provide information described in Table 1 of Provision C.3. in annual reports (Program to provide guidance for each annual report).	Annually	<p>Completed/Ongoing – Each June, Co-permittees are provides guidance (within the Program’s Annual Report preparation guidance memorandum) on C.3. reporting. Reporting requirements are cross-referenced with Table 1 of Provision C.3. and any comments/direction provided by Water Board staff. Data are reported using Group 1 and 2 reporting forms in the PPPS and Attachment VII-3 of the <i>C.3. Stormwater Handbook</i>.</p> <p><i>Guidance on annual reporting assisted Co-permittee compliance with regulatory requirements in C.3.n.</i></p>
n.2. Assist Co-permittees to collect information and summarize types of pesticide reduction measures required for development projects, and the percentage of projects for which pesticide reduction measures were required.	Annually	<p>Completed/Ongoing – Program staff provided guidance for reporting within the memorandum entitled <i>FY 03-04 Annual Report Preparation Guidance</i> -dated June 11, 2004. (See Task n.1). This is reinforced in subsequent annual report guidance memoranda provided each June. Data can be recorded on C.3. Summary Data Forms and reported using Group 1 and 2 reporting forms (PPPS and Attachment VII-3 of <i>C.3. Stormwater Handbook</i>.)</p> <p><i>Guidance assisted Co-permittee compliance with regulatory requirements in C.3.n. and C.9.d.ii.</i></p>

Table 8-2
SCVURPPP HMP - Summary of Next Steps

Task ¹	Anticipated Completion Date ²	Status
1. Develop the following: <ul style="list-style-type: none"> a. a funding mechanism³ such that projects can utilize in-stream control options b. a methodology for determining developer contributions based on the stream changes expected to result from changes in project runoff conditions. 	6/07 6/07	In Progress - District, San Jose, and Program staff have formed a HMP Instream Projects Work Group, and the group has met several times to review funding mechanisms and approaches for identifying and funding instream projects.
2. Work with City/County planning and public works departments and the Water District to determine the timing and method of notifying District staff during the development review process about HMP projects that may need in-stream controls, in a manner that does not unreasonably prolong the review process. Further, look at ways to improve method to provide early communication on Group 1 project reporting.	12/06	In Progress – Some Co-permittees already have a process for involving District staff in development project review. SCVURPPP staff will document current practices and develop guidance for other Co-permittees, in consultation with District staff.
3. Facilitate review of District’s MDL analysis, both by the Co-permittees and the Expert Panel, and work with the Management Committee to determine the need to integrate some or all of the MDL analyses into implementation of the HMP.	12/06	In Progress – The MC authorized budget for review by a member of the Expert Panel and arrangements for the review are being made.
4. Conduct additional studies of implementation of site design, integrated management practices, and/or basins at example development sites in Santa Clara Valley.	6/07	In Progress – The Program recently contracted with GeoSyntec Consultants to conduct studies comparing flow basin sizing using the HEC-HMS and HSPF models, in order to provide guidance on model use and sizing procedures and to assist development of the BAHM. This work will be completed in September 2006. Additional studies will be conducted in FY 06-07.
<i>Bay Area Hydrology Model (BAHM) Development Project – Regional Model, Local Calibration, Training</i>	9/06 Fall 2006	In Progress – The Program participated in the development of the regional component of the BAHM

¹ Tasks are from Chapter 7 of April 2005 HMP Report. *Tasks in italics have been added.*

² All dates depend on availability of resources and cooperation/collaboration of numerous staff from different agencies and may change because of circumstances beyond the control of the Program. The Program periodically updates the Management Committee regarding schedule changes and will transmit updates schedules to Water Board staff.

³ The intent is to describe a mechanism agreeable to Co-permittees and next steps for implementation.

**Table 8-2
SCVURPPP HMP - Summary of Next Steps (continued)**

Task ¹	Anticipated Completion Date ²	Status
		by Clear Creek Solutions (CCS), which is near completion. The Program also contracted with CCS to perform local calibration of the model to two watersheds. Local calibration is anticipated to be completed by early September 2006, and training workshops on the BAHM will be conducted in Fall 2006. The BAHM will include the ability to model common site design and treatment control measures and quantify the reduction in flow duration due to these measures.
5. During implementation of the HMP, obtain feedback/suggestions for further refinement and implementation guidance	As needed/ Ongoing	In Progress – The HMP Implementation Work Group has been meeting on a regular basis, and has been an effective forum to share experience with HMP implementation and obtain suggestions for additional HMP guidance. Members of the development community have also attended these meetings. Program staff have had the opportunity to review several conceptual design submittals to meet HMP requirements for projects in San Jose and discussed these with the work group.
6. Coordinate with other Bay Area stormwater programs to work toward a consistent approach for the Bay Area (via participation in development of the Municipal Regional Permit (MRP)).	Ongoing until completion of MRP	In Progress – Program and San Jose staff attended one meeting (February 8, 2006) with other Bay Area stormwater program representatives and one meeting (April 5, 2006) with Water Board and Contra Costa Program staff to discuss strategies for implementation of the HMP and differences between program approaches. Program staff also served on the MRP New Development Work Group and discussed the need for a consistent approach in the MRP. Since that time, the Contra Costa HMP was adopted by the Water Board on July 12, 2006, and that HMP contains different provisions than the SCVURPPP HMP. Program staff will continue to work with other Bay Area programs and Water Board staff during FY 06-07 to resolve these differences.

**Table 8-2
SCVURPPP HMP - Summary of Next Steps (continued)**

Task ¹	Anticipated Completion Date ²	Status
<p>7. Coordinate additional Co-permittee, Bay Area stormwater program, and Water Board staff review process and progress meetings, including:</p> <ul style="list-style-type: none"> a. The development of a schedule for Bay Area-wide HMP implementation in the upcoming Municipal Regional Permit. b. <i>Public outreach – HMP updates, workshop</i> c. <i>HMP Work Group Meetings</i> 	<p align="center">6/07</p> <p align="center">Ongoing</p> <p align="center">Ongoing</p>	<p>In Progress – See Task 7. HMPs are being adopted individually. Schedule for MRP is unclear.</p> <p>Completed/Ongoing – In FY 05-06, the Program completed: a HMP fact sheet for training Co-permittee staff and outreach to the development community; 2) a draft update to Chapter V of the <i>C.3. Stormwater Handbook</i> that includes the key provisions of the HMP and implementation guidance; 3) and a “HMP 101” workshop for Co-permittee staff that covered the basic principles of hydromodification management, conducted for West Valley Communities in Monte Sereno on January 26, 2006 and for other Co-permittees in San Jose on March 27, 2006. There have been four meetings of the HMP Implementation Phase Work Group</p>
<p>8. Collect data on the implementation of the HMP at small sites for a period of two years after the start of implementation, and plan to re-evaluate the small site size threshold and approach at that time. <i>Conduct and document reevaluation.</i></p>	<p align="center">9/08 (FY 07-08 AR)</p>	<p>FY 06-07: Define and start data collection process FY 07-08: Continue data collection</p>
<p>9. Make additional refinements per: 1) lessons learned from implementation efforts based on the draft HMP; 2) the need for consistency with HMPs being developed by other Bay Area stormwater programs; and 3) development community, Co-permittee, and Water Board feedback.</p>	<p align="center">Report in ARs beginning with FY 05-06 AR</p>	<p>In Progress – See Task 5. Additional refinements will be made pending completion of the BAHM, adoption of the MRP, and continuing input from Co-permittee staff and developers.</p>