



## SECTION 8

# NEW AND REDEVELOPMENT CONTROL MEASURES

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## 8. NEW AND REDEVELOPMENT CONTROL MEASURES

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### INTRODUCTION

This section describes the Program's efforts during FY 06-07 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 now applicable to "Group 1" projects (those with one acre or more of impervious surface) and "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. provisions<sup>1</sup>. In addition, the Program submitted a letter to the Water Board on September 22, 2003 proposing an alternative Group 1 and Group 2 project

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<sup>1</sup> 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' permits<sup>2</sup>, which was accepted by the Water Board in a letter dated January 29, 2004<sup>3</sup>. On July 20, 2005, the Water Board adopted a Tentative Order<sup>4</sup> (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 on August 15, 2006, Co-permittees began (or continued) implementing C.3. requirements for all Group 2 projects.

### IMPLEMENTATION OF FY 06-07 C.3. TASKS

During FY 06-07, 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 (MRP).

Table 8-1 presents the status of the Program's new and redevelopment (C.3.) tasks scheduled for completion or ongoing in FY 06-07. The table includes tasks outlined in the *FY 06-07 Work Plan*, including some remaining tasks from the original *C.3. Work Plan Guidance* (the numbered tasks) and some new tasks identified for FY 06-07.

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

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<sup>2</sup> 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.

<sup>3</sup>Letter 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.

<sup>4</sup>Order 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 06-07, the C3PO AHTG continued to meet approximately bimonthly and received updates on C.3. and HMP issues and projects; received updates on and discussed the proposed C.3. provisions in the draft Municipal Regional Permit (MRP); 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, are provided in Section 2, Table 2-2. During FY 06-07, two work groups were active: the HMP Implementation Phase Work Group and the BMP O&M Verification Work Group.

### C.3. Implementation Products

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. In FY 05-06, Program staff collected information on approximately ten additional projects installed after the completion of the original Guidebook and completed the process of updating the Guidebook to include these examples in FY 06-07. The February 2007 version is available on the Program's website ([www.scvurppp.org](http://www.scvurppp.org))

In 2006, the Program sponsored an awards program for exemplary site designs to protect water quality. This awards program recognizes 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 also helps provide information on additional site design examples for updating the Guidebook. Nominations were due on July 14, 2006, and an Awards Committee consisting of Program staff, a Co-permittee representative, a local consultant, and an environmental group representative met in August 2006 to review the submittals.

The 2006 award winners included:

- Exemplary Public Project (Large Site) – Tully Library, City of San Jose;
- Exemplary Public Project (Small Site) – Alum Rock Library, City of San Jose;
- Exemplary Private Project (Residential) – Willow Glen Reflections, DKB Homes and City of San Jose;
- Exemplary Private Project (Institutional) – Congregation Sinai Facility, Congregation Sinai and City of San Jose.

The award winners were recognized at an awards ceremony on October 30, 2006 (see Section 2 for additional details of the Program's award ceremony). The Program is continuing the awards program in 2007.

### C.3. Workshops

During FY 06-07, the Program conducted one workshop to assist Co-permittees with implementation of Provision C.3. The workshop, entitled *Implementing Stormwater Requirements in New Development and Redevelopment Projects*, was held on June 14, 2007 and attracted 128 participants. The workshop was designed to address topics of interest to municipal and private planning/engineering staffs. The morning sessions presented case studies of implementation of C.3. on a variety of projects; an update on stormwater regulations; and an overview of the HMP cost estimating study (described later in this section). The afternoon sessions focused on design, construction, experience and planting guidelines for bioretention systems; use of structural soils for street trees; and vector control considerations for stormwater treatment devices. The workshop also featured exhibits for five stormwater control measure vendors. The agenda and evaluation summary for the workshop are presented within Appendix A-6.

A second series of workshops was held in July 2007 to train Co-permittee staff and private consultants on the use of the Bay Area Hydrology Model. This is described later in this section.

### 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. In FY 02-03 and FY 03-04, Program staff and Work Group developed 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*. 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 Work Group also 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" 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.

During FY 06-07, Co-permittees began conducting BMP O&M inspections using the standardized inspection form. Inspection data was submitted to the Program using the Treatment BMP Inspection Activity Report form, for compilation. Appendix G-1 presents an example of this form containing all of the data submitted by the Co-permittees for FY 06-07. Appendix G-2 contains an Inspection Activity Summary Report of submitted data. A total of 26 inspections were conducted at approximately 13 sites. The Summary Report summarizes the information by Co-permittee, reason for inspection, project type, BMP type, inspection results and enforcement action.

The City of San Jose conducted a pilot BMP O&M verification inspection program during FY 06-07. Since all projects constructed to date were approved prior to numeric sizing requirements

and did not require inspection under the C.3. provisions, the pilot inspection program provided experience and training for City staff. During FY 06-07, twenty BMPs were inspected at twelve different sites using the Program's *Standard Stormwater Treatment BMP Inspection Data Collection Form*. BMPs were inspected on both public and private sites and include the following types: vegetated swale, porous pavement, exfiltration trench and extended detention basin. The City of San Jose learned that as numerically-sized BMPs are installed, additional resources and coordination among departments will be necessary to ensure appropriate installation, operation and maintenance, and overall functionality of BMPs.

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). A detailed history of the Program's HMP development has been provided in previous annual reports. During the period FY 01-02 to FY 05-06, the Program and its consultants: developed a work plan; conducted a literature review; conducted watershed hydrologic and geomorphic assessments of three subwatersheds in Santa Clara Valley; produced six technical memoranda on key technical issues; completed four interim and draft HMP reports; conducted a series of public meetings; and completed the final report. All products are available on the Program's website ([www.scvurppp.org](http://www.scvurppp.org))

The Final *Hydromodification Management Plan Report* was submitted to the Water Board on April 21, 2005 and the key provisions adopted as part of a Tentative Order 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). All Co-permittees have policies and/or ordinances in place requiring the implementation of the HMP, if applicable.

To assist Co-permittees with implementation of the approved HMP, the Program formed a HMP Implementation Phase (HIP) Work Group in FY 05-06. With direction and assistance from the HIP Work Group, Program staff has developed: 1) an HMP fact sheet; 2) Chapter V of the *C.3. Stormwater Handbook* that includes the key provisions of the HMP and implementation guidance; 3) and a list of qualified consulting firms that can design stormwater flow and treatment controls. In addition, Program staff began a series of "HMP 101" workshop for Co-permittee staff that covered the basic principles of hydromodification management.

### FY 06-07 Accomplishments

During FY 06-07, Program staff efforts focused on support of the HIP Work Group, development of the Bay Area Hydrology Model, participation in the HMP Instream Projects Work Group and overseeing other HMP implementation studies.

HIP Work Group: 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. During the six meetings in FY 06-07, the work group discussed the MRP and other Bay Area HMPs, development of the BAHM, HMP guidance and training, and the cost estimating methodology. At the request of the work group, a second "HMP 101" workshop covering the basic principles of hydromodification management was conducted for Co-permittee staff and the development community on October 25, 2006.

The work group also shared information on implementation of HMP requirements. The City of San Jose has begun implementation by requiring flow controls in the conceptual planning phases of large development projects. One project with a combination flow duration basin/park is under construction. Other Co-permittees have not had any projects for which the HMP was applicable.

Bay Area Hydrology Model (BAHM): The Program, along with the San Mateo and Alameda County stormwater programs, jointly funded 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, was contracted to develop a Bay Area version, based on the HSPF watershed hydrology model. The Program contracted separately with CCS to perform local calibration of the model to two watersheds in Santa Clara Valley.

The BAHM was completed in July 2007 and a series of six trainings were conducted on July 17-19, 2007. Trainings were co-sponsored by the Alameda and San Mateo countywide stormwater programs. The training hosted by SCVURPPP in San Jose attracted 43 participants, including agency staff, consultants, and Water Board staff. The agenda, evaluation summary, and list of attendees are provided in Appendix A-7.

The BAHM has the ability to model common site design and treatment control measures and quantify the reduction in flow duration due to these measures. Additional testing will be conducted in FY 07-08 to fine tune and improve guidance on the use of the BAHM for this purpose.

HMP Instream Projects Work Group: The HMP Instream Projects Work Group, consisting of Santa Clara Valley Water District, City of San Jose and Program staff, was formed to explore the feasibility of allowing developers of projects requiring hydromodification controls to contribute to regional stream restoration and/or hydromodification control projects in lieu of installing controls on-site. The work group continues to meet regularly to review potential funding mechanisms, review lists of District projects, and discuss approaches for linking instream projects to potential development projects in the contributing watersheds.

HMP Implementation Studies: In FY 06-07, the Program contracted with GeoSyntec Consultants to do a comparison of flow basin sizing using the HEC-HMS and HSPF models. The results will provide guidance on model use and sizing procedures and assist development of the BAHM. The draft comparison report was completed and is under going review by Program staff. In addition, the Program also contracted with GeoSyntec to develop a methodology for estimating costs for the purpose of determining impracticability of hydromodification management measures (i.e., the 2% cost cap). This work is underway and a draft report will be completed by September 2007.

### Next Steps

The Program's approach to hydromodification control will continue to be improved through lessons learned from implementation experiences, use of the BAHM, 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. An updated list and schedule of next steps is provided in Table 8-2.

### **Other Tasks**

Other tasks that Program staff accomplished during FY 06-07 include the following:

- Program staff continued to spend significant effort reviewing and commenting on the preliminary and administrative drafts of the C.3. and HMP sections of the MRP, and attending several meetings with BASMAA and Water Board staff on this topic.
- Program staff gave the following presentations on the permit requirements for new and redevelopment projects and other Program elements:
  - CASQA Conference, Sacramento, CA, presentation by Jill Bicknell entitled "Bay Area Hydrology Model – A Tool for Analyzing Hydromodification Effects on Development Projects and Sizing Solutions" (September 26, 2006);
  - San Diego Regional Stormwater Co-permittees Hydromodification Plan Workgroup Meeting, presentation by Jill Bicknell entitled "Hydromodification Management Plan for Santa Clara Valley" (December 6, 2006);
  - West Valley Clean Water Program MRP Meeting; presentation by Jill Bicknell entitled "Background on SCVURPPP and Permit Requirements for New and Redevelopment Projects" (December 19, 2006);
  - SCVWD Stream Protection, Restoration, and Erosive Forces Workshop; San Jose, CA, presentation by Jill Bicknell entitled "The Role of the Santa Clara Valley Urban Runoff Program in Stream Protection and Control of Erosive Forces" (January 31, 2007);
  - Sacramento Stormwater Quality Partnership Hydrograph Modification Management Workshop, Sacramento, CA, presentation by Kristin Kerr entitled "Hydromodification Management Plan for Santa Clara Valley" (February 22, 2007);
  - CASQA General Membership Meeting, San Jose, CA, presentation by Jill Bicknell and Kristy McCumby-Hyland (City of Sunnyvale) entitled "Conducting BMP Operation & Maintenance Verification Inspections: A County-wide Approach and Early Lessons Learned" (March 9, 2007);
  - City of San Jose Construction Management Training, San Jose, CA, presentation by Jill Bicknell entitled "The New Construction General Permit - How Will It Affect Your Next Project?" (March 28, 2007);
  - Santa Clara Valley Water District Board Meeting, San Jose, CA, presentation by Jill Bicknell entitled "The Role of the Santa Clara Valley Urban Runoff Program in Stream Protection and Control of Erosive Forces", Part of the Stream Protection, Restoration and Erosive Forces (SPREF) Presentation (April 10, 2007).
- Program staff reported on the Program's C.3. implementation progress at BASMAA New Development Committee meetings.
- Program staff continued to chair the BASMAA BMP Sizing Tools Work Group, a group overseeing a BASMAA Task of Regional Benefit to develop an automated, web-based BMP sizing tool. The Program is helping to fund the project and overseeing the

consultant contract. The BMPs selected for the tool include vegetated swale, pervious paving, infiltration trench, and bioretention area. The tool is under development and expected to be completed in September 2007.

### **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.

On July 18, 2007, the Program received comments from Water Board staff on the New and Redevelopment element of the FY 05-06 Annual Report (Program and Co-permittee sections). In the letter, Water Board staff commended the Program for its work and leadership in implementing the C.3. O&M requirements, particularly the "comprehensive, user-friendly Standard Stormwater Treatment BMP Inspection Data Collection Form." They also commended the Co-permittees for providing more detailed and comprehensive information in the New and Redevelopment reporting tables and for beginning to perform and report BMP O&M verification inspections. No responses to comments were required.

The evaluation summaries from the Program's C.3. workshop and BAHM training are provided within Appendices A-6 and A-7. Based on the evaluations, the workshops were successful overall and the expectations of most attendees were met. Comments on the evaluation forms will be used in planning subsequent workshops.

During FY 06-07, 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 special BASMAA meetings and 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.

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 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</u>
<b><u>C.3.c. Requirements for Group 1 and Group 2 Projects</u></b>		
All original C.3. tasks have been completed. Other Tasks:		
Promote/facilitate regional roundtable meetings with SCVURPPP agency staff and other stormwater programs to share information about implementation strategies and experience.	Ongoing	<b>Completed/Ongoing</b> – Co-permittees shared information on implementation of C.3. on 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 BASMAA New Development Committee meetings, and sessions at the CASQA conference related to new development.
Prepare guidance on implementing changes to Provision C.3. in the Regional Permit, and updates to the C.3. Handbook to reflect those changes.	6/08	<b>To Be Done</b> – This task was deferred until adoption of the MRP (expected late 2007/early 2008).
Develop model standards and specifications for preferred BMPs.	6/08	<b>To Be Done</b> – This task was deferred to FY 07-08 due to staff time needed to review and comment on draft documents; and time for participation in work groups for the Municipal Regional Permit (MRP). Standards and specifications will be include in FY 07-08 updates to the C.3. Handbook.
Continue assistance with the C3PO AHTG meetings and action items.	Ongoing	<b>Completed/Ongoing</b> – Program staff conducted and prepared meeting summaries for five AHTG meetings in FY 06-07 (approximately bimonthly).
Conduct workshop on implementation and design of BMPs, (e.g., bioretention, planter boxes, green roofs, etc.).	6/07	<b>Completed</b> – The Program's annual C.3. workshop, held on June 14, 2007, featured presentations covering the design of bioretention systems, including plant selection and case studies of C.3. implementation on various projects.

**Table 8-1, continued  
Status of FY 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</u>
Supervise BASMAA project for developing automated BMP sizing/design tool.	9/07	<b>In Progress</b> – 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 BMPs selected for the tool included vegetated swales, pervious paving, infiltration trenches and bioretention areas. The tool is under development and expected to be completed in September 2007.
<b>C.3.e. Operation and Maintenance of Treatment BMPs</b>		
<p>e.6. Assist Co-permittees to report on treatment BMPs O&amp;M verification program in each annual report, including organizational structure, evaluation of effectiveness, and planned improvement to the program.</p> <p>Continue to provide assistance with Co-permittee implementation of BMP O&amp;M verification programs and develop a Program-wide database.</p>	Annually	<p><b>Completed/Ongoing</b> – Since the C.3. implementation start date was October 15, 2003, most Group 1 projects approved in FY 03-04 or later years are either not yet constructed or only recently constructed. In FY 06-07, Co-permittees began conducting BMP O&amp;M verification inspections on recently constructed projects. Program staff provided an inspection data collection form and guidance for data collection. In addition, Program staff collected data which detailed BMP O&amp;M inspections and compiled the results for the FY 06-07 Annual Report (see Appendix G-1 and G-2).</p> <p><i>Guidance on O&amp;M annual reporting assisted Co-permittee compliance with regulatory requirements in C.3.e. and C.3.n.</i></p>

**Table 8-1, continued  
Status of FY 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</u>
<b>C.3.f. Hydromodification Management Plan</b>		
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: <ul style="list-style-type: none"> <li>• Conduct one or more workshops on HMP implementation;</li> <li>• Provide guidance on any changes to HMP requirements in the Regional Permit, and update the HMP and C.3. Stormwater Handbook to reflect these changes.</li> </ul>	Report completed 4/05; additional guidance 6/06; workshops FY 05-06 and FY 06-07	<p><b>Completed/Ongoing</b> – Guidance on HMP implementation is provided within Chapter 7 of the HMP Report and Chapter V of the <i>C.3. Stormwater Handbook</i>. On October 25, 2006, a second “HMP 101” workshop covering the basic principles of hydromodification management was conducted for Co-permittee staff and the development community.</p> <p><b>To Be Done</b> – This task was deferred until adoption of the MRP (expected late 2007/early 2008).</p> <p><i>Guidance on HMP implementation will assist Co-permittee compliance with regulatory requirements in C.3.f.</i></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.	Began implementation 10/05; Ongoing	<p><b>Completed/Ongoing</b> – 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. The City of San Jose has begun implementation by requiring flow controls in the conceptual planning phases of large development projects. One project with a combination flow duration basin/park is under construction. (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.) and reviewed several conceptual design submittals to meet HMP requirements for projects in San Jose. To develop a list of qualified firms for use by Co-permittees and developers, Program staff has also developed a Request for Qualifications for consulting firms that can design stormwater flow and treatment controls.</p>

**Table 8-1, continued  
Status of FY 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</u>
f.4. Provide assistance and input as needed to District study to evaluate potential regional treatment and/or flow control projects.	As needed	<b>Completed/Ongoing</b> – Program staff are continuing to review Water District products and participate in discussions with Water 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 Water 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.
Other Tasks: <ul style="list-style-type: none"> <li>• Continue development of the Bay Area Hydrology Model (BAHM), both regional and local aspects.</li>   <li>• Continue to develop the approach for quantifying flow control benefits of site design and treatment control measures.</li> </ul>	7/07	<b>Completed/Ongoing</b> – The BAHM was completed in July 2007 and a series of six trainings were conducted on July 17-19, 2007. Trainings were co-sponsored by the Alameda and San Mateo countywide stormwater programs. The Program participated with these two other programs in the development of the regional component of the BAHM, and also contracted with the software developer, Clear Creek Solutions, to calibrate the model to two watersheds in the Santa Clara Valley. Local calibration was completed in May 2007.  The BAHM includes the ability to model common site design and treatment control measures and quantify the reduction in flow duration due to these measures. Additional testing will be conducted in FY 07-08 to fine tune and improve guidance on the use of the BAHM for this purpose.

**Table 8-1, continued  
Status of FY 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</u>
<ul style="list-style-type: none"> <li>Conduct additional implementation studies for example sites in Santa Clara Valley.</li> </ul>	10/07	<p><b>In Progress</b> – In FY 06-07, the Program contracted with GeoSyntec Consultants to do a comparison of flow basin sizing using the HEC-HMS and HSPF models. The results will provide guidance on model use and sizing procedures and assist development of the BAHM. The draft comparison report was completed and is under going review by Program staff.</p> <p>In addition, the Program also contracted with GeoSyntec to develop a methodology for estimating costs for the purpose of determining impracticability of hydromodification management measures (i.e. the 2% cost cap). This work is underway and a draft report will be completed by September 2007.</p>
<ul style="list-style-type: none"> <li>Collect data on HMP implementation at small sites and plan to re-evaluate the small site size threshold after two years of implementation (HMP Next Steps Task 9 – may be superseded by changes to the permit).</li> </ul>	TBD	<p><b>To Be Done</b> –To date there have been no small sites required to implement HMP requirements. The MRP proposes to reduce the threshold for projects subject to HMP requirements to one acre of impervious surface. As a result, this task will be reevaluated following adoption of the MRP (late 2007/ early 2008).</p>
<ul style="list-style-type: none"> <li>Conduct programmatic monitoring tasks identified in Section 7.8 of the HMP Report (tracking projects, documenting BMP design and inspection, self-evaluation).</li> </ul>	Annually	<p><b>Completed/Ongoing</b> – As part of their annual reporting tasks, Co-permittees have been tracking and reporting information on projects subject to HMP requirements.</p>
<p><b><u>C.3.g. Waiver and Compensatory Mitigation Program</u></b></p>		

**Table 8-1, continued  
Status of FY 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</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><b>Completed/Ongoing</b> – 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>. No projects to date have used the alternative compliance option.</p> <p><i>Guidance on waiver reporting assisted Co-permittee compliance with regulatory requirements in C.3.g.</i></p>
<b><u>C.3.j. Site Design Measures Guidance and Standards Development</u></b>		
j.2. Assist Co-permittees to prepare and submit reports summarizing the status of review, revision, and implementation of local site design guidance and standards, as part of their annual reports.	Annually	<p><b>Completed/Ongoing</b> – On September 15, 2003, the Program submitted a compilation of the Co-permittees’ “Site Design Standards and Guidance Review”. This review contained recommendations for revisions to local site design standards. Each year, the Program’s Annual Report preparation memorandum provides direction for submitting information on any revisions completed during the fiscal year.</p> <p><i>Guidance on site design review reporting assisted Co-permittee compliance with regulatory requirements in C.3.j.</i></p>
<b><u>C.3.n. Reporting Requirements</u></b>		
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><b>Completed/Ongoing</b> – 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 is 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>

**Table 8-1, continued  
Status of FY 06-07 C.3. Implementation Tasks**

<u>Task</u>	<u>Anticipated Completion Date</u>	<u>Status</u>
<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.</p>	<p align="center">Annually</p>	<p><b>Completed/Ongoing</b> – 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 C.3. <i>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 (Updated 7/27/07)**

Task <sup>1</sup>	Anticipated Completion Date <sup>2</sup>	Status
1. Develop the following: <ul style="list-style-type: none"> <li>a. a funding mechanism<sup>3</sup> such that projects can utilize in-stream control options</li> <li>b. a methodology for determining developer contributions based on the stream changes expected to result from changes in project runoff conditions.</li> </ul>	6/08 6/08	<b>In Progress</b> - The HMP Instream Projects Work Group, consisting of Water District, City of San Jose and Program staff, continues to meet regularly. In FY 06-07, the group met nine times to review potential funding mechanisms, review lists of Water District projects, and discuss approaches for linking instream projects to potential development projects in the contributing watersheds.
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.	12/07	<b>In Progress</b> – This task was delayed pending decisions by the HMP Instream Projects Work Group. Some Co-permittees already have a process for involving Water District staff in development project review. Program staff will document current practices and develop guidance for other Co-permittees, in consultation with Water 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.	TBD	<b>On Hold</b> – This task is on hold pending results of the analyses being done by the HMP Instream Projects Work Group and adoption of new HMP requirements in the Municipal Regional Permit (MRP). The Management Committee authorized budget for review by a member of the Expert Panel but the review is on hold.
4. Conduct additional studies of implementation of site design, integrated management practices, and/or basins at example development sites in Santa Clara Valley.	12/07	<b>In Progress</b> – In FY 06-07, the Program contracted with GeoSyntec Consultants to do a comparison of flow basin sizing using the HEC-HMS and HSPF models. The results will provide guidance on model use and sizing procedures and to assist development of the

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

<sup>2</sup> 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.

<sup>3</sup> 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)**

<b>Task<sup>1</sup></b>	<b>Anticipated Completion Date<sup>2</sup></b>	<b>Status</b>
		<p>BAHM. The draft comparison report was completed and is under going review by Program staff.</p> <p>In addition, the Program also contracted with GeoSyntec to develop a methodology for estimating costs for the purpose of determining impracticability of hydromodification management measures (i.e. the 2% cost cap). This work is underway and a draft report will be completed by September 2007.</p>
<p><i>Bay Area Hydrology Model (BAHM) Development Project – Regional Model, Local Calibration, Training</i></p>	<p>Completed 7/07; Ongoing</p>	<p><b>Completed/Ongoing</b> –The BAHM was completed in July 2007 and a series of six trainings were conducted on July 17-19, 2007. Trainings were co-sponsored by the Alameda and San Mateo countywide stormwater programs. The Program participated with these two other programs in the development of the regional component of the BAHM, and also contracted with the software developer, Clear Creek Solutions, to calibrate the model to two watersheds in Santa Clara Valley. Local calibration was completed in May 2007.</p> <p>The BAHM includes the ability to model common site design and treatment control measures and quantify the reduction in flow duration due to these measures. Additional testing will be conducted in FY 07-08 to fine tune and improve guidance on the use of the BAHM for this purpose.</p>
<p>5. During implementation of the HMP, obtain feedback/suggestions for further refinement and implementation guidance</p>	<p>As needed/ Ongoing</p>	<p><b>Completed/Ongoing</b> – 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 reviewed several conceptual design submittals to meet HMP requirements for projects in San Jose and discussed these with the work group.</p>



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

<b>Task<sup>1</sup></b>	<b>Anticipated Completion Date<sup>2</sup></b>	<b>Status</b>
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.	Report in ARs beginning with FY 05-06 AR	<b>In Progress</b> – 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.