

## d. STANDARD STORM WATER MITIGATION PLANS (SSMPS) – APPROVAL PROCESS

## CRITERIA AND REQUIREMENTS FOR PRIORITY DEVELOPMENT PROJECTS

Development Projects to implement sitting, design, and maintenance criteria for each site design and treatment control BMP listed in its local SSMP to determine feasibility and applicability and so that implemented site design and treatment control BMPs are constructed correctly and are effective at pollutant removal, runoff control, and vector minimization. LID techniques, such as soil amendments, must be incorporated into the criteria for appropriate treatment control BMPs. Development of BMP design worksheets which can be used by project proponents is encouraged.

(9) Implementation Process

As part of its local SSMP, each Copermitttee must implement a process to verify compliance with SSMP requirements. The process must identify at what point in the planning process Priority Development Projects will be required to meet SSMP requirements and at a minimum, the Priority Development Project must implement the required post-construction BMPs prior to occupancy and/or the intended use of any portion of that project. The process must also include identification of the roles and responsibilities of various municipal departments in implementing the SSMP requirements, as well as any other measures necessary for the implementation of SSMP requirements.

(10) Treatment BMP Review

- (a) The Copermitttees must review and update the BMPs that are listed in their local SSMPs as options for treatment control during the third year of implementation of this Order. At a minimum, the update must include removal of obsolete or ineffective BMPs and addition of LID BMPs that can be used for treatment, such as bioretention cells, bioretention swales, etc. The update must also add appropriate LID BMPs to any tables or discussions in the local SSMPs addressing pollutant removal efficiencies of treatment control BMPs. In addition, the update must include review and revision where necessary of treatment control BMP pollutant removal efficiencies.
  - (b) The update must incorporate findings from BMP effectiveness studies conducted by the Copermitttees for projects funded wholly or in part by the State Board or Regional Board.
  - (c) Each Copermitttee must implement a mechanism for annually incorporating findings from local treatment BMP effectiveness studies (e.g., ones conducted by, or on-behalf of, public agencies in Orange County) into SSMP project reviews and permitting
- (11) Where a development project, greater than 100 acres in total project size or smaller than 100 acres in size yet part of a larger common plan of

h. HYDROMODIFICATION – LIMITATIONS ON INCREASES OF RUNOFF DISCHARGE RATES  
AND DURATIONS

- (g) Include a protocol to evaluate potential hydrograph change impacts to downstream watercourses from Priority Development Projects. This protocol must include the use of the IBI score as a metric for assessing impacts and improvements to downstream watercourses.
  - (h) Include a description of how the Copermittees will incorporate the HMP requirements into their local approval processes.
  - (i) Include criteria on selection and design of management practices and measures (such as detention, retention, and infiltration) to control flow rates and durations and address potential hydromodification impacts.
  - (j) Include technical information supporting any standards and criteria proposed.
  - (k) Include a description of inspections and maintenance to be conducted for management practices and measures to control flow rates and durations and address potential hydromodification impacts.
  - (l) Include a description of pre- and post-project monitoring and other program evaluation, including IBI score, to be conducted to assess the effectiveness of implementation of the HMP.
  - (m) Include mechanisms for assessing and addressing cumulative impacts within a watershed on channel morphology.
  - (n) Include information on evaluation of channel form and condition, including slope, discharge, vegetation, underlying geology, and other information, as appropriate.
- (2) In addition to the hydrologic control measures that must be implemented per section F.1.h.(1)(c), the HMP must include a suite of management measures to be used on Priority Development Projects to protect and restore downstream beneficial uses and prevent or further prevent adverse physical changes to downstream channels. The measures must be based on a prioritized consideration of the following elements in this order:
- (a) Hydrologic control measures;
  - (b) On-site management controls;
  - (c) Regional controls located upstream of receiving waters; and
  - (d) In-stream controls.

Where stream channels are adjacent to, or are to be modified as part of a Priority Development Project, management measures must include buffer zones and setbacks. Under no circumstances will in-stream controls include the use of non-naturally occurring hardscape materials such as concrete,

## e. INSPECTION OF CONSTRUCTION SITES

slope; (3) project size and type; (4) sensitivity of receiving water bodies; (5) proximity to receiving water bodies; (6) non-storm water discharges; (7) past record of non-compliance by the operators of the construction site; and (8) any other relevant factors.

- (2) During the wet season, each Copermittee must inspect at least monthly, all construction sites with one acre or more of soil disturbance not meeting the criteria specified above in section F.2.e.(1).
- (3) During the wet season, each Copermittee must inspect construction sites less than one acre in size as needed to ensure compliance with its ordinances and this Order.
- (4) Each Copermittee must inspect all construction sites as needed during the dry season. Sites meeting the criteria in section F.2.e.(1) must be inspected at least once in August or September each year.
- (5) Re-inspections: Based upon site inspection findings, each Copermittee must implement all follow-up actions (i.e., re-inspection, enforcement) necessary to comply with this Order. Reinspection frequencies must be determined by each Copermittee based upon the severity of deficiencies, the nature of the construction activity, and the characteristics of soils and receiving water quality.
- (6) Inspections of construction sites must include, but not be limited to:
  - (a) Check for coverage under the General Construction Permit (Notice of Intent (NOI) and/or Waste Discharge Identification No.) during initial inspections;
  - (b) Assessment of compliance with Copermittee ordinances and permits related to runoff, including the implementation and maintenance of designated minimum BMPs;
  - (c) **Assessment of BMP effectiveness;**
  - (d) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff;
  - (e) Education and outreach on storm water pollution prevention, as needed; and
  - (f) Creation of a written or electronic inspection report.
- (7) The Copermittees must track the number of inspections for each inventoried construction site throughout the reporting period to verify that each site is inspected at the minimum frequencies required.

## f. ENFORCEMENT OF CONSTRUCTION SITES

- (1) Each Copermittee must develop and implement an escalating enforcement

information, and education.

b. COMMERCIAL / INDUSTRIAL

(4) Inspection of Industrial and Commercial Sites/Sources

Each Copermittee must conduct industrial and commercial site inspections for compliance with its ordinances, permits, and this Order.

(a) Inspection Procedures: Inspections must include but not be limited to:

- (i) Review of BMP implementation plans, if the site uses or is required to use such a plan;
- (ii) Review of facility monitoring data, if the site monitors its runoff;
- (iii) Check for coverage under the General Industrial Permit (Notice of Intent (NOI) and/or Waste Discharge Identification Number), if applicable;
- (iv) Assessment of compliance with Copermittee ordinances and permits related to runoff;
- (v) **Assessment of BMP implementation, maintenance and effectiveness;**
- (vi) Visual observations for non-storm water discharges, potential illicit connections, and potential discharge of pollutants in storm water runoff; and
- (vii) Education and training on storm water pollution prevention, as conditions warrant.

(b) Each Copermittee shall annually notify the Regional Board, prior to the commencement of the wet season, of all Industrial Sites and Industrial Facilities subject to the General Industrial Permit or other individual NPDES permit with alleged violations. Information may be provided as part of the JRMP annual report if submitted prior to the rainy season. Information provided shall include, but not be limited to, the following:

- (i) WDID number if enrolled under the General Industrial Permit;
- (ii) Site Location, including address;
- (iii) Current violations or suspected violations; and
- (iv) Past Violation history.

(c) Frequencies: At a minimum, 20 percent of the sites inventoried as required in section F.3.b.(1) above (excluding mobile sources and food facilities) must be inspected each year. Mobile businesses must be

## c. RESIDENTIAL

areas and activities must be area or activity specific.

- (c) Hazardous Waste BMPs: Each Copermittee must facilitate the proper management and disposal of used oil, toxic materials, and other household hazardous wastes. Such facilitation must include educational activities, public information activities, and establishment of collection sites operated by the Copermittee or a private entity. Curbside collection of household hazardous wastes is encouraged.
- (d) Implement BMPs: Each Copermittee must implement, or require implementation of, the designated minimum BMPs and any additional measures necessary to comply with Sections A and B of this Order.
- (e) Each Copermittee must implement, or require implementation of, BMPs for residential areas and activities that have not been designated a high threat to water quality, as necessary.

(3) Enforcement of Residential Areas and Activities

Each Copermittee must enforce its storm water ordinance for all residential areas and activities as necessary to maintain compliance with this Order.

(4) Evaluation of Oversight of Residential Areas and Activities

Each Copermittee must annually review the effectiveness of efforts to reduce residential discharges of storm water pollutants from the MS4 and eliminate illicit residential discharges into the MS4. The evaluation must consider findings from monitoring data, municipal employee comments, inspections, complaints, and other appropriate sources.

(5) Common Interest Areas (CIA) / Home Owner Association (HOA) Areas

Each Copermittee must implement measures specifically to ensure that runoff within common interest developments, including areas managed by associations, meets the objectives of this section and Order.

- (a) BMP Implementation: Each Copermittee must implement management measures based on a review of pertinent factors, including:
  - (i) Current maintenance duties and procedures used by CIA/HOA maintenance associations within its jurisdiction;
  - (ii) Whether streets and storm drains are publicly or privately owned within the CIA/HOA;
  - (iii) Whether the CIA/HOA area has been identified as a high priority residential area;
  - (iv) Proximity to 303(d)-listed waterbodies, the ocean, environmentally

## d. Retrofitting Existing Development

improvement programs.

(1) Source Identification

The Copermittee must identify and inventory existing developments (i.e. municipal, industrial, commercial, residential) as candidates for retrofitting. Potential retrofitting candidates must include but are not limited to:

- (a) Development that contributes pollutants of concern to a TMDL or a ESA;
- (b) Receiving waters channelized or otherwise hardened;
- (c) Development tributary to receiving waters that are channelized or otherwise hardened;
- (d) Developments tributary to receiving waters that are significantly eroded;
- (e) Developments tributary to an ASBS or SWQPA; and
- (f) Development that causes hydraulic constriction.

(2) Each Copermittee shall evaluate and rank the inventoried existing developments to prioritize retrofitting. Criteria for evaluation must include but is not limited to:

- (a) Feasibility;
- (b) Cost effectiveness;
- (c) Pollutant removal effectiveness;
- (d) Impervious area potentially treated;
- (e) Maintenance requirements;
- (f) Landowner cooperation;
- (g) Neighborhood acceptance;
- (h) Aesthetic qualities; and
- (i) Efficacy at addressing concern.

(3) Each Copermittee must consider the results of the evaluation in prioritizing work plans for the following year. Highly feasible projects expected to benefit water quality should be given a high priority to implement source control and treatment control BMPs. Where feasible, the retrofit projects should be designed in accordance with the SSMP requirements within sections F.1.d.(3) through F.1.d.(8). In addition, the Copermittee shall encourage retrofit projects to implement where feasible the Hydromodification requirements in Section F.1.h.

(4) When requiring retrofitting on existing development, the Copermittees will cooperate with private landowners to encourage retrofitting projects. The Copermittee may consider the following practices in cooperating and encouraging private landowners to retrofit their existing development:

- (a) Demonstration retrofit projects;
- (b) Retrofits on public land and easements;

## **G. WATERSHED RUNOFF MANAGEMENT PROGRAM**

### **1. Lead Watershed Copermittee Identification**

Watershed Copermittees shall identify the Lead Watershed Copermittee for their Watershed Management Area (WMA). The Lead Watershed Copermittees shall serve as liaisons between the Permittees and Regional Board, where appropriate.

### **2. Watershed Water Quality Workplan (Watershed Workplan)**

The Watershed Workplan shall describe the Permittees' development and implementation of a collective watershed strategy to assess and prioritize the water quality problems within the watershed's receiving waters, identify and model sources of the highest priority water quality problem(s), develop a watershed-wide BMP implementation strategy to abate highest priority water quality problems, and a monitoring strategy to evaluate BMP effectiveness and changing water quality prioritization in the WMA.

The work plan shall, at a minimum:

- a. Characterize the receiving water quality in the WMA. Characterization shall include use of regularly collected water quality data, reports, monitoring and analysis generated in accordance with the requirements of the Receiving Waters Monitoring and Reporting Program, as well as applicable information available from other public and private organizations.
- b. Identify the highest priority water quality problem(s), in terms of constituents by location, in the WMA's receiving waters. Identified water quality problem(s) shall, at a minimum, give consideration to; TMDLs, receiving waters listed on the CWA section 303(d) list, waters with persistent violations of water quality standards, toxicity, or impacts to beneficial uses, and other pertinent conditions.
- c. Identify the sources of the highest water quality problem(s) within the WMA. Efforts to determine such sources shall include, but not be limited to: use of information from the construction, industrial/commercial, municipal, and residential source identification programs required within the Jurisdictional Runoff Program (JRMP) of this Order; specific actions to model pollutant transport to receiving waters for the sake of identifying the source(s) point(s) of origin; water quality monitoring data collected as part of the Receiving Water Monitoring and Reporting Program required by this Order, and additional focused water quality monitoring to identify specific sources within the watershed.
- d. Develop a watershed BMP implementation strategy to attain receiving water quality objectives in the identified highest priority water quality problem(s). The BMP implementation strategy shall include a schedule for implementation of the BMP projects to abate specific receiving water quality problems. BMPs not

Annual Reports, as necessary, so that they are consistent with the updated Watershed Workplan.

## 7. Aliso Creek Watershed Runoff Management Plan (WRMP) Provisions

The following provisions apply to the Aliso Creek WRMP. Requirements in this subsection must supersede requirements prescribed by the Regional Board on October 18, 2005.<sup>20</sup>

- a. Each Copermittee within the Aliso Creek Watershed must implement the monitoring and reporting program described in *Aliso Creek 13325 Directive, Revised Monitoring Program Design – Integration with NPDES Program*, December 2004 (Revised Aliso Creek Program).
- b. Each Copermittee must provide annual reports by March 1 of each year beginning in 2011 for the preceding annual period of January through December. The annual reports must contain the following information:
  - (1) Water quality data and assessment from the Revised Aliso Creek Program. Each municipality must implement the monitoring and reporting program described in the Revised Aliso Creek Program. All information submitted in the report must conform to a SWAMP-Compatible Quality Assurance Project Plan<sup>21</sup>. The report must contain an assessment of compliance with applicable water quality standards for each monitoring station. The report must include data in tabular and graphical form, and electronic data must be submitted to the Regional Board.
  - (2) Program Assessment. A description and assessment of each municipality's program implemented within the high-priority storm drain locations (as identified Revised Aliso Creek Program) to reduce discharges of indicator fecal bacteria/pathogens. Monitoring alone is not sufficient to assess progress of the municipal programs. Municipalities must demonstrate each year that their programs are effective and resulting in a reduction of bacteria sources.
    - (i) For structural and nonstructural management practices implemented, the assessment must contain a description of the

<sup>20</sup> On October 12, 2005, the Regional Board accepted proposed changes to the bacteria monitoring program that had been conducted since spring 2001 pursuant to an Investigative Order from the Regional Board's executive officer. The October 18, 2005, letter from the Regional Board's executive officer revised the Investigative Order and instituted the new monitoring and reporting requirements.

<sup>21</sup> The State Water Resource Control Board (State Board) has prepared an electronic template for Quality Assurance Project Plans (QAPP) to assist in QAPP development, to provide a common format that will allow for review to be expedited, and to provide information on Surface Water Ambient Monitoring (SWAMP) consistency. Additional information and the template are available on-line at <http://www.waterboards.ca.gov/swamp/qapp.html>.



practice, capital and maintenance costs, expectations for effectiveness, date implemented, and any observed results.

(ii) For structural and nonstructural management practices evaluated, the assessment must contain a description of the practice(s), conclusions from the evaluation, and whether and when the practice is planned for implementation by the municipality or group of municipalities.

(3) Status Reports. Updates on high-priority storm drain areas. Status reports must be provided by each municipality that discuss the causes of impairment and subsequent management activities implemented within the reporting period in the high priority areas and the planned activities for the next reporting period.

(4) Certification Statement. The technical reports submitted to the Regional Board must include the following certification statement signed by either the principal executive officer, ranking elected official, or duly authorized representative of that person:

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

- c. The annual reports must be submitted until the Regional Board determines they are no longer warranted. If requested by a municipality, the monitoring program may be modified or reduced by the Regional Board. The monitoring program and annual reporting may be modified in response to adopted TMDLs and additional Clean Water Act 303(d) listings for impairment.
- d. Municipalities must continue meeting on a quarterly basis to discuss efforts to reduce bacteria in the Aliso Creek watershed.

## J. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

### 1. Jurisdictional Program Effectiveness Assessments

#### a. OBJECTIVES OF EFFECTIVENESS ASSESSMENTS

Beginning with the Annual Report due in 2011, each Copermittee must annually assess the effectiveness of its Jurisdictional Runoff Management Program (JRMP) implementation at meeting the following objectives:

- (1) Objective for 303(d) Waterbodies: Reduce storm water pollutant loadings.
  - (a) Each Copermittee must establish annual assessment measures or methods specifically for reducing discharges of storm water pollutants from its MS4 into each downstream 303(d)-listed water body for which that waterbody is impaired. Assessment measures must be developed for each of the six outcome levels described by CASQA.<sup>22</sup>
  - (b) Each Copermittee must annually conduct each established assessment measure or method and evaluate the outcome. Each outcome must then be used to assess the effectiveness of implemented management measures toward reducing MS4 discharges of the specific pollutants causing or contributing to conditions of impairment.
  - (c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- (2) Objective for Environmentally-Sensitive Areas: Prevent storm water MS4 discharges from causing or contributing to conditions of pollution, nuisance, or contamination.
  - (a) Each Copermittee must establish annual measures or methods specifically for assessing the effectiveness of its management measures for protecting downstream ESAs from adverse effects caused by discharges from its MS4. Assessment measures must be developed for each of the six outcome levels described by CASQA.
  - (b) Each Copermittee must annually implement each established assessment measure or method and evaluate the outcome. Each outcome must be used to assess the effectiveness of implemented management measures toward reducing MS4 discharges of the specific pollutants causing or contributing to conditions of impairment.
  - (c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- (3) Objectives for major program component outcomes: Determined by Each

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<sup>22</sup> Effectiveness assessment outcome levels as defined by CASQA are defined in Attachment C of this Order. See "Municipal Stormwater Program Effectiveness Assessment Guidance" (CASQA, May 2007) for guidance for assessing program activities at the various outcome levels.

Copermittee.

- (a) Each Copermittee must annually develop objectives for each program component in Section F and the overall JRMP. The objectives must be established as appropriate in response to program implementation and evaluation of water quality and management practices.
  - (b) Assessment approaches for program implementation must include a mix of specific activities, general program components, and water quality data.
  - (c) The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- (4) Objectives for actions taken to protect receiving water limitations in accordance with this Order.
- (a) Each Copermittee must develop and implement an effectiveness assessment strategy for each measure conducted in response to a determination to implement the "iterative" approach to prevent or reduce any storm water pollutants that are causing or contributing to the exceedance of water quality standards as outlined in this Order

## **b. ASSESSMENT REVIEW**

- (1) Based on the results of the effectiveness assessments, each Copermittee must annually review its jurisdictional activities and BMPs to identify modifications and improvements needed to maximize JRMP effectiveness, as necessary to achieve compliance with this Order.
- (2) Each Copermittee must develop and annually conduct an Integrated Assessment<sup>23</sup> of each effectiveness assessment objective above (Section J.1.a) and the overall JRMP using a combination of outcomes as appropriate to the objectives.<sup>24</sup>

## **2. Program Modifications**

- a. Each Copermittee must develop and implement a plan and schedule to address program modifications and improvements identified during annual effectiveness assessments.
- b. Jurisdictional activities/BMPs that are ineffective or less effective than other comparable jurisdictional activities/BMPs must be replaced or improved upon by implementation of more effective jurisdictional activities/BMPs. Where monitoring data exhibits persistent water quality problems that are caused or

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<sup>23</sup> Integrated assessment is defined in Attachment C. It is the process of evaluating whether program implementation is resulting in the protection or improvement of water quality. Integrated assessment combines assessments of program implementation and water quality.

<sup>24</sup> Not all program components need be addressed at each of the six outcome levels.

contributed to by MS4 discharges, jurisdictional activities or BMPs applicable to the water quality problems must be modified and improved to correct the water quality problems.

### 3. Effectiveness Assessment and Program Response Reporting

- a. Each Copermittee must include a description and summary of its annual and long-term effectiveness assessments within each Annual Report. Beginning with the Annual Report due in 2011, the Program Effectiveness reporting must include:
- (1) 303(d) waterbodies: A description and results of the annual assessment measures or methods specifically for reducing discharges of storm water pollutants from its MS4 into each 303(d)-listed waterbody;
  - (2) ESAs: A description and results of the annual assessment measures or methods specifically for managing discharges of pollutants from its MS4 into each downstream ESA;
  - (3) Other Program Components: A description of the objectives and corresponding assessment measures and results used to evaluate the effectiveness of each general program component. The results must include findings from both program implementation and water quality assessment where applicable;
  - (4) Receiving water protection: A description and results of the annual assessment measures or methods employed specifically for actions taken to protect receiving water limitations in accordance with Section A.3 of this Order;
  - (5) A description of the steps taken to use dry-weather and wet-weather monitoring data to assess the effectiveness of the programs for 303(d) impairments, ESAs, and general program components;
  - (6) A description of activities conducted in response to investigations of illicit discharge and illicit connection activities, including how each investigation was resolved and the pollutant(s) involved;
  - (7) Responses to effectiveness assessments: A description of each program modification, made in response to the results of effectiveness assessments conducted pursuant to Section J.1.a, and the basis for determining (pursuant to Section J.2.b.) that each modified activity and/or BMP represents an improvement with respect to reducing the discharge of storm water pollutants from the MS4.
  - (8) A description of the steps that will be taken to improve the Copermittee's ability to assess program effectiveness using measurable targeted outcomes, assessment measures, assessment methods, and outcome levels 1-6. Include a time schedule for when improvement will occur; and
  - (9) A description of the steps that will be taken to identify aspects of the Copermittee's Jurisdictional Runoff Management Program that will be changed based on the results of the effectiveness assessment.

#### 4. Work Plan

Each Copermittee must develop a work plan to address their high priority water quality problems in an iterative manner over the life of the permit. The goal of the work plan is to demonstrate a responsive and adaptive approach for the judicious and effective use of available resources to attack the highest priority problems. The work plan shall include, at a minimum, the following:

- a. The problems and priorities identified during the assessment;
- b. A list of priority pollutants and known or suspected sources;
- c. A brief description of the strategy employed to reduce, eliminate or mitigate the negative impacts;
- d. A description and schedule for new and/or modified BMPs. The schedule is to include dates for significant milestones;
- e. A description of how the selected activities will address an identified high priority problem. This will include a description of the expected effectiveness and benefits of the new and/or modified BMPs;
- f. A description of implementation effectiveness metrics;
- g. A description of how efficacy results will be used to modify priorities and implementation; and
- h. A review of past activities implemented, progress in meeting water quality standards, and planned program adjustments.

The Copermittee shall submit the work plan to the Regional Board within 365 days of adoption of the Order. Annual updates are also required and shall be included with the annual JRMP report. The Regional Board will assess the work plan for compliance with the specific and overall requirements of the Order. To increase effectiveness and efficiencies, Copermittees may combine their implementation efforts and work plans within a hydrologic area or sub area. Each Copermittee, however, maintains individual responsibility for developing and implementing an acceptable work plan.