

Regional Board, this watershed modeling plan shall be used to determine compliance with the WLA. The Big Bear Lake MS4 Permittees shall select a watershed model that best fits the conditions they are modeling and document the basis for that selection. Data collected under the approved watershed monitoring program shall be evaluated by the Big Bear Lake MS4 Permittees to determine if it falls within the range of dry hydrological conditions as specified in the Nutrient TMDL. The Big Bear Lake MS4 Permittees shall utilize data collected from the monitoring locations specified in the watershed monitoring program approved on May 22, 2009, as well as any other data that are deemed necessary to calibrate and validate the watershed model. The Big Bear Lake MS4 Permittees will document the basis for the selection of the model, the data evaluation and selection process, and the model calibration/validation process. The Big Bear Lake MS4 Permittees or the Big Bear Lake Task Force, shall provide the results of the first model update by February 15, 2011.

- i. The Big Bear Lake MS4 Permittees shall revise the Municipal Storm Water Management Plan (MSWMP), Water Quality Management Plan (WQMP) and Local Implementation Plans (LIP) as necessary to implement the plans submitted pursuant to paragraphs c, d, e, f, and g of this section no later than 180 days after the Regional Board approves these plans. A summary of any such revisions shall be included in the area-wide annual report due November 15 of each year.
- m. If water quality monitoring data and related modeling analyses indicate that the urban wasteload allocation for total phosphorus is being exceeded during dry hydrological conditions despite implementation of the lake management plan and the MSWMP and other requirements of this Order, the Big Bear Lake MS4 Permittees shall comply with the following procedure:
  1. Each Big Bear Lake MS4 Permittee upstream of the monitoring locations where exceedances appear to be occurring shall evaluate and characterize discharges from its significant outfall locations.
  2. The Big Bear Lake MS4 Permittees shall submit a report with proposed actions to the Executive Officer that describes the BMPs that are currently being implemented and any additional BMPs that will be implemented to reduce the controllable sources of phosphorus causing the exceedances of the urban wasteload allocation for total phosphorus. The report must be submitted as part of the annual report due in November 15 of each year.
- n. **Storm Water Program Modification:** The Big Bear Lake MS4 Permittees shall revise their LIPs, as needed, to incorporate the requirements from TMDL implementation activities. These revisions shall include: (1) the results of the nutrient monitoring programs; (2) an evaluation of the effectiveness of the control measures in meeting the phosphorus WLAs; (3) any additional control measures

proposed to be implemented if the WLA or numeric targets are exceeded, including control measures for controlling nutrient inputs from new developments and/or new sources; and (4) a progress report evaluating progress towards meeting the WLAs (pre-compliance evaluation monitoring<sup>53</sup>).

#### **5. Knickerbocker Creek Sole Source Pathogen Investigation and Control**

- a. The City of Big Bear Lake shall continue to participate in and implement the January 2008 Phase 2 Monitoring and Reporting Program in accordance with the agreed sampling locations, parameters, schedule, and protocol.
- b. The City of Big Bear Lake shall annually review and revise, if necessary, the control measures implemented and undertake an iterative approach until water quality objectives within Knickerbocker Creek are attained, unless it can be demonstrated that the pathogen sources are from uncontrollable sources.
- c. The City of Big Bear Lake shall continue to work with Regional Board staff and the Storm Water Quality Standards Task Force to review and update designated uses and related water quality objectives for Knickerbocker Creek. This may result in different water quality objectives for bacteria.

#### **6. Big Bear Lake Mercury TMDL**

Pending adoption of the Mercury TMDL, the City of Big Bear Lake shall participate in the development and implementation of monitoring programs and control measures, including any BMPs that the City is currently implementing or proposing to implement.

#### **7. Compliance with WLAs**

The determination of compliance with the WLAs shall be based on implementation of BMPs as specified in the implementation plans for the approved TMDLs or based on plans developed as per the approved TMDLs. The Permittees obligation to meet the WLAs is met if the water quality standards in the impaired receiving waters are met through implementation of control measures approved by the Regional Board.

### **VI. RECEIVING WATER LIMITATIONS**

- A. Discharges from the MS4s shall not cause or contribute to exceedances of receiving water quality standards (designated beneficial uses and water quality objectives) contained in Chapter 4 of the Basin Plan, and amendments thereto, for surface or groundwater.
- B. The MSWMP and its components, including LIPs shall be designed to achieve compliance with receiving water limitations consistent with the MEP standard. It is

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<sup>53</sup>Pre-compliance evaluation monitoring is monitoring conducted prior to the compliance date to evaluate effectiveness of pollution reduction efforts.  
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expected that compliance with receiving water limitations will be achieved through an iterative process and the application of increasingly more effective BMPs.

- C. The Permittees shall comply with Section VI.A of this Order through timely implementation of control measures and other actions to reduce pollutants in urban and storm water runoff in accordance with the MSWMP and its components and other requirements of this Order, including any modifications thereto
- D. Upon a determination by either the Permittees or the Executive Officer that the discharges from the MS4 systems are causing or contributing to an exceedance of an applicable water quality standard, the Permittees shall promptly notify either by phone or by e-mail and, thereafter submit a report within 30 days (or if approved by the Executive Officer, this report may be incorporated into the annual report) to the Executive Officer for review and approval. At a minimum, the report shall:
- a. Describe BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce those pollutants that are causing or contributing to the exceedance of water quality standards.
  - b. Address the cause of the impairment or exceedance, and the technical and economic feasibility of control actions available to the Permittees to reduce or eliminate the impairment or exceedance consistent with the MEP standard.
  - c. Include an implementation schedule.
  - d. Contain a comparative analysis of monitoring data to the USEPA Multi-Sector Permit Parameter Benchmark Values and applicable water quality objectives for inland surface streams as specified in Chapter 4 of the Basin Plan.
  - e. A status report on the effectiveness of the pollution source investigation and control plan implementation to address exceedance of water quality objectives or elevated pollutant levels above benchmark values may be incorporated in the annual report unless the Executive Officer directs a different submittal date. The transmittal letter shall indicate that the annual report contains a description of additional BMPs proposed, pollution investigation report, and/or pollution source investigation and control plan.
- E. The Executive Officer may require modifications to the plan and/or report. The Permittees shall submit any modifications required by the Executive Officer within 30 calendar days of notification. The plan and/or report shall be deemed acceptable if the Executive Officer does not respond with requested modifications within 30 days of the submittal date.
- F. Within 60 calendar days following the Executive Officer's approval of the plan and/or report described above (or within 60 days following the date the plan and/or report were deemed acceptable due to lack of response from the Executive Officer), the Permittees shall revise the storm water management programs (MSWMP and LIP) and monitoring program to incorporate the additional BMPs that will be implemented, the implementation schedule, and any additional monitoring required.

### VIII. ILLICIT DISCHARGES (ID)/ILLEGAL CONNECTIONS (IC); LITTER, DEBRIS AND TRASH CONTROL

- A. The Permittees shall continue to prohibit all illegal connections to the MS4s through their ordinances, inspections, monitoring programs, and enforcement actions. The Permittees shall develop a pro-active IC/ID or illicit discharge detection and elimination program (IDDE) using the Guidance Manual for Illicit Discharge, Detection, and Elimination by the Center for Watershed Protection<sup>57</sup> or any other equivalent program. Any illegal connections identified by routine inspections, the IDDE program, or dry weather screening and/or monitoring shall be investigated and eliminated or permitted within 120 days of discovery.
- B. The Permittees' IDDE program shall specify a procedure to conduct focused, systematic field investigations, outfall reconnaissance survey, indicator monitoring, and tracking of discharges to their sources<sup>58</sup>. The IDDE program(s) shall be linked to urban watershed protection efforts including: a) the use of GIS maps of the Permittees' conveyance systems to track sources ; b) aerial photography to detect IC/IDs; b) municipal inspection programs of construction, industrial, commercial, storm drain systems, municipal facilities, etc.; c) analysis of watershed monitoring and other indicator data; d) watershed education to educate the public about illegal discharges; e) pollution prevention for generating sites; f) stream restoration efforts/opportunities; and g) rapid assessment of stream corridors to identify dry weather flows and illegal dumping.
- C. The LIP shall identify the staff positions responsible for different components of the IDDE program.
- D. The Permittees shall maintain a database of permitted and unpermitted connections, routine inspections and dry weather monitoring. This information shall be updated on an ongoing basis and submitted with the annual report.
- E. The Permittees shall control, consistent with the MEP standard, the discharge of spills, leaks, or dumping of any materials other than storm water and authorized non-storm water per Section V, above, into the MS4s. All reports of spills, leaks, and/or illegal dumping shall be promptly investigated and reported as specified under Section XVII (Notification Requirements).
- F. The Permittees shall continue to characterize trash, determine its main source(s) and develop and implement appropriate BMPs and control measures to reduce and/or to eliminate the discharge of trash and debris to Waters of the U.S. to the MEP. **These control measures and their effectiveness in reducing trash shall be reported in the annual report.**

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<sup>57</sup> USEPA (Illicit Discharge Detection and Elimination - A Guidance Manual for Program Development and Technical Assessments) by the Center for Watershed Protection and Robert Pitt, University of Alabama, October 2004, updated 2005).

<sup>58</sup> Table 2: Land uses, Generating Sites and Activities that Produce Indirect Discharges from IDDE, A Guidance Manual for Program Development and Technical Assessments, October 2004 CWP.  
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X. MUNICIPAL INSPECTION PROGRAMS

least once per month until full compliance is achieved.

7. The Permittees shall verify during inspections and/or prior to local permit issuance whether a site has obtained necessary permit coverage under one or more of the Statewide General Permits, an individual NPDES permit, Waste Discharge Requirements, and/or 401 Certification. Local permits, certificates of occupancy, or other approvals shall not be granted until proof of coverage under the applicable statewide permit is verified.
8. The Permittees shall deem facilities operating without a proper permit to be in significant non-compliance. Appropriate enforcement measures shall be implemented including a time schedule to obtain coverage, or suspension of business license until evidence of permit coverage is provided. Non-filers shall be reported within 14 calendar days to the Regional Board by electronic mail or other written means. The Permittees shall include in their LIP the method for verification of permit coverage and for notification of non-filers to the Regional Board.
9. Permittees shall maintain hard or electronic copies and make available upon request all information related to their inspections, including inspection reports, photographs, videotapes, enforcement actions, notices of correction issued to dischargers and other relevant information. This information shall be linked to the electronic database identified in Section X.A.3 above.
10. The Permittees need not inspect facilities already inspected by Regional Board staff if the inspection was conducted within the specified time period. Regional Board staff inspection information is available at [www.ciwqs.ca.gov](http://www.ciwqs.ca.gov)<sup>61</sup>.
11. Each Permittee shall respond to complaints received from third parties in a timely manner to ensure that the construction, industrial and commercial sites are not a source of pollutants in the MS4s and the receiving waters. Each Permittee shall implement a system of prioritizing the complaints based on threat to the environment (water quality/public health) and an appropriate response time based on this prioritization.
12. Each Permittee shall document, evaluate, and annually report the effectiveness of its enforcement procedures in achieving prompt and timely compliance. When timely compliance is not achieved, the Permittee shall take appropriate corrective measures to immediately prevent or abate the discharge of pollutants into its MS4 system.
13. Where storm water related inspections and/or enforcement required by this Order are carried out on behalf of the Permittee by other agencies or departments such as: the County Public Health, county and/or local fire departments, code enforcement, industrial pretreatment, building and safety, etc., the Permittee shall monitor and annually evaluate and report adequacy of such programs in complying with this Order.

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<sup>61</sup>To obtain access to the State database, registration at the following link is necessary: [http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/chc\\_npdes.shtml](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/chc_npdes.shtml). Contact information is available at [http://www.waterboards.ca.gov/water\\_issues/programs/ciwqs/contactus.shtml](http://www.waterboards.ca.gov/water_issues/programs/ciwqs/contactus.shtml).

14. All inspectors conducting storm water inspection as required in this Order shall be trained in accordance with the training requirements specified in Section XVI.

## **B. Construction Sites**

1. Each Permittee shall include in the electronic database identified in Section X.A.3 an inventory of all construction sites within its jurisdiction for which building or grading permits are issued and activities at the site include: soil movement; uncovered storage of materials or wastes, such as dirt, sand or fertilizer; or exterior mixing of cementaceous products, such as concrete, mortar or stucco.
2. Prior to approval of the risk-based scoring and prioritization system, the Permittees shall continue to prioritize construction sites within its jurisdiction as a high, medium or low threat to water quality. This prioritization of construction sites shall be based on factors, which shall include but not be limited to: soil erosion potential, project size, proximity and sensitivity of receiving waters and any other relevant factors. At a minimum, high priority construction sites shall include: sites 50 acres and greater; sites over 1 acre that are tributary to Clean Water Act section 303(d) waters listed for sediment or turbidity impairments; site specific characteristics<sup>62</sup>, and any other relevant factor. At a minimum, medium priority construction sites shall include: sites between 10 to less than 50 acres of disturbed soil. Upon approval of the risk-based scoring system, the sites shall be categorized as high, medium, or low risk based on the risk-based scores.
3. Each Permittee shall conduct construction site inspections for compliance with its ordinances (grading, Water Quality Management Plans, etc.) and local permits (construction, grading, etc.). The Permittees shall develop a checklist for conducting site inspections. Inspections of construction sites shall include, but not be limited to:
  - a. Verification of coverage under the General Construction Permit (Notice of Intent (NOI) or Waste Discharge Identification No.) during the initial inspection. Permit coverage shall also be confirmed in the event of a change in ownership.
  - b. A review of the Erosion and Sediment Control Plans (ESCP) to ensure that the BMPs implemented on-site are consistent with the appropriate phase of construction (Preliminary Stage, Mass Grading Stage, Streets and Utilities Stage, Vertical Construction Stage, and Post-Construction Stage).
  - c. Visual observations for non-storm water discharges, potential illicit connections, and potential pollutant sources.
  - d. Determination of compliance with local ordinances, permits, Water Quality Management Plans and other requirements, including the implementation and maintenance of BMPs required under local requirements.
  - e. **An assessment of the effectiveness of BMPs implemented at the site and the need for any additional BMPs. In evaluating BMP effectiveness, the Permittees may consider applicable action levels (AL) and/or numeric effluent limits (NEL)**

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<sup>62</sup> The approved General Construction Permit Order No. 2009-0009-DWQ includes risk-based characterization of construction sites based on site-specific conditions.  
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**promulgated by the State or USEPA.**

4. At a minimum, the inspection frequency shall include the following:
  - a. During the wet season<sup>63</sup> (i.e., Oct 1 through May 31 of each year), all high priority (or high risk) sites are to be inspected, in their entirety, once a month. All medium priority (or medium risk) sites are to be inspected at least twice during the wet season. All low priority (or low risk) sites are to be inspected at least once during the wet season. When BMPs or BMP maintenance is deemed inadequate or out of compliance, an inspection frequency of once every week shall be maintained until BMPs and BMP maintenance are brought into compliance.
  - b. During the dry season (i.e., June 1 through September 30 of each year), all construction sites shall be inspected at a frequency sufficient to ensure that sediment and other pollutants are properly controlled and that unauthorized, non-storm water discharges are prevented.
5. The Permittees' implementation of their construction storm water program shall be consistent with the latest version of the statewide General Construction Permit and all applicable provisions of the federal effluent limitations guidelines.

### **C. Industrial Facilities**

1. Prior to approval of the risk-based scoring and prioritization system, the Permittees shall continue to prioritize industrial facilities within its jurisdiction as high, medium, or low threat to water quality. The prioritization of these facilities should be based on such factors as type of industrial activities (SIC codes)<sup>64</sup>, materials or wastes used or stored outside, pollutant discharge potential, compliance history, facility size, proximity and sensitivity of receiving waters, and any other relevant factors. At a minimum, a high priority shall be assigned to: facilities subject to section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA); facilities that handle or generate pollutants for which the receiving water is impaired, facilities that have a demonstrated or significant potential to release pre-production plastic or nurdles into the environment, and facilities with a high potential for or history of unauthorized, non-storm water discharges. Upon approval of the risk-based scoring system, the facilities shall be categorized as high, medium or low risk.
2. Each Permittee shall conduct industrial facility inspections for compliance with its ordinances, permits and this Order. Industrial inspections shall include: a review of the site's material and waste handling and storage practices; a review of written documentation of pollutant control BMP implementation and maintenance procedures; digital photographic documentation of water quality violations, and/or evidence of past or present unauthorized-, non-storm water discharges; and enforcement actions issued at the time of inspection if necessary. A summary of

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<sup>63</sup> Wet and dry season for TMDL compliance evaluation will be the months as defined in the TMDL development documents and implementation plans. See Glossary, Attachment 4.

<sup>64</sup> Industrial Facilities, as defined at 40 CFR § 122.26(b)(14), including those subject to the General Industrial Permit or other individual NPDES permit;  
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- e. Inspection of existing devices designed to separate grease from wastewater (e.g., grease traps or interceptors) to ensure adequate capacity and proper maintenance is currently performed under the Fats, Oils and Grease (FOG) program (the FOG inspections conducted under the Statewide SSO Order [Water Quality Order No. 2006-0003] could be substituted for this inspection).
9. All violations of the Water Quality Ordinance shall be enforced by the Permittees and all violations of the Health and Safety Code should be enforced by the Public Health Agency.

### E. Residential Program

1. Within 36 months of adoption of this Order, each Permittee shall, consistent with the MEP standard, develop and implement a residential program designed to reduce the discharge of pollutants from residential facilities to the MS4s and to prevent discharges from the MS4s from causing or contributing to exceedances of water quality standards in the receiving waters.
2. The Permittees shall identify residential areas and activities that are potential sources of pollutants and develop Fact Sheets/BMPs. At a minimum, this should include: residential auto washing and maintenance activities; use and disposal of pesticides, herbicides, fertilizers and household cleaners; and collection and disposal of pet wastes. The Permittees shall encourage residents to implement pollution prevention measures. The Permittees should work with sub-watershed groups to disseminate the latest research information from organizations such as the Inland Empire Resource Conservation District<sup>66</sup>, The Land Trust Alliance, The USDA Natural Resources Conservation Service, USDA's Backyard Conservation Program<sup>67</sup>, and others.
3. Each Permittee shall document its residential program in its LIP.
4. The Permittees shall continue to, collectively or individually, facilitate the proper collection and management of used oil, toxic and hazardous materials, and other household wastes. Such facilitation shall include educational activities, public information activities, and establishment of curbside or special collection sites managed by the Permittees or private entities, such as solid waste haulers. **Each Permittee shall continue these programs and periodically evaluate their effectiveness in reducing discharges of pollutants into the MS4s.**
5. The Permittees shall develop and implement control measures for common interest areas and areas managed by homeowner associations or management companies. This may include development and promotion of public education materials identifying BMPs for these common interest areas or HOA areas. The Permittees

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<sup>66</sup>The District provides gardening and horticulture information appropriate for the area including native plant selection, backyard management, alternatives to pesticide, irrigation scheduling and composting.

<sup>67</sup>Backyard Conservation, Bringing Conservation from the Countryside to Your Backyard, USDA Natural Resources Conservation Service, National Association of Conservation Districts, Wildlife Habitat Council and National Audubon Society.



XI. NEW DEVELOPMENT (INCLUDING SIGNIFICANT RE-DEVELOPMENT), Watershed Action Plan

- ii. Develop and implement a Hydromodification Monitoring Plan (HMP) to evaluate hydromodification impacts for the drainage channels deemed most susceptible to degradation. The HMP will identify sites to be monitored, include an assessment methodology, and required follow-up actions based on monitoring results. **Where applicable, monitoring sites may be used to evaluate the effectiveness of BMPs in preventing or reducing impacts from hydromodification.**
  - iii. Develop and implement a Hydromodification Management Plan prioritized based on drainage feature/susceptibility/risk assessments and opportunities for restoration.
  - iv. Conduct training workshops in the use of the Watershed Geodatabase. Each Permittee must ensure that their planning and engineering staff attend a workshop.
  - v. Conduct demonstration workshops for the Watershed Geodatabase to be attended by appropriate upper-level managers and directors from each Permittee.
  - vi. Develop recommendations for streamlining regulatory agency approval of regional treatment control BMPs. The recommendations should include information needed to be submitted to the Regional Board for approval of regional treatment control BMPs. At a minimum, this information should include: BMP location; type and effectiveness in removing pollutants of concern; projects tributary to the regional treatment system; engineering design details; funding sources for construction, operation and maintenance; and parties responsible for monitoring effectiveness, operation and maintenance. The Permittees are encouraged to collaborate and work with other counties to facilitate and coordinate these recommendations.
  - vii. Implement applicable retrofit or regional treatment recommendations from the evaluation conducted in Section B.3.a.ix, above.
  - viii. Submit the Phase 2 components in a report to the Executive Officer. The submitted report shall be deemed acceptable to the Regional Board if the Executive Officer raises no written objections within 30 days of submittal.
4. Within three years of adoption of this Order, each Permittee shall review the watershed protection principles and policies in its General Plan or related documents (such as Development Standards, Zoning Codes, Conditions of Approval, Development Project Guidance) to determine consistency with the Watershed Action Plan. Each Permittee shall report the findings in the annual report along with a schedule for any necessary revision.

E. LID and Hydromodification Management to Minimize Impacts from New Development I Significant Redevelopment

- i. Review and update the menu of site design BMPs to include any LID BMP that is currently not listed.
  - ii. Include as a reference for design and installation of LID BMPs the *LID Guidance Manual for Southern California* developed by the Southern California Coastal Water Research Project upon its completion.
  - iii. Techniques or specifications to minimize soil compaction in areas designated for site design BMPs, especially infiltration.
  - iv. Review and update design, installation and test specifications for retention BMPs to prevent unwanted ponding.
  - v. Evaluate the use of a credit system<sup>84</sup> for using site design BMPs.
  - vi. Develop in-lieu programs for projects where implementation may not be feasible.
- b. Source Control BMPs:
- i. Review and update the menu of source control BMPs.
  - ii. Include design and installation standards for each structural source control BMP.
- c. Treatment Control BMPs:
- i. Update the list of treatment control BMPs, including an evaluation of their effectiveness based on national, statewide or regional studies.
  - ii. Prioritize treatment control BMPs based on their effectiveness in pollutant removal and require project proponents to select the most appropriate BMPs.
  - iii. Include design and installation standards for each treatment control BMP.
- d. Hydrologic Conditions of Concern (HCOC):
- i. The Permittees shall continue to ensure, consistent with the MEP standard, through their review and approval of project-specific WQMPs that new development and significant re-development projects:
    - a) do not cause a hydrologic condition of concern (HCOC), or
    - b) otherwise, demonstrate that the project does not have the potential to cause significant adverse impacts on downstream natural channels and habitat integrity, alone or in conjunction with the impacts of other projects likely to be implemented in the same drainage area.
  - ii. A development/redevelopment project does not cause a HCOC if it causes no adverse downstream impacts on the physical structure, aquatic, and riparian habitat and any of the following conditions is met: and any of the following conditions is met:

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<sup>84</sup>See sample credit calculation spreadsheet in Appendix 2 of the adopted statewide construction permit, [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/constpermits.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml)  
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type of enforcement action that will be carried out by the Permittee. Further, incidences of noncompliance shall be recorded along with the information noted in the written report and the final outcome/enforcement for the incident in the appropriate database.

- B. Sewage spill notification shall be consistent with the timelines specified in the SSO Order.
- C. All reports submitted by the Permittees as per the requirements in this Order for the approval of the Executive Officer shall be publicly noticed and made available on the Regional Board's website, or through other means, for public review and comments. The Executive Officer shall consider all comments received prior to approval of the reports. Any unresolved issues shall be scheduled for a public hearing at a Regional Board meeting after proper public notice.
- D. As specified in Section X.A.7, the Permittees shall deem facilities operating without a proper permit to be in significant non-compliance. These facilities shall be reported within 14 calendar days to the Regional Board by electronic mail or other written means. Permittees' notifications of facilities' failure to obtain required permits under the Construction Activities Storm Water General Permit (Construction Permit), Industrial Activities Storm Water General Permit (Industrial Permit), including Requirements to file a Notice of Intent or No Exposure Certification, Notice of Non-applicability, and/or 401 Certification must include, at a minimum, the following documentation:
  - 1. Name of the facility;
  - 2. Operator of the facility;
  - 3. Owner of the facility;
  - 4. Construction/Commercial/Industrial activity being conducted at the facility that is subject to the Construction//Industrial General Permit, or 401 Certification; and
  - 5. Records of communication with the facility operator regarding the violation, including an inspection report.

#### **XVIII. PROGRAM MANAGEMENT ASSESSMENT / MSWMP REVIEW**

- A. Upon the effective date of this Order, the Permittees shall start implementing the 2007 MSWMP and modify it to be consistent with the requirements of this Order and the schedules contained herein. If major modifications to the 2007 MSWMP not addressed in this Order are determined to be necessary, the Permittees shall prepare and submit MSWMP modifications to the Executive Officer for review and approval. Such modifications may include regional and watershed-specific requirements and/or waste load allocations developed and approved pursuant to the TMDL process.
- B. By October 1 of each year, the Permittees shall evaluate the MSWMP to determine the need for any revisions in order to reduce pollutants in MS4 discharges to the maximum extent practicable. In addition, the first annual review after adoption of this Order shall include the following:
  - 1. Review of the formal training needs of municipal employees;
  - 2. Review of coordination meeting/training for the designated NPDES inspectors.; and

3. Propose any changes to assess program effectiveness on an area-wide and jurisdictional basis. Permittees may utilize the CASQA Guidance<sup>89</sup> for developing these assessment measures at the six outcome levels. The assessment measures must target both water quality outcomes and the results of municipal enforcement activities.
- C. The annual report shall include the findings of this review and a schedule to address necessary revisions, or a copy of the amended MSWMP with the proposed changes. Replacement pages are acceptable if modifications are not extensive. Annual reports shall also be submitted in electronic format.
- D. The Management Committee will continue to meet at least 8 times a year to discuss issues related to permit implementation and regional and statewide issues. Each Permittee's designated representative or a designated alternate should attend not less than 7 of 8 scheduled meetings.

## **XIX. FISCAL RESOURCES**

- A. Each Permittee shall exercise its full authority to secure the resources necessary to meet the requirements of this Order. This Order may be revised to adjust time schedules to accommodate prioritization of available resources.
- B. The Permittees shall prepare and submit a financial summary to the Executive Officer. The financial summary shall be submitted with the annual report each year and shall, at a minimum, include the following:
  1. Each Permittee's expenditures for the previous fiscal year,
  2. Each Permittee's budget for the current fiscal year,
  3. A description of the source of funds, and
  4. Each Permittee's estimated budget for the next fiscal year.

## **XX. PROVISIONS**

- A. All reports submitted by the Permittees as per the requirements in this Order for the approval of the Executive Officer shall be publicly noticed and made available on the Regional Board's website, or through other means, for public review and comments. The Executive Officer shall consider all comments received prior to approval of the reports. Any unresolved significant issues shall be scheduled for a public hearing at a Regional Board meeting prior to approval by the Executive Officer.
- B. Permittees shall demonstrate compliance with all the requirements in this Order and specifically with Section III. Discharge Limitations, and Section IV. Receiving Water Limitations, through timely implementation of their MSWMP and any modifications, revisions, or amendments developed pursuant to this Order approved by the Executive Officer or determined by the Permittees to be necessary to meet the requirements of this Order. The MSWMP, including any approved amendments thereto is hereby made an enforceable component of this Order.

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<sup>89</sup> CASQA, May 2007. Municipal Stormwater Program Effectiveness Assessment Guidance. January 29, 2010 (Final)

- b. The dry weather monitoring for nitrogen and total dissolved solids shall be included as part of the illegal discharge/illegal connection monitoring program. In light of the recently adopted Nitrogen-TDS objectives for certain management zones, the Permittees shall, within 18 months of Permit adoption, submit a plan to determine baseline concentration of these constituents in dry weather runoff, if any, from significant outfall locations (36 inches or larger in diameter).

#### 4. HYDROMODIFICATION MONITORING PLAN (HMP)

This Order requires development and implementation of a Hydromodification Monitoring Plan as part of the Watershed Action Plan (WAP) to evaluate hydromodification impacts for the drainage channels deemed most susceptible to degradation, and, where applicable the effectiveness of BMPs in preventing or reducing impacts from hydromodification within the permitted area. (Some or all of the following requirements may be satisfied by the Permittees participation in the "Development of Tools for Hydromodification Assessment and Management Project" undertaken by the SMC and coordinated by SCCWRP).

- a. The Order requires the Permittees to develop a WAP within 12 months of Permit adoption (phase 1) and 12 months following approval of phase 1 (phase 2). The WAP should identify vulnerable streams and possible control measures to minimize hydrologic changes and tools to measure any impacts on geomorphology and aquatic resources.
- b. The HMP shall include:
  - i. Protocols for ongoing monitoring to assess drainage channels deemed most susceptible to degradation, and to assess the effectiveness in preventing or reducing impacts from hydromodification within the permitted area.
  - ii. Models to predict the effects of urbanization on stream stability within the permitted area.

#### 5. SOURCE IDENTIFICATION AND SPECIAL STUDIES

- a. The ROWD identified a priority list of pollutants of concern in the watershed based on the findings of water quality monitoring efforts. These pollutants and their order of priority from high to low were: (1) high - bacteria, (2) medium - metals (zinc, copper, lead), (3) low - nutrients (nitrate as nitrogen, total phosphorus), TSS and COD. During the Permit term, the Permittees shall assess each of the pollutants considered a concern (except bacteria, which is already being addressed by a TMDL) and prepare a strategic plan for addressing each pollutant. For some pollutants such as the metals, special studies for the development of site-specific objectives or total recoverable/dissolved translators may be necessary.

- b. During the third-term permit, a Pollutant Source Investigation and Control Plan<sup>5</sup> was developed and implemented to investigate elevated pollutant concentrations of coliform bacteria, zinc, copper and lead at Site 5. This Order requires continued implementation of the plan, including annual reporting and BMP effectiveness evaluation for the Site 5 drainage area.

## **V. REGIONAL WATERSHED MONITORING**

A. Regional watershed monitoring refers to the collaboration among many agencies in and around southern California in addition to municipal stormwater agencies that are interested in watershed to regional scale monitoring. Regional monitoring can be used to assess the cumulative results of anthropogenic and natural effects on the environment and provides opportunities for comparison of the different stormwater agencies' monitoring to determine the breadth and depth of human impacts and natural variability found throughout southern California's watersheds. See Section V.B.3 below for Regional Bioassessment monitoring,

1. Some of these regional monitoring programs include the Statewide Ambient Monitoring Program (SWAMP), State Wetland's Recovery Project, USEPA Environmental Monitoring and Assessment Program (EMAP), and US Geological Survey's National Water Quality Assessment Program (NAWQA).
2. A number of regional organizations continue work in the Santa Ana River Watershed area, including the SWQSTF, SMC, SCCWRP, and universities. Participation in water-related studies or planning efforts, which may include monitoring, provides valuable information for the area-wide monitoring program. The Permittees shall participate in these regional efforts including the following:
  - a. TMDL Monitoring
  - b. Low Impact Development BMP Monitoring
  - c. Regional Bioassessment Monitoring (SCCWRP Technical Report 539)

### **B. Regional Monitoring Plans**

#### **1. TMDL/WLA MONITORING**

The Permittees shall continue to participate in TMDL monitoring programs to determine compliance with the waste load allocations (WLAs). The compliance schedules for the approved TMDLs within the permitted area are beyond the five-year permit term. This Order requires Permittees to conduct monitoring to determine the effectiveness of the BMPs implemented in reducing pollutant loads and eventually to attain WLAs by the deadlines specified in the TMDL implementation plans.

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<sup>5</sup> 2005-2006, 2006-2007, 2007-2008 Annual Reports

Since the compliance dates for the TMDLs in this Order are outside the five-year term of this Order, the Permittees are required to monitor and report effectiveness of the BMPs specified in the TMDL Implementation Plans and this Order with respect to pollutant reduction goal(s) as one measure of progress towards attainment of WLAs in accordance with the compliance schedules specified in the TMDL Implementation Plans. If water quality standards in the impaired receiving waters are met through implementation of appropriate control measures, this would constitute compliance with the WLAs.

**a. MSAR Bacteria TMDL/WLA Monitoring Plan (Figures 2 & 3)**

- i. On June 14, 2007, the TMDL task force members submitted a source evaluation plan and a monitoring plan. The Regional Board approved these plans on June 29, 2007, Resolution No. R8-2007-0046. A revised monitoring plan and an urban bacterial indicator source evaluation plan were approved by the Regional Board on April 18, 2008, Resolution No. R8-2008-0044 (See Figures 2 and 3). The MSAR Permittees within the MSAR watershed shall continue to conduct monitoring and source evaluations in accordance with the approved plans and report the findings in accordance with the schedules specified in the approved plans or as updated by subsequent Regional Board approved revisions.
- ii. In conformance with Task 3 of the TMDL Implementation Plan contained in Resolution R8-2005-0001, the Permittees shall individually, or in conjunction with the MSAR TMDL Task Force, prepare a triennial report summarizing the data collected for the preceding 3 year period and evaluating compliance with the WLAs. The first report shall be due February 15, 2010.
- iii. The Permittees shall conduct monitoring and reporting consistent with Section V.D. of this Order to evaluate the effectiveness of the BMPs implemented in the watershed and determine their progress towards attaining compliance with the interim WQBELs, and final BMP-based WQBELS, if approved, or the final numeric WQBELS/WLAs.

**b. Big Bear Lake Watershed Wide Nutrient Monitoring Plan (Figure 4)**

- i. For each year of in-lake nutrient and water quality monitoring under the approved plans<sup>6</sup>, the results shall be summarized in an annual report and submitted to the Executive Officer. The Big Bear Lake Nutrient TMDL annual report is due to the Executive Officer by February 15<sup>th</sup> of each year.
- ii. Currently, the Big Bear Lake MS4 Permittees are meeting the WLAs. In the future, continued compliance with the phosphorus WLA will be determined by watershed modeling. By March 31, 2010, the Big Bear Lake MS4 Permittees shall submit a final watershed modeling plan that is ready to be

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<sup>6</sup> The 2006 Integrated TMDL Implementation Program for Big Bear Lake QAPP applies to the existing monitoring plans: Big Bear Lake Monitoring Plan, Tributary Monitoring Plan, East End Nutrient/Sediment Removal Monitoring Plan, and Bacteria Monitoring Plan

implemented and that details how the WLA will be determined and evaluated in future years. Upon approval by the Executive Officer, this watershed modeling plan shall be used to determine compliance with the WLA. The Big Bear Lake MS4 Permittees shall select a watershed model that best fits the conditions they are modeling and document the basis for that selection. Data collected under the approved watershed monitoring program shall be evaluated by the Big Bear Lake MS4 Permittees to determine if it falls within the range of dry hydrological conditions as specified in the Nutrient TMDL. The Big Bear Lake MS4 Permittees shall utilize data collected from the monitoring locations specified in the watershed monitoring program approved on May 22, 2009, as well as any other data that are deemed necessary to calibrate and validate the watershed model. The Big Bear Lake MS4 Permittees will document the basis for the selection of the model, the data evaluation and selection process, and the model calibration/validation process. The Big Bear Lake MS4 Permittees or the Big Bear TMDL Task Force, shall provide the results of the first model update by February 15, 2011, and every three years thereafter.

- iii. An iterative approach is appropriate to demonstrate compliance with the phosphorus WLA in drainage areas tributary to Big Bear Lake.
- iv. If watershed modeling determines exceedances of the phosphorus WLA, despite implementation of the lake management plan and the MSWMP and other requirements of this Order, the Big Bear Lake MS4 Permittees shall comply with the following procedure:
  1. Each Big Bear Lake MS4 Permittee<sup>7</sup> upstream of the monitoring locations shall evaluate and characterize discharges from its significant outfall locations.
  2. The Big Bear Lake MS4 Permittees<sup>8</sup> shall submit a report with proposed actions to the Executive Officer that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce pollutants that are causing or contributing to the exceedances of the WLA.
  3. The report may be incorporated into the storm water annual report.

## **2. LOW IMPACT DEVELOPMENT (LID) BMP MONITORING**

The Principal Permittee shall continue to participate in data collection and monitoring to assess the effectiveness of LID techniques in semi-arid climate as part of the SMC project titled, "Quantifying the Effectiveness of Site Design/ Low Impact Development Best Management Practices in Southern California".

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<sup>7</sup> This task may be completed by the Big Bear TMDL Task Force.

<sup>8</sup> This task may be completed by the Big Bear TMDL Task Force.



### **3. REGIONAL BIOASSESSMENT MONITORING (SCCWRP TECHNICAL REPORT 539<sup>9</sup>)**

The Principal Permittee, on behalf of the co-Permittees, participates (through a memorandum of understanding and cooperative agreements) with the 16 member agencies of the Storm Water Monitoring Coalition (SMC) Bioassessment Working Group to conduct bioassessments on a regional basis. The Principal Permittee in coordination with SCCWRP shall ensure that a sufficient number of monitoring stations are selected for this program from locations within the permitted area.

- a. The objectives of the Regional Watershed Monitoring Program overseen by the State Board's Storm Water Ambient Monitoring Program (SWAMP) and the Storm Water Monitoring Coalition (SMC) and coordinated by the Southern California Coastal Water Research Project (SCCWRP) are:
  - i. To assess the current status of streams in Southern California.
  - ii. To identify major stressors to aquatic life.
  - iii. To monitor the trend in water quality in Southern California streams.
- b. The Principal Permittee, in collaboration with the SMC, shall conduct sampling, analysis, and reporting of specified instream biological and habitat data within the 5-year permit cycle according to the protocols specified in the SCCWRP Tech Report No. 539.
- c. The bioassessment shall provide information about the biological integrity of receiving waters. **Baseline and trend monitoring information on the biotic and geomorphological condition of the receiving waters shall be used to evaluate the effectiveness of the storm water pollution control measures.**
- d. The sampling sites in each watershed unit were determined according to distribution or abundance of the three land uses: urban, agriculture, or open. Within the San Bernardino County permitted area (considered as 1.5 watershed unit), the Principal Permittee, shall ensure the collection of at least 9 samples/year.
- e. Sampling events shall be conducted between 4 to 12 weeks following the last significant rainfall. No sampling shall occur within 72 hours of any measurable rainfall. The default index period will be from May 15 to July 15.
- f. For long-term trend monitoring, the Principal Permittee shall ensure the collection of a minimum of one sample per year during the dry weather index period from Station ID WW-S1, Santa Ana River Reach 3 at the MWD crossing. Additional samples may be collected to improve data quality for trend analysis.

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<sup>9</sup>"The Regional Monitoring of Southern California's Watershed SMC Bioassessment Working Group", SCCWRP, Technical Report No. 539, December 2007

5. The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [40 CFR 122.41(k)(2)].

## **VII. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING**

- A. All progress reports and proposed strategies and plans required by this order shall be signed by the Principal Permittee, and copies shall be submitted to the Executive Officer under penalty of perjury.
- B. The Principal Permittee has been monitoring urban runoff and receiving waters since the first MS4 permit term. It is recognized that some of the objectives noted in Section II may not have been fully attained during the previous MS4 permit terms. **With the first annual report due after adoption of this Order, the Principal Permittee must submit an evaluation of the progress achieved to date and propose modifications to the monitoring program to achieve full compliance with the objectives of this monitoring program, discussed in Section II.**
- C. The Permittees shall be responsible for the timely submittal to the Principal Permittee of all required information/materials needed to comply with this Order. All such submittals shall be signed by a duly authorized representative of the Permittee under penalty of perjury.
- D. The data transmittals to the Regional Board shall be in the form developed by the Storm Water Monitoring Coalition (SMC) and approved by the State Water Resources Control Board in the document entitled "Standardized Data Exchange Formats". This document was developed in order to provide a standard format for all data transfer so that data can be universally shared and evaluated from various programs.
- E. The Permittees shall submit an annual progress report to the Executive Officer and to the Regional Administrator of the USEPA, Region 9, no later than November 15th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, annual progress report shall include the following:
  1. A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this Order;
  2. **An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the Municipal Storm Water Management Plan (MSWMP). The effectiveness may be measured in terms of how successful the program has been in eliminating illicit/illegal discharges and reducing pollutant loads in storm water discharges;**

3. As assessment of control measures and their effectiveness in addressing pollutants causing or contributing to an exceedance of water quality objectives in receiving waters that are on the 303(d) list of impaired waters. The effectiveness evaluation shall consider changes in land use and population on the quality of receiving waters and the impact of development on sediment loading within receiving waters and recommend necessary changes to program implementation and monitoring needs.
4. The annual report shall include an overall program assessment. The Permittees are encouraged to use the program assessment methodology described in the 2006 ROWD. The Permittees should determine, to the extent practicable, water quality improvements and pollutant load reductions resulting from implementation of various program elements. The Permittees may also use the "Municipal Storm Water Program Effectiveness Assessment Guidance" developed by the California Storm Water Quality Association in May 2007 as guidance for assessing program effectiveness at various outcome levels. The assessment should include each program element required under this Order, the expected outcome, and the measures used to assess the outcome. The Permittees may propose any other methodology for program assessment using measurable targeted outcomes.
5. The annual report shall include a status report on the development and implementation of the Hydromodification Monitoring Program developed as part of the WAP.
6. Each Permittee shall develop, update, implement, and review its local implementation plan (LIP) to address program modifications and improvements identified during the program assessment.
7. A summary and analysis of monitoring results from the previous year and any changes to the monitoring program for the following year;
8. A financial summary report as described in Section XIX.B of this order; including:
  - a. Each Permittee's expenditures for the previous fiscal year;
  - b. Each Permittee's budget for the current fiscal year;
  - c. A description of the source of funds.
9. A draft workplan which describes the proposed implementation of the LIPs, and MSWMPs for next fiscal year. The workplan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's action plans for the next fiscal year;
10. Major changes to any of the previously submitted plans/policies; and
11. An assessment of the Permittees compliance status with the Receiving Water Limitations, Section VI of the Order, including any proposed modifications to the MSWMP and WQMP if the Receiving Water Limitations are not fully achieved.