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RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

November 23, 2009

Mr. Gerard J. Thibeault, Executive Officer
California Regional Water
Quality Control Board – Santa Ana Region
3737 Main Street, Suite 500
Riverside, CA 92501-3348

Dear Mr. Thibeault:

Re: Comments on the October 22, 2009 Second Draft Order R8-2009-0033 for the Renewal of Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside and the incorporated cities of Riverside County, Tentative Order R8-2009-0033, NPDES CAS618033, Area-wide Urban Runoff Management Program (Tentative Order)

The Riverside County Flood Control and Water Conservation District (District) serves as the Principal Permittee of the Riverside County Municipal Separate Storm Sewer System (MS4) Permit for the Santa Ana Region. This letter is submitted on behalf of the MS4 Permittees identified in the Tentative Order. The purpose of this letter is to transmit comments on Second Draft Order R8-2009-0033 for the Renewal of Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside and the incorporated cities of Riverside County, Tentative Order R8-2009-0033, NPDES CAS618033, Area-wide Urban Runoff Management Program.

The MS4 Permittees would like to thank the Santa Ana Regional Water Quality Control Board for providing them and other interested parties the opportunity to communicate with your staff regarding the requirements proposed in the Tentative Order. This has afforded the MS4 Permittees an opportunity to better understand the goals and objectives of the Tentative Order, to identify our issues and concerns regarding the proposed requirements, and to formulate comments that may be able to address the Board's concerns while recognizing the economic crises which our State, and by extension, the MS4 Permittees and our citizens, must manage.

The MS4 Permittees' comments regarding the second draft Tentative Order are addressed via several attachments. A summary of the attachments follows:

Attachment 1 – Summary of Comments regarding specific provisions of the Tentative Order

Attachment 2 – Redline mark-up of the Monitoring and Reporting Program

Attachment 3 – Redline mark-up of the Fact Sheet (see Page 15)

Attachment 4 – Redline mark-up of excerpts of Findings and Permit Requirements

Attachment 5 – Redline markup of Permit Section XII.E.8 – Hydrologic Conditions of Concern

Attachment 6 – Appendix 5 (Redline mark-up of Construction NOI/NOT)

Attachment 7 – Discussion of WQBELs

Attachment 8 – WQBEL Policy Issues

Attachment 6 provides suggested revisions to Appendix 5 of the Order that were submitted in our comments on the first draft Tentative Order. As these were updates of factual information, it appears that this was an oversight and they have been provided again for inclusion in the final Order.

Closing

The requirements proposed in the Tentative Order, if adopted, will result in significant operational and fiscal impacts to the Permittees during a period of economic distress. As described in previous communications and Attachment 1 of our comments on the First Draft Tentative Order, the MS4 Permittees do not currently have revenues to support expanded compliance programs and significant revenue increases are not anticipated during the term of the Tentative Order. As a matter of prudent public policy, it is incumbent upon our respective organizations to recognize these limitations and provide for balance in establishing compliance requirements and programs.

The Permittees remain committed to effectively managing Urban Runoff to protect Receiving Water quality in a manner that balances this objective with the finite resources available to meet the universe of needs and expectations of the citizens, and the responsibility and duties of local governments within the Riverside County portion of the Santa Ana River watershed. Given the funding reductions impacting the Permittees (including those imposed by the State), it is especially important to ensure that proposed requirements do not exceed those mandated by the federal stormwater regulations (including the Maximum Extent Practicable requirements), will be effective in addressing existing water quality impairments, and are technically and fiscally achievable. If you have any questions regarding these comments, please contact Jason Uhley at 951.955.1273 or juhley@rcflood.org of the District's Regulatory Division.

Very truly yours,

WARREN D. WILLIAMS
General Manager-Chief Engineer

Attachment: Attachments 1-8

c: Santa Ana River Region MS4 Permittees
Matt Yeager, SB County Flood Control
Robert Collacott, URS Corporation

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ATTACHMENT 1

General Comments

The comments contained herein are the result of ongoing discussions between MS4 Permittee staff and Regional Board staff regarding the intent, purpose and goals of the Tentative Order. Specific redline edits are contained in Attachments 2 through 6 of this comment letter. The following comments summarize the major revisions contained therein. Referenced sections are to the Tentative Order.

1) General Comment

   The MS4 Permittees understand that text shown in "strikethrough" mode throughout the NPDES MS4 Permit and its Appendices was intended to be deleted from the Tentative Order. The MS4 Permittees' comments are written from the perspective that all text shown in strikethrough mode will be deleted in the final Tentative Order. Unless otherwise noted herein, the MS4 Permittees support the deletion of the text shown in strikethrough mode.

2) Fact Sheet – Section C, Page 15 (See Attachment 3)

   Section C of the Fact Sheet should be revised as follows to clarify that the de-minimus discharges are discharge specifications and not independent numeric effluent limitations:

   ~~The WLAs are included as numeric effluent limits. Numeric effluent limits~~ Discharge specifications are ~~also~~ included for de-minimus types of discharges from Permittee-owned or Permittee-operated facilities and activities and for total dissolved solids and total inorganic nitrogen for dry weather discharges.

3) Permit Section II – Findings (See Attachment 4)

   a. The MS4 Permittees request that Table 5 be revised to add the Agricultural Pool and Milk Producers Council, consistent with the TMDL Task Force Agreement.

   b. The MS4 Permittees request that Finding F.19 be revised as noted to ensure consistency between the TMDL Implementation Plan and the Tentative Order.

   c. The MS4 Permittees request that Finding K.3.b.iv be revised to ensure consistency between the TMDL Monitoring Plan and the Tentative Order.

   d. The MS4 Permittees request that Finding K.3.b.v recognize that the objective of the TMDL is to attain Water Quality Standards.

4) Section VI – Effluent Limitations, Discharge Specifications and Other TMDL Related Requirements

   Attachment 4 contains several redline revisions to Section VI.D. The following discussion summarizes the basis for those revisions. Additional comments regarding Water Quality Based Effluent Limits ("WQBELs") are contained in Attachment 7.

The record developed during the adoption of the Middle Santa Ana Bacteria TMDL ("MSAR TMDL") and the Lake Elsinore and Canyon Lake Nutrient ("LE/CL") TMDL supports the following:

1) As addressed more fully in the Permittees' comments filed with Regional Board staff on October 8, 2009, the TMDLs address complicated issues that are not well understood and are based on incomplete and preliminary data, data which are being refined as the result of the work of task forces. It is therefore imperative that the TMDLs are implemented using the most flexible adaptive management policies allowed under federal regulations.

2) The Tentative Order should be designed to continue to focus resources on regional management strategies and, with respect to the Lake Elsinore/Canyon Lake (LE/CL) TMDL, in-lake controls. The Tentative Order should require BMPs to be implemented in the watersheds to the maximum extent practicable, consistent with the requirements of Section 304(p) of the Clean Water Act, but should not divert resources to additional plans, studies, or other requirements beyond the TMDL Implementation Plans that would unduly interfere with the Permittees' ability to implement those plans and programs most likely to result in the attainment of beneficial uses. Further, by requiring additional control measures, plans and monitoring, the Regional Board may actually disqualify the Permittees' eligibility to pursue grants and other financial resources.

3) The Order should incorporate the TMDL Implementation Plan requirements by reference, so as to facilitate the work of the ongoing task forces to adaptively manage TMDL implementation. Hard wiring dates, monitoring stations and other requirements limits the MS4 Permittees' ability to make course corrections and/or adjust for failures that are expected when adaptively managing complex problems.

4) A TMDL implementation approach based on:
    a. Calculating existing loads and updating load and waste load allocations (WLA) for each discharger/source based on the most current data available
    b. Developing tools and data that allow the dischargers to take credit for load reductions based on BMP implementation
    c. Development of pollutant trading plans and biological translators which allow the dischargers to take credit for participation and/or implementation of innovative and effective in-lake control systems
    d. Re-evaluation of the TMDLs, as appropriate, to ensure that it reflects the current state of science and knowledge regarding the river and lakes

As written, the TMDL requirements in the Tentative Order impose additional studies, monitoring and other requirements that exceed the requirements of the TMDL Implementation Plans. Promoting additional watershed based monitoring and outfall-based compliance determinations divert Permittee resources from solving the actual beneficial use impairments. Such requirements force dedication of resources to determination of compliance with incomplete WLAs that were only established as placeholders pending collection of additional data.

With respect to the LE/CL TMDL, the Permittees believe that controlling nutrients in the watershed alone will not result in restoration of beneficial uses in the lakes. Watershed-based nutrient controls only function during infrequent rain events, and can never be sufficient to control the volume of water, and resultant nutrient load, produced by large rain events. Proper management of the lakes will require BMPs that can function year-round and which can continually address the sources of impairment. In-lake management measures are likely to be the most successful, as they can control the underlying cause of impairments on a daily basis. Although some Permittees may be in a position to address their discharges through watershed-based compliance measures (*e.g.*, due to limited jurisdictional area or their location in the watershed), it is expected that the majority of the affected MS4 Permittees will choose to focus resources on in-lake control measures to address TMDL requirements.

Promoting additional watershed-based compliance determinations will also weaken, and possibly destroy, the task force approach, as dischargers may be driven to argue over the sources of nutrients that are measured in outfall monitoring data. This additional level of monitoring was not required by the TMDL Implementation Plan. Evaluating compliance with WLAs through outfall based monitoring is both inconsistent with the TMDL Implementation Plan and technologically and economically infeasible. The watershed is very large and diverse. There are far too many outfalls to monitor economically and the outfall discharges themselves would not represent homogeneous sources. Nutrients measured at outfalls will typically represent the contribution of multiple TMDL dischargers that are not under the control of the Permittees, including state and federal agencies (schools, Caltrans, etc.) and agricultural and CAFO operations. In addition, the outfall may represent discharges from multiple Permittees. Thus, determining any individual MS4 Permittee's actual nutrient load from outfall monitoring data is technologically infeasible. The result of imposing additional outfall monitoring will still be the progress of the task force, as resources are diverted from addressing the actual impairments or developing more effective in-lake solutions.

Alternatively, the proposal currently supported by the LE/CL TMDL Task Forces, using models to calculate discharger specific existing nutrient loads, and then determining compliance by allowing the dischargers to take credit for load reductions that result from BMP implementation, is a more effective way to ensure progress toward compliance with the TMDL. Monitoring data and models already required by the TMDL Implementation Plan can then be used to evaluate whether expected load reductions are being attained over time.

Finally, Section VI.D.2.e requires the Permittees to develop and implement a Canyon Lake Sediment Nutrient Treatment Plan. This requirement is problematic:

- Not all of the LE/CL Permittees are dischargers to Canyon Lake.
- The requirement unnecessarily presumes that all the LE/CL Permittees will need to participate in nutrient/sediment control plan for Canyon Lake. It is entirely feasible that some Permittees (e.g., City of Riverside) may have special circumstances (such as limited jurisdictional area or their relative location in the watershed) that allow them to more cost-effectively address TMDL requirements via other BMP based approaches.

- The requirement places the burden of developing this plan on the affected MS4 Permittees and overlooks the responsibilities of non-MS4 Permittee dischargers.
- The TMDL did not require implementation of a nutrient/sediment control system in Canyon Lake. By mandating this system in the draft Order, the Regional Board is effectively disqualifying the Permittees from eligibility to pursue grants to offset the costs of development, implementation and operation of this system, which would otherwise not be required by an NPDES MS4 Permit. The Permittees request deletion of this provision.

5) Section XI – Municipal Inspection Programs

Section XI.D.1 The CAP, which is implemented by the County Environmental Health Department on behalf of the smaller cities in Riverside County, is a cost-effective mechanism to address the industrial and commercial inspection program requirements of the Tentative Order. Although the County and the larger cities, which encompass 73 percent of the population, implement comprehensive inspection programs, it is estimated that 95 percent of the facilities targeted by the Municipal Inspection requirement are addressed by the CAP and other existing programs. The MS4 Permittees have committed to more fully describe the CAP in the revised Drainage Area Management Plan and to specifically evaluate the need to develop or enhance inspection programs to address facilities that manufacture, transport or store pre-production plastics. Thus, the MS4 Permittees request that the Tentative Order be modified as set forth in the redline in Attachment 4.

6) Section XII – New Development (including Significant Redevelopment)

a. The MS4 Permittees recommend that Section XII.A.6 be revised as set forth in the Attachment 4 redline to prevent conflict with state drainage law (language attempting to prohibit flow unless certain conditions are met). Additionally, the proposed revisions focus the provision on the outcome as opposed to the method of compliance.

b. The MS4 Permittees request that Section XII.D.2.i be deleted and that Section XII.F be expanded, as set forth in the redline, to cover both public and private road projects.

c. The MS4 Permittees request that Section XII.D.3.a be deleted to remove the compliance standard of BAT/BCT, as Treatment Control BMPs are subject to the MEP standard, not the BAT/BCT standard. This revision is also consistent with the final Orange County NPDES MS4 Permit.

d. The redline text attached as Attachment 5 proposes revisions to the HCOC requirements in Sections XII.E.8.b.ii) and XII.E.8.d.iv) to improve compliance feasibility and flexibility in a manner protective of receiving water quality and to be consistent with the Orange County NPDES MS4 Permit.

e. Section XII.F has been modified in the Attachment 4 redline text to clarify that the Road Standards address both public and private road projects under the jurisdiction of the Permittees. Further clarifications were made to clarify that the Principal Permittee does not maintain road standards.

7) Appendix 3 – Monitoring and Reporting Program (See Attachment 2)

a) Section III.D – The MS4 Permittees request that the text following the first paragraph of Section III.D be eliminated. The additional text is not pertinent to this section of the Monitoring and Reporting Program and is duplicative of text contained in the Tentative Order. If the Board chooses to keep this section, the explicit text should be removed and replaced with references to the appropriate sections of the Tentative Order.

b) Section III.E.1.b.ii – The Permittees request that the phrase "to correlate land use and population changes" be deleted. Stormwater data is highly variable and developing such correlations is beyond the capability and resources of the MS4 Permittees. The Permittees conducted such an analysis as part of the ROWD for the SMR Permit, it was a substantial and time consuming analysis – particularly when you consider it would need to be done separately for dry weather, wet weather and each of the more than 200 pollutants that we monitor. Such extensive research endeavors are best left to US EPA and university researchers.

c) Section III.E.1.b.iii – The Permittees request that the comparison to the Industrial Permit Multi-sector benchmarks be deleted, as these benchmarks are not applicable to an NPDES MS4 Permit. The actual benchmarks are specific to each industrial discharge category and MS4 discharges are not consistent with the individual categories and would not provide useful comparison for urban runoff management. Further, the benchmarks are derivatives of the CTR objectives, which the Permittees are already required to evaluate. In addition, the Permittees request deletion of the CTR objectives, as they are not applicable to stormwater.

d) Section III.E.1.b.v – The Permittees request that this section be revised to clarify that the "model" is intended to address conversion of grab sample data to mass loads and may be as simple as a spreadsheet – and use of a "model" may not provide more statistically reliable information than that provided by a spreadsheet. Further, the Permittees request deletion of the words "and monitoring data" from the sentence regarding GIS database management. The Permittees have monitoring locations in a GIS database, but do not maintain monitoring data itself in a GIS database. Development of such a tool would require an investment of several hundreds of thousands of dollars – resources that are and will not be available to the MS4 Permittees during the term of the Tentative Order. This requirement should be deleted as such a tool is not necessary to address the requirements of the Tentative Order. .

e) Section II.E.3 – The MS4 Permittees request a minor amendment to the second paragraph to clarify that nitrogen/TDS monitoring is applicable at the Core Monitoring Stations.

f) Table 1 – The MS4 Permittees request deletion of the TMDL monitoring stations, as these stations are not part of the MS4 Permittees Core Monitoring Stations. These monitoring stations are currently monitored (or proposed to be monitored) by the LE/CL TMDL Task Force. The Permit already requires the MS4 Permittees to participate in the TMDL Monitoring Program.

g) Section III.E.8.g – The MS4 Permittees have requested minor revisions to this paragraph to clarify where Receiving Waters Monitoring Stations are to be abolished and the basis for selecting sites. Due to safety considerations and the difficulty of monitoring receiving waters sites during wet weather, the MS4 Permittees are only recommending one site on each River.

h) Section III.E.8.h – The MS4 Permittees have requested revisions to this paragraph to clarify that the monitoring stations referenced here are the same monitoring stations contained in the CMP and referenced in Section E.1 and that this is not a new and separate monitoring requirement.

i) Section III.G – The MS4 Permittees have proposed clarifying revisions to this paragraph. The MS4 Permittees are requesting additional flexibility in the language so that they may implement programs that will be consistent with upcoming recommendations from the Southern California Stormwater Monitoring Coalition.

j) Section III.J – The MS4 Permittees are requesting deletion of this provision, as it is duplicative of the Receiving Waters Limitations requirements and creates a new and unnecessary fiscal burden. The MS4 Permittees are already spending $1.2 million in capital costs and more than $100,000 over 5 years for the monitoring of the District's LID Facility. These expenditures are in addition to the funds dedicated to several monitoring projects, including BMP testing, jointly conducted with the SMC. Since this provision is duplicative of those efforts, and the cost of implementing this program diverts resources from critical water quality issues, it should be deleted.

k) Section IV.A.1 – The additional text beyond the first sentence in this provision is duplicative of, and potentially contrary to, Section II.A. The MS4 Permittees request that this additional text be deleted.

l) Section IV.B.2.f – The MS4 Permittees are requesting a minor amendment to this section to clarify the purpose of the provision.

m) Section IV.B.4 – The last sentence should be deleted, as SWAMP compliance is addressed in Section II.C of the Monitoring and Reporting Program. Further, the Regional Board has already agreed to implement the regional reporting requirements instituted by the Southern California Stormwater Monitoring Coalition.

8) Appendix 4 – Glossary

The MS4 Permittees request the following revisions of the LID and Effluent Limit definitions in the Glossary:

> **Low Impact Development (LID)** – Comprises a set of technologically feasible and cost-effective approaches and practices that are designed to reduce runoff of water and Pollutants from the site at which they are generated. By means of infiltration, evapotranspiration, biotreatment, and reuse of rainwater, LID techniques manage water and water Pollutants at the source.

Effluent Limits – Can be either numeric or narrative; water quality-based or technology-based. Generally, NPDES MS4 Permits require implementation of BMPs, identified as narrative water quality-based effluent limitations, rather than as numeric effluent limits. USEPA recognizes that because storm water discharges are due to storm events that are highly variable in frequency and duration and are not easily characterized, only in rare cases will it be feasible or appropriate to establish numeric limits for municipal storm water discharges. *See, e.g.,* 40 C.F.R. 122.44(k); EPA's *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits*, 61 Fed. Reg. 43761 (Aug. 26, 1996); *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs* (EPA Memo, Nov. 22, 2002); and EPA's *TMDL to Storm Water Handbook (Draft)* (Nov. 2008). *See also* SWRCB Order No. 97-03-DWQ, *NPDES General Permit/Waste Discharge Requirements for Discharges of Storm Water Associated With Industrial Activities Excluding Construction Activities* (Apr. 17, 1997).

ATTACHMENT 2

State of California
California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2009-0033
NPDES No. CAS618033

for
Riverside County Flood Control and Water Conservation District,
The County of Riverside and the Cities of Riverside County
Within the Santa Ana Region
AREA-WIDE URBAN STORM WATER RUNOFF MANAGEMENT PROGRAM

I. OBJECTIVES

The overall goal of the urban storm water runoff monitoring program is to support the development of an effective urban storm water runoff management program. The following are the major objectives:

A. To identify those receiving waters, which, without additional action to control pollution from urban storm water runoff, cannot reasonably be expected to achieve or maintain applicable water quality standards required to sustain the designated beneficial uses, the goals, and the objectives of the Basin Plan.

B. To develop and support an effective MS4 management program.

C. To identify significant water quality problems, related to discharges of urban storm water runoff within the permitted area.

D. To determine water quality status, trends, and pollutants of concern associated with urban storm water runoff and their impact on the beneficial uses of the receiving waters.

E. To analyze and interpret the collected data to determine the impact of urban storm water runoff and/or validate relevant water quality models.

F. To characterize pollutants associated with urban storm water runoff, and to assess the influence of urban land uses on receiving water quality and associated beneficial uses.

G. To identify other sources of pollutants in urban storm water runoff to the maximum extent possible (e.g., including, but not limited to, atmospheric deposition, contaminated sediments, other non-point sources, etc.)

H. To identify and permit or prohibit illicit connections.

I. To identify, verify and prohibit illegal discharges.

J. To verify and to identify sources of Urban Runoff pollutants.

K. To evaluate the effectiveness of the DAMP and WQMPs, including an estimate of pollutant reductions achieved by the site design (LID), treatment and source control BMPs implemented by the Permittees.

L. To evaluate the effectiveness of proposed urban storm water runoff management programs to protect receiving water quality.

II. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. All sample collection, handling, storage, and analysis shall be in accordance with test procedures under 40 CFR Part 136 (latest edition) "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the USEPA, the guidance being developed by the State Board pursuant to Water Code Section 13383.5, or other methods which are more sensitive than those specified in 40 CFR 136 and approved by the Executive Officer. For priority toxic pollutants that are identified in the California Toxics Rule (CTR) (65 Fed. Reg. 31682), the Minimum Levels (MLs) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) shall be used for all analyses, unless otherwise specified.

   For priority toxic pollutants, if the Permittee can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR 136, the lowest quantifiable concentration of the lowest calibration standard analyzed by a specific analytical procedure (assuming that all the method specified sample weights, volumes, and processing steps have been followed) may be used instead of the ML listed in Appendix 4 of the SIP. The Principal Permittee must submit documentation from the laboratory to the Regional Water Board Executive Officer for approval prior to raising the ML for any constituent.

B. All chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by an appropriate governmental regulatory agency.

C. Analytical methods, target reporting limits and data reporting formats shall be compatible with California's Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan and with SWAMP's Procedures for Conducting Routine Field Measurement unless otherwise specified in this Monitoring and Reporting Program.

D. Revisions of this monitoring and reporting program (MRP) are appropriate to ensure that the Permittees are in compliance with requirements and provisions contained in this Order. Revisions may be made under the direction of the Executive Officer at any time during the term of the Order, and may include redistribution of monitoring resources to address TMDL needs, a reduction or

increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

E. The Executive Officer is authorized to allow the Permittees to participate in regional, statewide, national, or other monitoring programs in addition to or as part of this Urban Runoff monitoring program. Also, the Permittees are authorized to complement their Urban Runoff monitoring data with data from other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana River watershed.

F. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this Order shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both [40 CFR 122.41(j)(5)].

III. MONITORING PROGRAM

A. The Principal Permittee has been monitoring Urban Runoff and receiving waters since the first MS4 permit term. The Principal Permittee currently implements the Consolidated Monitoring Program (CMP) and participates in a number of other storm water or TMDL related monitoring programs such as: TMDL Bacterial and Nutrient Monitoring, WLA Compliance, BMP Effectiveness, Urban Source and Trend Evaluation, Receiving Water Quality, Hydromodification and Bioassessment. The Principal Permittee shall continue to implement the CMP and continue to participate in other related monitoring programs.

B. 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). The Permittees shall continue to cooperate with other MS4 permittees (including Orange County and San Bernardino County), Southern California Coastal Water Research Project (SCCWRP), POTW operators, the dairy industry, the Santa Ana Watershed Project Authority (SAWPA), and other public and private organizations in the watershed to develop coordinated surface water quality monitoring programs, databases, and special studies as appropriate. The Regional Board supports continued coordination with SCCWRP and the SMC to facilitate and implement coordinated watershed based monitoring programs. The Permittees may use coordinated monitoring efforts such as the Middle Santa Ana and Lake Elsinore TMDL Task Forces, SCCWRP and SMC regional monitoring programs to address partially, or in full, the requirements of this Monitoring and

Reporting Program. A proposed coordinated monitoring program shall result in the development and implementation of a monitoring plan that:

1. Fully addresses the requirements of this Monitoring and Reporting Program;

2. Describes how the external monitoring programs address the requirements of the Monitoring and Reporting Program;

3. Include a quality assurance plan , including data management, validation, verification mechanism for the portions of the monitoring directly conducted by the Permittees;

4. Reference the locations of the quality assurance plans for regional components; and

5. Result in a coordinated annual report summarizing the pertinent Urban Runoff data from the coordinated programs necessary to address this Monitoring and Reporting Program.

C. Within 12 months of adoption of this Order, the Permittees shall review the CMP, Regional and TMDL related monitoring programs that they conduct or participate to determine their effectiveness in achieving the Urban Runoff assessment requirements contained in Section IV.B, below. .If this review indicates any data gaps, the Principal Permittee shall submit a revised CMP, or coordinate revisions to other regional programs for approval of the Executive Officer to ensure that the combined efforts adequately address the requirements of Section IV.B. The revised CMP, including a description of how other regional efforts combine with the CMP to address requirements of Section IV.B shall be submitted within 16 months of adoption of this Order and shall be implemented within six months of its approval by the Executive Officer.

Pending approval of the revised CMP, current monitoring efforts will continue to be implemented.

D. <u>TMDL/303(d) Listed Waterbody Monitoring</u>: The Permittees identified as dischargers in adopted TMDLs shall continue to participate in TMDL monitoring programs as required by TMDL Implementation Plans. The compliance schedules for the two approved TMDLs within the permitted area are beyond the five year permit term. This Order requires Permittees identified as dischargers in their respective TDMLs to conduct monitoring required by the TMDL Implementation Plans to determine the effectiveness of the BMPs implemented in reducing pollutant loads and eventually to attain WLA by the deadlines specified in the respective TMDL implementation plans.

~~1. MSAR Bacteria WLA TMDL USEP monitoring~~

~~By February 15, 2010, the Permittees shall revise the DAMP to incorporate a plan and a schedule to achieve bacterial indicator WLAs based on the schedule established in the TMDLs. The plan shall include workplans or actions proposed by each permittee within the MSAR to be implemented within its jurisdiction attained necessary portion reduction. The MS4 Permittees shall track and annually report their progress for compliance with the MSAR Bacteria WLA at the location specified in the MSAR bactierial indicator TMDL or other appropriate urban source monitoring locations.~~

~~2. Lake Elsinore/Canyon Lake Nutrient TMDL~~

~~Monitor and report the effectiveness of the control measures implemented in the watershed to control nutrient inputs into the lakes from Urban Runoff by implementing the following:~~

~~0. Within twelve months of adoption of this Order, the Permittees within the San Jacinto watershed shall identify representative urban storm water runoff monitoring locations for discharges into the lakes. Selection of those monitoring locations shall take into account the size of the drainage area and potential sources of nutrients within each drainage area. Those monitoring locations may include existing storm water core monitoring locations and the Phase II watershed wide TMDL monitoring locations.~~

~~0. Beginning with the 2012-2013 annual report, and every three years thereafter, include an evaluation of nutrient source reductions during the prior three years. This evaluation should indicate how the source reduction plans implemented by each Permittee are geared towards meeting the WLAs by the 2020 compliance date. Since the WLAs are based on a 10-year running average, data from storm water core monitoring locations may be used to project loading reductions.~~

E. In addition, any requirements developed by the State Board in accordance with Water Code Section 13383.5 shall be considered during any revision of the CMP. The revised CMP shall, at a minimum, include the following:

1. Mass Emissions Monitoring – Core Stations:

   a. An estimate of flow in cubic feet per second (cfs) from the outfall/stream at the time of sampling.

   b. Monitor mass emissions in urban ~~storm water~~ runoff to:

      i) Estimate the total mass emissions from the MS4s to receiving waters.

      ii) Assess trends in mass emissions associated with specific urban storm water discharges from their MS4s over time, correcting for (e.g~~to correlate~~ land use and population changes to the extent feasible.; and

iii) Determine if urban storm water runoff is contributing to exceedances of water quality objectives or beneficial uses in receiving waters by comparing ~~results to Basin Plan water quality objectives~~. outfall and receiving water results to: (1) Basin Plan Water quality Objectives (WQOs); (~~2) EPA storm water benchmarks contained in the EPA Multi-Sector Industrial Storm Water Permit;~~ (3) California Toxic Rule (CTR – dry weather only~~)~~ and (4) other MS4 discharger's monitoring data.

iv) Representative samples from the first sampleable storm event (based on mobilization criteria to be established in the CMP) of the rainy season (October 1 to May 31) and two more storm events shall be collected during the rainy season. A minimum of two dry-weather samples shall also be collected. Samples from the first sampleable storm event each year shall be analyzed for constituents according to the list provided in the 2007-2008 Santa Ana Region Monitoring Annual Report, Attachment A. This list includes 40 CFR 122 Appendix D Tables II and III, and Tables IV and V if expected to be present, and additional constituents. All samples shall be analyzed for *E. coli*, nutrients (Nitrates + Nitrites, potassium, and phosphorous), hardness[1], metals, pH, TSS, TOC, pesticides/herbicides, and pollutants/stressors for 303(d) listed receiving waters. Dry weather samples should also include analyses for TPH (8015M – direct injection) and oil and grease. The analyte list will be reviewed annually. Constituents may be added to the list for a selected monitoring station if they are expected to be present, and removed from the list if three consecutive samples from the station have not had detectable concentrations of the constituent.

v) ~~A mass loading model shall be used to calculate the mass loadings and t~~To the extent practicable all monitoring locations ~~and monitoring data~~ shall be integrated into a GIS database system.

2. Water Column Toxicity Monitoring: Analyses for toxicity to aquatic species shall be performed on receiving water samples to determine the impacts of urban storm water runoff on toxicity of receiving waters. The *Ceriodaphnia dubia* survival (acute), Fathead Minnow larval survival (acute), and Selenastrum Capricornutum growth (chronic) tests shall be used to evaluate toxicity on the sample from the first sampleable storm event, plus one other wet weather sample. Where applicable, two dry weather samples shall also be collected or equivalent procedures shall be proposed in the CMP. In addition, criteria shall be identified which will trigger the initiation of Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

   To the extent that the toxicity testing developed as part of the Regional Bioassessment Monitoring described in item 5 and Section D below, or other standardized toxicity testing protocols developed by the SWRCB, RWQCB, SMC or SCCWRP, satisfies the objective of determining the impact of Urban

[1] Hardness is necessary to evaluate some metal objectives in receiving waters.

Runoff on toxicity of receiving waters, the Permittees may satisfy this requirement by participating in the regional bioassessment effort or conducting toxicity testing consistent with the standardized protocols.

3. Illicit Connection/Illegal Discharge (IC/ID) Monitoring: The Permittees shall review and update their dry and wet weather reconnaissance strategies to identify and eliminate illegal discharges and illicit connections using the Guidance Manual for Illicit Discharge, Detection, and Elimination developed by the Center for Watershed Protection[2] or any other equivalent program. Where possible, the use of GIS to identify geographic areas with a high density of industries associated with gross pollution (e.g. electroplating industries, auto dismantlers) and/or locations subject to maximum sediment loss (e.g. new development) may be used to determine areas for intensive monitoring efforts.

   The dry weather monitoring for nitrogen and total dissolved solids shall be ~~included as part of the IC/ID monitoring program. Establish~~used to establish a baseline dry weather flow concentration for TDS and TIN at each Core monitoring location.

4. Sources of Data: Where possible and applicable, data shall be obtained from monitoring efforts of other public or private agencies/entities (e.g., Caltrans).

5. Bioassessment: In lieu of developing an independent bioassessment program as required in the prior term permit, 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). The SMC's Bioassessment Working Group conducts 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 Principal Permittee, in collaboration with the SMC, shall conduct sampling, analysis, and reporting of specified in-stream biological and habitat data within the 5-year permit cycle according to the protocols specified in the SCCWRP Tech Report No. 539.

   b. Within the Riverside County , the bioassessment project area consists of the lower half of the Middle Santa Ana River Watershed, the San Jacinto Watershed, and the northern Santa Margarita Watershed (northern San Diego) for a total of 1.5 watershed units, a minimum of 9 samples shall be collected per year[3]. Within Riverside County's Santa Ana and San Jacinto Watersheds, which are permitted areas of this Order, the Permittees shall sample 5 sites per year. SWAMP samples 2 sites per year.

[2] 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).
[3] See Table 4 page 15 of Technical Report No.539.

c. For long-term trend monitoring, the Principal Permittee shall collect a minimum of 1 sample per year during the dry weather index period, as noted in the SCCWRP Tech Report No. 539. Additional samples may be collected to improve data quality for trend analysis. At a minimum, chemistry and aquatic toxicity should be used as indicators for trend analysis.

d. Any baseline and historic information on stream geomorphology and ecological health, including aquatic habitats, in the receiving waters and the findings from the trend analysis shall be used to evaluate the effectiveness of urban storm water management program, including the requirements specified in the Order.

6. A Quality Assurance Program Plan within the CMP that describes how data will be collected and analyzed to ensure that data is consistent with State and Regional Board monitoring programs and is of high quality. Dischargers shall develop a Quality Assurance Program Plan (QAPP) that is compatible with the State's Surface Water Ambient Monitoring Program (SWAMP) QAPP and approved by the Regional Board's Quality Assurance Officer. A QAPP template is available, upon request, through the State Water Resources Control Board's SWAMP website (http://www.waterboards.ca.gov/water_issues/programs/swamp/qapp.shtml). All analytical methods, target reporting limits, and data reporting formats should be SWAMP compatible unless otherwise specified in this Monitoring and Reporting Program. The QAPP will include location of sample site(s), description of analytical techniques, data quality objectives, and other standard quality assurance information.
7. A procedure for the collection, analysis, and interpretation of existing data from local, regional or national monitoring programs. These data sources may be utilized to:
   a. Characterize different sources of pollutants discharged to the MS4;
   b. Determine pollutant generation, transport and fate;
   c. Develop a relationship between land use, development size, storm size and the event mean concentration of pollutants;
   d. Determine spatial and temporal variances in urban storm water runoff quality and seasonal and other bias in the collected data; and
   e. Identify any unique features of the permitted area.
   f. The Permittees are encouraged to use data from similar studies, if available.

8. The CMP update shall include descriptions of:
   a. The number of monitoring stations;

b. Monitoring locations within MS4s, major outfalls, and receiving waters; environmental indicators (e.g., ecosystem, flow, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring; The initial update shall at least contain the sampling stations listed in Table 1, below:

Table 1 Current Core Monitoring Stations

Station Number	Class	Station Description	Latitude	Longitude
40	Outfall	Corona Storm Drain – Line K Harrison & Sheridan St.	33.885	-117.568611
316	Outfall	Sunnymead Chanel – Line B Alessandro & Heacock	33.917778	-117.242222
318	Outfall	Hemet Channel @ Sanderson Ave.	33.734167	-117.005556
364	Outfall	Magnolia Center – SD @ Santa Ana River	33.964722	-117.414444
702	Outfall	University Wash – Market & Bowling Green	33.9975	-117.370833
707	Outfall	North Norco Channel @ Country Club Lane	33.907778	-117.583889
752	Outfall	Perris Line J - Sunset Ave below Murrieta Rd.	33.803333	-117.2075
~~792~~	~~TMDL – RW*.~~	~~San Jacinto River @ Cranston Guard Station~~	~~33.7328~~	~~-116.8361~~
~~745~~	~~TMDL – RW*.~~	~~Salt Creek @ Murrieta Road~~	~~33.6871~~	~~-117.2013~~
~~759~~	~~TMDL – RW*.~~	~~San Jacinto River @ Goetz Rd~~	~~33.7517~~	~~-117.2237~~
~~741~~	~~TMDL – RW*.~~	~~San Jacinto River @ Ramona Expressway~~	~~33.8383~~	~~-117.1367~~
~~841~~	~~TMDL – RW*.~~	~~Canyon Lake spillway~~	~~33.6754~~	~~-117.2729~~
~~**Starting Jan 1, 2011**[4]~~				
~~318~~	~~TMDL – RW*.~~	~~Hemet Channel at Sanderson Ave.~~	~~33.73417~~	~~-117.0062~~
~~325~~	~~TMDL – RW*.~~	~~Perris Valley Storm Drain @ Nuevo Rd.~~	~~33.8011~~	~~-117.2053~~
~~827~~	~~TMDL – RW*.~~	~~San Jacinto River upstream of Lake Elsinore~~	~~33.6642~~	~~-117.293~~
~~834~~	~~TMDL – RW*.~~	~~Sierra Park Drain in Canyon Lake~~	~~33.6949~~	~~-117.2604~~
~~NS-1~~	~~TMDL – RW*.~~	~~Medowbrook (Marie St & SH 74 Perris)~~	~~33.7613~~	~~-117.2668~~
~~NS-2~~	~~TMDL – RW*.~~	~~Kitching St. & Iris Ave., Moreno Valley~~	~~33.888~~	~~-117.2174~~
~~NS-3~~	~~TMDL – RW*.~~	~~Bridge St. & SJ River, San Jacinto~~	~~33.853~~	~~-117.0683~~
~~NS-4~~	~~TMDL – RW*.~~	~~State St., & SJ River, San Jacinto~~	~~33.819~~	~~-117.9735~~

~~*TMDL - RW. TMDL Receiving Water~~

c. Total number of samples to be collected from each station, frequency of sampling during wet and dry weather, short duration or long duration storm events, type of samples (grab, 24-hour composite, etc.), justification for composite versus discrete sampling, type of sampling equipment, quality assurance/quality control procedures followed during sampling and analysis, analysis protocols to be followed (including sample preparation and maximum reporting limits), and qualifications of laboratories performing analyses;

d. A procedure for analyzing the collected data and interpreting the results. This procedure shall include the evaluation of the effectiveness of the management practices, a comparative analysis of the Permittees' monitoring data to the USEPA Multi-Sector Permit Parameter Benchmark Values and applicable water quality objectives specified in Chapter 4 of the Basin Plan, and the need for any refinement of the WQMPs, the DAMP and or/the LIPs.

e. Parameters selected for field screening and for laboratory work; and

f. A description of the responsibilities of all the participants in this program, including cost sharing.

g. Receiving Water Monitoring:

Permittees shall ~~select a number of r~~identify a representative receiving water location~~s within their jurisdiction~~within the San Jacinto and Santa Ana Rivers. These locations should be close to MS4 discharge points, coordinated with other regional monitoring programs to the extent feasible and should ~~include locations where chronic and/or persistent water quality problems have been identified. The objective of receiving water monitoring is to determine~~be selected so as to be useful to evaluate if urban runoff is causing or contributing to violations of water quality standards in the receiving waters.

h. Monitoring within MS4s:
Permittees shall ~~select a number of representative locations~~evaluate their current CMP MS4 monitoring locations (~~representative of flow, duration, pollutant loads, etc.~~identified in Table 1 and required by Section E.1 above) to ensure that they are representative of urban runoff. ~~within storm water conveyance systems within their jurisdiction~~. The objective of this monitoring element is to determine the pollutant loads from the MS4s and to determine their trend. ~~This monitoring requirement maybe combined with the mass emissions monitoring described in F.1, above.~~

F. REGIONAL WATERSHED MONITORING

1. 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:

a. To assess the current status of streams in Southern California.

b. To identify major stressors to aquatic life.

c. To monitor the trend in water quality in Southern California streams.

2. The bioassessment discussed above, should provide information about the biological, chemical and toxicological integrity of receiving waters. Baseline and trend monitoring information on the biotic and geomorphological condition of the receiving waters should be used to evaluate the effectiveness of the Urban Runoff pollution control measures.

3. The Riverside County Regional Watershed monitoring area is within the lower half of the Middle Santa Ana River Watershed, the San Jacinto Watershed, and the northern Santa Margarita watershed (northern San Diego) for a total of 1.5 watershed units[5]. Within Riverside County's Santa Ana and San Jacinto Watersheds, the Permittees sample 5 sites per year. SWAMP samples 2 sites per year.

4. The sampling sites in each watershed unit were determined according to distribution or abundance of the three land uses: urban, agriculture, or open. The sampling grid includes 15 watershed units located from Ventura to San Diego and as far east as San Bernardino and Riverside Counties. A total of 450 samples in the 15 watershed units will be collected within a five year period to assess the spatial extent of impacts to streams within the area. Samples will be collected at sites representing each of the three land use types. Each site will be sampled only once during an index period and not all sites need to be sampled during the same year. One-fifth of the samples (90 samples) will be collected each year for the 15 watersheds. 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. The specifics and details of the Regional Watershed Program are discussed in "The Regional Monitoring of Southern California's Watershed SMC Bioassessment Working Group", SCCWRP, Technical Report No. 539, December 2007 (The Tech Report).

5. Any baseline and historic information on stream geomorphology and ecological health, including aquatic habitats, in the receiving waters and the findings from the trend analysis shall be used to evaluate the effectiveness of Urban Runoff management program, including the requirements specified in the Order.

[5] See Table 4 page 15 of Technical Report No.539.

G. HYDROMODIFICATION MONITORING PROGRAM

This Order requires development and implementation of a hydromodification monitoring plan as part of the Watershed Action Plan (WAP) to evaluate the effectiveness of hydromodification controls () implemented 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 and follow on efforts to develop hydromodification monitoring guidance).

~~1. The Order requires the Permittees to revise the DAMP to incorporate Watershed Action Plan principles within three years of adoption of the Order. The hydromodification requirements require the permittees to identify vulnerable streams and possible control measures to minimize hydrologic impacts and tools to measure any impacts on geomorphology and aquatic resources.~~

~~2.~~1. The hydromodification monitoring program shall include:

a. Protocols for ~~ongoing monitoring to assess~~assessing the effectiveness of hydromodification management within the permitted area.

b. ~~Models~~ Methods to predict the effects of urbanization on stream stability within the permitted area.

H. LOW IMPACT DEVELOPMENT BMP MONITORING

The Principal Permittee shall continue to participate in data collection and monitoring to assess the effectiveness of low impact development 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". The Principal Permittee is also developing a regional LID BMP testing and demonstration facility at the main office that meets the intent of this requirement (currently the facility data is intended to be integrated into the SMC project).

~~**J. Pilot Studies**~~

~~1. The data obtained from the receiving water monitoring shall be analyzed using the State's Listing Policy to determine the number of times the representative receiving waters monitored exceed the applicable water quality standards. If a pollutant exceeds the allowable rate of exceedance in the Listing Policy, the Permittees shouldl develop and implement pilot studies to determine the BMPs to address the problem pollutant in urban runoff. Upon~~

~~completion of the pilot study, the Permittees should propose appropriate control measures to the Executive Officer to address pollutants causing the impairment in the receiving waters. Upon approval by the Executive Officer, the approved BMPs shall be implemented in accordance with the schedule approved by the Executive Officer.~~

~~2. Annually the data from the receiving water monitoring (including wet weather and dry weather) shall be analyzed by using the State's Listing Policy to determine whether any pollutant exceeds the allowable frequency of exceedances in the receiving waters. A BMP pilot study should be initiated for those pollutants that exceed the allowable frequency of exceedances as outlined above. A trend analyses of the data shall be developed and the best model that describes the data shall be used in explaining any possible trends (linear or non linear).~~

IV. RECORD KEEPING REQUIREMENTS

A. All monitoring activities shall meet the following requirements:

1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 CFR 122.41(j)(1)]. ~~Samples and measurements taken to meet the requirements of this Order shall be representative of the volume and nature of the monitored discharge, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality in the case of storm channels and flow quality in the case of streams and lakes. Representative sampling also includes development of a testable hypothesis, appropriate site selection, applicable and accepted sampling methodologies, laboratory methods, and frequency of sampling.~~

2. The Permittees shall retain records of all monitoring information, including all calibration and maintenance of monitoring instrumentation, copies of all reports prepared as per this MRP and records of all data used to complete the Report of Waste Discharge and annual reports for a period of at least five years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Board or USEPA at any time and shall be extended during the course of any unresolved litigation regarding this discharge [40 CFR 122.41(j)(2), CWC section 13383(a)].

3. Records of monitoring information shall include [40 CFR 122.41(j)(3)]:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

4. Calculations for all effluent limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in this MRP [40 CFR 122.41(l)(4)(iii)].

B. PROGRAM EFFECTIVENESS ASSESSMENT AND REPORTING

1. 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.

2. The Permittees shall submit an annual report to the Executive Officer and to the Regional Administrator of the USEPA, Region 9, no later than November 30th, of each year. This progress report shall also be submitted in a mutually agreeable electronic format that is text searchable. Any monitoring data shall also be submitted electronically in the form outlined in Section IV.B.4 of this Monitoring and Reporting Program. At a minimum, the annual report shall include the following:

   a. A review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this Order;

   b. An assessment of the effectiveness of control measures established under the illegal discharge elimination program and the DAMP. The effectiveness may be measured in terms of how successful the program has been in eliminating IC/IDs and/or reducing pollutant loads in urban storm water runoff, including summaries of Permittee actions to investigate and eliminate or permit IC/IDs and measures to reduce and/or eliminate the discharge of pollutants, including trash and debris

   c. 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 sediment impaired receiving waters and recommend necessary changes to program implementation and monitoring needs.

d. An assessment of the Permittees compliance status with the Receiving Waters Limitatins, Section VII of this Order, including any proposed modifications to the DAMP if the Receiving Water Limitations are not fully achieved.

e. 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.

f. Description of ~~each program review/assessment,above, including updates to address~~ program modifications and improvements identified during the program assessment above along with implementation schedule for incorporation of revisions into the local implementation plans (LIPs).

g. An assessment of any modifications to the WQMPs, or the DAMP made to comply with CWA requirements to reduce the discharge of pollutants to the MEP;

h. A summary, evaluation, and discussion of monitoring results from the previous year and any changes to the monitoring program to be made the following year;

i. A fiscal resources analysis progress report as described in Section XVII.B of Order No. R8-2009-0033 including:

   i. Each Permittee's expenditures for the previous fiscal year;

   ii. Each Permittee's budget for the current fiscal year; and

   iii. A description of the source of funds.

j. A draft work plan that describes the proposed implementation of the LIPs and DAMP for next fiscal year. The work plan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's actions for the next fiscal year;

k. Major changes in any previously submitted plans/policies;

l. If the Implementation Agreement is revised, a copy of the signature page and revisions to the Implementation Agreement.

m. A review of each Permittee's Storm Water Ordinances and their enforcement practices to assess their effectiveness in prohibiting non-exempt, non-storm water discharges to the MS4 (The Permittees may propose appropriate control measures in lieu of prohibiting these discharges, where the Permittees are responsible for ensuring that dischargers adequately maintain those control measures).

3. The Co-Permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the Principal Permittee. A duly authorized representative of the Co-Permittee under penalty of perjury shall sign all such submittals.

4. The monitoring 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. ~~The data shall also be compatible with California's Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Management Plan and with SWAMP's Procedures for Conducting Routine Field Measurement.~~

V. REPORTING SCHEDULE

All reports required by this Order shall be submitted to the Executive Officer in accordance with the following schedule:

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
III.A.1.e III.B.3.a,d,e & XVII.D.		Management Steering Committee meetings to discuss MS4 Permit implementation	Held at least twice per year.	Annual Report
III.A.1.f III.B.3.a,d,e & XVII.D.		Permittee Technical Committee meetings to discuss permit implementation	Held at least 10 times each year	Annual Report
III.B.3.a,d,e & XVII.D.		Co-Permittees participate in Management Steering and Technical Committee meetings to discuss MS4 Permit implementation	Attend at least 1 out of 2 Management and 8 out of 10 Technical meetings each year	Annual Report
III.A.1.r		The Principal Permittee shall develop a library of BMP performance reports, and revise the BMP performance report annually thereafter.	Within 6 months of permit adoption	
III.A.1.s		The Principal Permittee shall coordinate a review of area-wide documents with the Co-Permittees to determine the need for update or revisions and establish a schedule for those revisions.	Within 6 months of permit adoption	
III.B.2.g		Submit up-to-date MS4 facility maps	Annually to Principal Permittee	Annual Report
III.B.2.h		Submit reports & information for Annual Report	Annually to Principal Permittee	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
III.C.		Evaluate Implementation Agreement annually to determine need for revision.	Annually	Report findings and schedule for revisions to the Implementation Agreement in 2009-2010 Annual Report.
III.C.		Allow new permittees to join MS4 permit	Per schedule required in Section III.A.1.s	Report findings and schedule for revisions to the Implementation Agreement in 2009-2010 Annual report.
IV.A.		Principal Permittee shall develop and maintain a LIP Template	Within 18 months of adoption of Order and update annually thereafter.	
IV.B.		Complete a Co-Permittee specific LIP	Within 6 months of approval of the Template	Within 6 months of approval of the Template
VI.D.1.b.		Comply with WLA for Dry Weather bacterial indicators in MSAR	Dec. 31, 2015.	
VI.D.1.c.		Comply with WLA for Wet Weather bacterial indicators in MSA River	Dec. 31, 2025.	
VI.D.1.d.ii.		Submit a plan and schedule to achieve BacT indicator WLAs and submit Tri-annual data summary and compliance evaluation report	February 15, 2010 and every 3 years thereafter.	
VI.D.1.d.iii.		Report progress toward compliance with WLAs		Annual Report
VI.D.1.d.iii.c		Report revisions to the DAMP, LIP, or WQMP in response to TMDL requirements	Annually	Annual Report
VI.D.2.b.		Submit Phase 2 Alternatives	December 31, 2010	
		Submit O&M for Agreement for Fishery Management Program	December 31, 2010	
		Submit O&M for Agreement for Aeration and Mixing Systems	December 31, 2010	
		Submit Phase 2 Projects Plans	June 30, 2011	
		Complete Phase 2 Project Implementation	December 31, 2014	
		Implement in-lake and watershed monitoring programs	Annual Reports due August 31 every year.	

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
VI.D.2.c.		In-lake Processes Evaluation Study	December 31, 2009	
		Linkage Analysis Study	December 31, 2009	
		Watershed Source Loading Study	August 31, 2010	
		Model Evaluation	December 31, 2010	
		Construct/Calibrate Model	June 30, 2011	
		Conduct Model Scenarios	August 31, 2011	
		Model Update Final Report	November 30, 2011	
VI.D.2.d.		Conduct Feasibility analysis and ID Pollutant Trading Framework	March 2012	
		Create and Adopt Program Protocols and Program Implementation	August 2012	
		Submit Pollutant Trading Program	November 30, 2012	
VI.D.2.f.		Evaluate compliance with TMDLs and TMDL Implementation Plan tasks	Annually	Annual Report
VI.D.2.g.i.		Permittees within San Jacinto watershed shall identify representative Urban Runoff monitoring locations for discharges into the lakes	Within 12 months of adoption of Order	
VI.D.2.g.ii		Evaluate nutrient source reductions during the prior three years	Third Annual Report after adoption of Order	Third Annual Report
VII.D.1.a		Notify Regional Board if Section VI.A. discharges from MS4 causes exceedance of Receiving Water Quality Objectives.	---	2 working days verbal or email notice and 30 days written from time of becoming aware of the situation.
VII.D.1.e		Submit modified report required under VI.D.1		30 calendar days following receipt of written notice to modify report.
VII.D.4		Report any exceedance solely due to discharges outside the Permittees jurisdiction.	Within two (2) working days of becoming aware of the situation, provide oral or e-mail notice and provide written documentation within ten (10) calendar days of becoming aware of the situation.	

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
VII.D.2		Modify DAMP, LIP, and MRP to address Receiving Water Limit Violations and implementation schedule.	---	60 days after approval of Subsection VI.D.1 report by Executive Officer
VII.D.4		Report discovery of exceedances of Receiving Water Standards from non-jurisdictional sources.	---	Oral or email notice within 2 working days of becoming aware of situation and written documentation within 10 days from time of becoming aware of the situation.
VIII.C.		Promulgate ordinances that would control for known pathogen or bacterial indicator sources	Within 2 years of adoption	Within two (2) years of identification of known bacterial indicator sources that are determined to be significant within Co-Permittee's jurisdiction
VIII.E.		Review Storm Water Ordinances for effectiveness in prohibiting discharges to the MS4	Annual Report	First Annual Report
VIII.F.		Review of the effectiveness of ordinances and associated enforcement programs in prohibiting IC/ID to the MS4s	Annually	Annual Report
VIII. G.		Certification statement, signed by the Chief legal counsel, that the Permittee has obtained all necessary legal authority	Within 24 months	One year after Order adoption
VIII.H.		Permittees shall effectiveness of, implementation and enforcement response procedures.	Annually	Annual Report
IX. A.		Eliminate or permit IC/IDs		60 calendar days from receipt of notice from a third party.
IX.D.		Review and revise IC/ID program	18 months after Order adoption	Annual Report
IX.G.		Annually review and evaluate their IC/ID or IDDE program to determine if the program needs to be adjusted.	Annually	Annually

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
IX.H.		Maintain database summarizing IC/ID incident response	Annually	Annual Report
X.D.		Maintain inventory of septic systems within its jurisdiction completed in 2008.	Ongoing	Annual Report.
XI.A.1. & XI.A 2.		Submit a sortable electronic database of all construction, industrial, and commercial facilities within their jurisdiction that have a reasonable potential to discharge pollutants.		Annual Report
XI.A.11.		Each Permittee shall document, evaluate and annually report the effectiveness of its enforcement procedures in achieving prompt and timely compliance.	Annually	Annual Report
XI.A.13.		Permittees to evaluate and report adequacy of inspection programs conducted by other agencies on behalf of Permittee.	Annually	Annual Report
XI.B.4.		An inventory and inspection frequency of: Wet Season(Oct 1 – May 31): High = 1/mo., Med = 2/season, low = 1/season Dry Season: 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		Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XI.C.3		All high priority industrial facilities are to be inspected at least once a year; all medium priority sites are to be inspected at least once every two years; and all low priority sites are to be inspected at least once per permit cycle.		Annual Report
XI.D.4		All high priority sites shall be inspected at least once a year; all medium priority sites shall be inspected at least every two years; and all low priority sites shall be inspected at least once per MS4 Permit cycle.		Annual Report
XI.D.6		Notify all mobile businesses operating within the County concerning the minimum source control and pollution prevention measures that they must develop and implement.	Within 18 months of adoption of this Order	Annually
XI.D.7		The Principal Permittee shall develop an enforcement strategy to address mobile businesses.	Within 24 months of adoption of this Order	Annually
XI.E.1		Each Permittee shall develop and implement a residential program to reduce the discharge of Pollutants from residences to the MS4s to the MEP.	Within 18 months of adoption of this Order	Annually
XI.E.6.		Co-Permittees to provide an evaluation of its residential program	Annually starting with the second Annual Report following MS4 Permit adoption	Annually starting with the third Annual Report following MS4 Permit adoption
XII.B.3 & 4.		The Principal Permittee shall submit to the Regional Board a Watershed Action Plan	Within three years of adoption of MS4 Permit.	Annual Report
XII.B.6.		Within six months of Executive Officer approval of WAP DAMP revisions, Permittees shall implement.		Annually, starting with fourth Annual Report following adoption

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XII.C.1.		Each Permittee shall review the watershed protection principles and policies in its General Plan	Within 24 months of adoption of this Order	Annually
XII.D.1.		Principal Permittee to submit a revised WQMP to incorporate new elements required in the Order	Within 18 months of adoption of this Order	Annual Report
XII.D.5.		Principal Permittee to develop recommendations for streamlining regulatory agency approval of regional Treatment Control BMPs.	Within 24 months of adoption of this Order	Annually
XII.E.1		Permittees shall update the WQMP to incorporate LID principles,	18 months of Order adoption	
XII.C.1.		Each Permittee shall identify barriers to LID implementation and revise ordinances, codes, building and landscape design standards to promote green infrastructure/LID implementation.	Within 24 months of adoption of this Order	2010-2011 Annual Report.
XII.E.5.		Each Permittee to update its landscape ordinance consistent with requirements of AB 1881 and annually evaluate effectiveness with respect to water efficiency and water conservation goals	January 31, 2010	2011-2012 Annual Report
XII.E.1.		Permittees to review and update the WQMP guidance and template to incorporate LID principals and address impacts of urbanization on downstream hydrology	Within 6 months of MS4 Permit adoption	
XII.G1.		Permittees shall establish technically-based feasibility criteria for project evaluation to determine feasibility of implementing LID	Within 18 months of MS4 Permit adoption	No reporting specified
XII.H.		Each Permittee shall develop and implement standard procedures and tools, and include in its LIP.	Within 18 months of adoption of this Order	Annually

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XII.K.4.		The Permittees shall develop a database to track operation and maintenance of post-construction BMPs.		Annually
XII.K.5		Treatment Control BMPs, shall be inspected prior to the rainy season.	Within the 5 year permit term.	Annually
XII.K.6.		Provide list of all post-construction Treatment Control BMPs approved, constructed and/or operating	Annually	Annual Report
XII.L.		Provisions for LID and HCOC included in WQMP.	Within 45 days of approval of WQMP.	
XIII.A.		Review public education and outreach efforts and revise their activities to adapt to the needs identified in the annual reassessment.		Annual Report
XIII.B.		Status report on Public Education and Outreach requirements and changes to the ongoing program	Annually	Annual Report
XIII.C.		Implement assessment program to measure increases in public knowledge of impacts of Urban Runoff on Receiving Waters	First Annual Report following MS4 Permit adoption	
XIII.F.		The Permittees shall develop, maintain and distribute BMP guidance for the control of those potentially polluting activities identified during the previous permit cycle, which are not otherwise regulated by any agency, including guidelines for the household use of fertilizers, pesticides, herbicides and other chemicals, and guidance for mobile vehicle maintenance, carpet cleaners, commercial landscape maintenance, and pavement cutting.	Within 12 months of adoption of this Order	Annual Report
XIII.I.		The Public Education Committee shall meet at least twice per year.		Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XIII.J..		Sponsor or staff an Urban Runoff table or booth at community, regional, and/or countywide events to distribute public education materials to the public. Each Permittee shall participate in at least one event per year.		Annually
XIII.K.		Involve public agency organizations, listed in Appendix 2, in Urban Runoff program. Notify the Regional Board where assistance is needed in improving local cooperation.		Annual Report
XIII.L		Develop and distribute BMP Fact Sheets for mobile businesses	Within 18 months of adoption of this Order	
XIV.A.		Review activities and facilities to determine the need for revisions to Section 5 of the DAMP and LIP.		Annual Report
XIV.B.		Each Permittee shall review its inventory of fixed facilities listed in the DAMP, its field operations and drainage facilities to ensure that public agency facilities and activities do not cause or contribute to a Pollution or nuisance in Receiving Waters.	Within 12 months of adoption of this Order	Annual Report
XIV.C.		Conduct inspections of its fixed facilities and field operations.	Annually	Annual Report
XIV.E.		Unless otherwise determined, each Permittee shall inspect, clean & maintain at least 80% of it's open channels, catch basins, retention/detention basins, and wetlands created for Urban Runoff treatment.	Annually	Annual Report

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XIV.G1.c.		Notify the Executive Officer of the proposed construction project by electronically submitting Permit Registration Documents (PRDs).	Prior to commencement of each construction project.	
XIV.G1.d.		the Executive Officer shall be notified of the completion of the project by submitting a Notice of Termination (NOT).	Upon completion of each construction project.	
XIV.G2.b.		Notify the Executive Officer of each proposed deminimus discharge at least 15 days prior to start of the discharge	At least 15 days prior to discharge.	At least 15 days prior to discharge.
XV.A		DAMP and each Permittee's LIP shall be updated to include a program to provide formal and where necessary, informal training to Permittee staff that implement the provisions of this Order	Within 24 months of adoption of Order	DAMP will be updated within 24 months of adoption of Order. LIP will be updated within 12 months of approval of LIP template by EO
XV.A., XV.E. .		Each Permitee's LIP shall describe a program to provide formal and informal training to Permittee staff and contractors that implement the provisions of this Order. Provide the specified training.	Within 24 months of adoption of this Order and annually thereafter.	LIP will be updated within 24 months of order adoption.
XV.F.		Principal Permittee shall provide and document training to applicable Permittee staff on area wide procedures such as the DAMP, and any other applicable guidance and procedures developed by the Permittees to address activities in fixed facilities as well as field operations, including MS4 maintenance.	Within 12 months of adoption of this Order, within 12 months of hire and every two years, thereafter.	Bi-annually
XV.H*		Principal Permittee shall notify Regional Board staff		When notifying Permittees of training session.
XVI.A.		Notify of noncompliant sites within its jurisdiction.		Within 24 hours of discovery

Reference		Item	Completion Time after Permit Adoption or Frequency	Report Due Date
Permit	**DAMP[(a)]**			
XVI.C		Sewage spill notification shall be consistent with the timelines specified in the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order No. 2006-0003-DWQ.		Consistent with 2006-003-DWQ.
XVI.E.		Facilities operating without an applicable General permit.		Reported within 14 calendar days
XVII.A.		Evaluate the effectiveness of the Urban Runoff management program.	By November 30 of each year.	Annually by November 30.
XVII.B.		Amended DAMP pages.		Annual Report
XVIII.B.		Financial analysis report		Annual Report
XXII.A.		Report of Waste Discharge	180 days before permit expires	Month Day, 2014
Appendix 3, III.C.		Review CMP to determine their effectiveness in Urban Runoff program assessment	Within 12 months of adoption of this Order	N/A
		Submit Revised CMP	Within 16 months of adoption of this Order and implement within 6 months of approval.	
Appendix 3, III.E.1.		Track progress for compliance with the MSAR Bacteria WLA at the location specified in the MSAR bactierial indicator TMDL or other appropriate urban source monitoring locations.	By February 15, 2010	Annual Report
Appendix 3, III.E.2.		Identify representative urban storm water runoff monitoring locations for discharges into Canyon Lake and Lake Elsinore	Within 12 months of adoption of this Order	Annual Report
		Evaluate the nutrient source reductions during the prior three years.	Beginning with the 2012-2013 annual report, and every three years thereafter	Triennial
Appendix 3, IV.B.2.		Annual Report	Annually	November 30th

(a) This column to be completed by Permittees.

Date:_____ Ordered by_____

Gerard J. Thibeault
Executive Officer

ATTACHMENT 3

plan documenting the completion schedule for any additional and/or more effective BMPs and must execute the plan upon approval by the Executive Officer. Taken together, these permit conditions are consistent with the facts and assumptions specified in the TMDLs, including the TMDL Implementation Plans, and are expected to achieve compliance with the related WLAs.

~~The WLAs are included as numeric effluent limits. Numeric effluent limits~~Discharge specifications are ~~also~~ included for de-minimus types of discharges from Permittee-owned or permittee-operated facilities and activities and for total dissolved solids and total inorganic nitrogen for dry weather discharges.

ATTACHMENT 4

F. CWA SECTION 303(D) LISTED WATERBODIES AND TMDLS (ALSO SEE SECTION K)

1. Water quality assessment conducted by Regional Board staff has identified a number of Beneficial Use Impairments due, in part, to Urban Runoff. Section 305(b) of the CWA requires the USEPA and each state that has been delegated NPDES permitting authority to routinely monitor and assess the quality of waters of their respective regions. If this assessment indicates that Beneficial Uses are not met, then that waterbody must be listed under Section 303(d) of the CWA as an Impaired Waterbody.

2. Based on the Regional Board's 2006[1] water quality assessment a number of water bodies within the Permit Area are listed (see Table 4, below) as Impaired pursuant to Section 303(d).

Table 4 - Impaired Waterbodies

Waterbody	Pollutant	Potential Sources	Proposed TMDL Completion
Santa Ana River, Reach 3,	Pathogens	Dairies	Approved 2007
Canyon Lake	Nutrients	Non-point Source	Approved 2005
	Pathogens	Non-point Source	Listing under evaluation
Lake Elsinore	Nutrients	Non-point Source	Approved 2005
	Unknown Toxicity PCBs	Unknown Unknown Non-point Source	2021 2019
Lake Fulmor	Pathogens	Unknown Non-point Source	2019
Santa Ana River, Reach 4	Pathogens	Non-point Source	2019

3. Federal regulations require that a total maximum daily load (TMDL) be established for each 303(d) listed waterbody for each of the Pollutants causing Impairment. The TMDL is the total amount of a Pollutant that can be discharged to a subject waterbody, while still enabling the waterbody to attain Water Quality Standards in

[1] On April 24, 2009, the Regional Board adopted Resolution No. R8-2009-0032 approving the Clean Water Act Section 305(b) Integrated Report/Clean Water Act Section 303(d) List of Impaired Waterbodies. Minor additional modifications were approved by the Regional Board on October 23, 2009. When the revised list is approved by the State Board and the USEPA, the 2006 list will be updated.

the receiving water. Attaining Water Quality Standards means that the receiving waterbody's Water Quality Objectives are met and its Beneficial Uses are protected. The TMDL is the sum of the individual WLAs for point source inputs, Load Allocations (LAs) for Non-Point Source inputs and natural background, and a margin of safety. The TMDLs are one of the bases for limitations established in Waste Discharge Requirements.

4. The Basin Plan amendment incorporating the Middle Santa Ana River Watershed Bacterial Indicator TMDLs (MSAR TMDL) was approved by the Regional Board on August 26, 2005 (Resolution No. R8-2005-0001), by the State Board on May 15, 2006, by the state's Office of Administrative Law on September 1, 2006, and by the USEPA on May 16, 2007.

5. The MSAR TMDL established limits for bacterial source indicators for Santa Ana River (Reach 3), Chino Creek (Reaches 1 and 2), Prado Park Lake, Mill Creek (Prado Area), and Cucamonga Creek (Reach 1). The allocations apply to Middle Santa Ana River Watershed Urban Dischargers as a group. The MSAR TMDLs Implementation Plan identifies three sub-watersheds in Riverside County that drain to the Santa Ana River, Reach 3: 1) Riverside Watershed - Contributes surface drainage generally westward from the City of Riverside to the Santa Ana River; 2) Temescal Canyon Watershed - Contributes surface drainage generally northward to Temescal Creek and then to the Santa Ana River; and 3) Chino Basin - The southeastern portion of the Chino Basin drains generally south to the Santa Ana River in Riverside County.

6. The MSAR TMDLs specifies WLAs for Urban Runoff, and discharges from concentrated animal feeding operations. LAs are specified for runoff from other types of agriculture and from natural sources (open space/undeveloped forest land). WLAs and LAs are specified for both dry season discharges and wet season discharges, with separate compliance dates.

7. The MSAR TMDL Implementation Plan assigns responsibilities to specific MS4 dischargers to identify sources of impairment, to propose BMPs to address those sources, and to monitor, evaluate, and revise BMPs as needed, based on the effectiveness of the BMP implementation program. Specific Implementation Plan tasks are described in Chapter 5 of the Basin Plan and are assigned to one or more of the Permittees. Requirements of the TMDL Implementation Plan tasks are incorporated into this Order. A number of these Implementation Plan tasks are also jointly assigned to non-Permittee stakeholders. The stakeholders have established TMDL task forces to jointly implement and coordinate the TMDL Implementation Plan tasks.

8. The MSAR TMDL Task Force members are listed in Table 5.

Table 5 - Middle Santa Ana River Bacterial Indicator TMDL Task Force

MS4 Permittees	Non-MS4 Permittees
Corona, City of	Santa Ana Watershed Project Authority
Norco, City of	US Department of Agriculture, Forest Service
Riverside, City of	Agricultural Pool, Milk Producers Council
Riverside, County of	
RCFC&WCD,	Region 4 MS4 Permittees - Claremont and Pomona
San Bernardino County Flood Control District (representing the county of San Bernardino and the municipalities named in the TMDL)	

9. Pursuant to Task 3 of the MSAR TMDL, on June 29, 2007, the Regional Board approved the monitoring program (Resolution No. R8-2007-0046) proposed by the TMDL Task Force. Pursuant to Task 4 of the MSAR TMDL, on April 18, 2008, the Regional Board approved the Urban Source Evaluation Plan (Resolution No. R8-2008-0044) proposed by the TMDL Task Force. This Order requires the Permittees on the Task Force to continue to implement the approved monitoring program and the Urban Source Evaluation Plan.

10. Within the Permit Area, there are two watershed-wide MSAR TMDL monitoring stations (WW-S1 Santa Ana River Reach 3 @ MWD Crossing and WW-S4 Santa Ana River Reach 3 @ Pedley Avenue). Permittees within the MSAR TMDL area are required to comply with the numeric bacterial indicator targets at these monitoring locations as soon as possible but no later than December 31, 2015 for dry weather conditions (April 1 through October 31, as defined in the TMDL) and no later than December 31, 2025 for wet weather conditions (November 1 through March 31, as defined by the TMDL).

11. Stakeholders in the Santa Ana Region have formed the Storm Water Quality Standards Task Force (SWQSTF) to evaluate USEPA's bacterial indicator recommendations and appropriate recreational beneficial use designations for waterbodies throughout the Region. The SWQSTF is expected to make recommendations for the adoption of alternative bacterial indicators such as E.coli, based on USEPA's "Ambient Water Quality Criteria for Bacteria -1986". These and other recommendations of the SWQSTF for revisions to recreational beneficial use designations will be considered through the Basin Planning process. When and if the Basin Plan is amended to incorporate new beneficial use designations and/or bacterial objectives, the MSAR TMDLs will be revised, as appropriate.

12. This Order will be reopened to incorporate any new WLAs approved by the Regional Board, the State Board, Office of Administrative Law and the USEPA.

13. On December 20, 2004, the Regional Board adopted Resolution R8-2004-0037 amending the Basin Plan to incorporate the Lake Elsinore and Canyon Lake Nutrient TMDLs. These TMDLs were subsequently approved by the State Board on May 19, 2005, by the Office of Administrative Law on July 26, 2005 and by the USEPA on September 30, 2005. These TMDLs include urban WLAs that are now incorporated into Chapter 5 of the Basin Plan. For both Canyon Lake and Lake Elsinore, the TMDLs specify causal numeric targets (nitrogen and phosphorus) and response numeric targets (chlorophyll *a*, dissolved oxygen and un-ionized ammonia). The TMDLs also specify nitrogen and phosphorus WLAs (point source discharges) and LAs (nonpoint source discharges) for each lake. Compliance with interim dissolved oxygen and chlorophyll a numeric targets is to be achieved no later than December 31, 2015. Compliance with the final numeric targets and WLAs and LAs is to be achieved as soon as possible but no later than December 31, 2020. The LAs and WLAs are specified as 10-year running average.

14. The nitrogen and phosphorus WLAs and LAs for Canyon Lake are applicable to those discharges tributary to Canyon Lake. The nitrogen and phosphorus WLAs and LAs for Lake Elsinore apply to those areas downstream of Canyon Lake and to overflows from Canyon Lake.

15. TMDL Implementation Plans for each TMDL assign responsibilities to specific MS4 dischargers/stakeholders to identify sources of Impairment, to propose BMPs to address those sources, and to monitor, evaluate and revise BMPs based on monitoring results. Specific implementation plan tasks are described in Chapter 5 of the Basin Plan and are assigned to one or more of the Permittees. Requirements of the TMDL implementation plan tasks are incorporated into this Order and were proposed for inclusion in Chapter 13 of the DAMP (see 2007 ROWD). Several of these tasks are also jointly assigned to non-Permittee stakeholders. The Permittees have established TMDL Task Forces to jointly implement and coordinate those tasks.

16. To evaluate compliance with TMDL WLAs as per the Implementation Plans, the Permittees proposed to include in future ROWDs an:

    a. Evaluation of the effectiveness of BMPs and other control actions implemented; and

    b. Evaluation of the progress towards compliance with the nutrient WLA allocation for Urban Runoff.

17. The Canyon Lake and Lake Elsinore Nutrient TMDL Task Force (also referred to as the San Jacinto Watershed Urban Dischargers) members are tabulated below:

Table 6 - Canyon Lake and Lake Elsinore Nutrient TMDL Task Force

Riverside MS4 Permittees	Non-Permittees
Beaumont, City of	California Department of Fish and Game
Canyon Lake, City of	California Department of Transportation (Caltrans),
Hemet, City of	Eastern Municipal Water District
Lake Elsinore, City of	Elsinore Valley Municipal Water District
Moreno Valley, City of	U.S. Air Force (March Air Reserve Base), March Joint Powers Authority,
Murrieta, City of	U.S. Forest Service
Perris, City of	Western Riverside County Agricultural Coalition
San Jacinto, City of	
Riverside, City of	
Riverside, County of	
RCFC&WCD	

18. The cities of Menifee and Wildomar were recently incorporated and are responsible for compliance with the Canyon Lake and Lake Elsinore Nutrient TMDL requirements. They have the option to participate in the TMDL Task Force or comply with the TMDL requirements on their own.

19. Compliance determination with the WLAs in the TMDLs will be based on the Permittees progress towards implementing the various TMDL Implementation Plan tasks as per the resultant studies and plans approved by the Regional Board.

K. WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELs) AND TMDL WLA

1. 40 CFR 122.44(d) requires that NPDES permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the Beneficial Uses of the receiving water. Where numeric water quality criteria have not been established, 40 CFR 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter. In *Defenders of Wildlife, et al* v. *Browner,* No. 98–71080 (9th Cir, October 1999), the Court held that the CWA does not require strict compliance with State Water Quality Standards for MS4 permits under section 301(b)(1)(C), but that at the same time, the CWA does give the permitting authority the discretion to incorporate appropriate water quality-based Effluent Limitations under another provision, CWA Section 402(p)(3)(B)(iii). The use of BMPs to control or abate the discharge of Pollutants is allowed by 40 CFR 122.44(k)(3) when Numeric Effluent Limitations are infeasible or when practices are reasonably necessary to achieve Effluent Limitations and standards or to carry out the purposes and intent of the CWA. The legislative history and the preamble to the federal storm water regulations indicate that the Congress and the USEPA were aware of the difficulties in regulating Urban Runoff solely through traditional end-of-pipe treatment. It is the Regional Board's intent to require the

Permittees to implement BMPs consistent with the MEP standard in order to support attainment of Water Quality Standards. This Order includes Receiving Water Limitations based on Water Quality Objectives; it prohibits the creation of Nuisance and requires the reduction of water quality standards impairment in Receiving Waters. The Permit includes a procedure for determining whether Urban Runoff is causing or contributing to exceedances of Receiving Water Limitations and for evaluating whether DAMP must be revised to meet Water Quality Standards. The Order establishes an iterative process to determine compliance with the Receiving Water Limitations.

2. To support attainment of Water Quality Standards, consistent with the MEP standards, this Order aims to reduce the discharge of Pollutants in Urban Runoff from the MS4 by requiring Permittees to:
   a. Implement BMPs at Permittee facilities and activities,
   b. Require BMPs, including LID techniques, to be implemented at New Development and Significant Redevelopment project sites prior to accepting discharges into their MS4 facilities, where feasible,
   c. Implement and annually evaluate the DAMP and each Permittee's LIP for effectiveness in reducing Pollutants in Urban Runoff, and
   d. Perform monitoring and reporting to determine adequacy of BMPs within the Permit Area and compare the results to Basin Plan Water Quality Standards including applicable WLAs or interim goals and USEPA numeric benchmarks.

3. This Order includes TMDL WLAs that are expressed as WQBELs. The TMDLs adopted by the Regional Board and approved by the State Board, Office of Administrative Law and the USEPA are incorporated into this Order. USEPA's Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits, 60 FR 43761 (Aug 26, 1996) recognizes the need for an iterative approach to control Pollutants in urban storm water discharges. 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 in reducing pollutants to achieve compliance consistent with the TMDL Implementation Plan. ~~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.~~ The two approved TMDLs within the Permit Area are described in Section F, above. These include the following:

   a. MSAR Bacterial Indicator TMDL

      i. The TMDL relies on this Order to implement the WLAs for Urban Runoff.

ii. This Order requires the Permittees within the MSAR TMDL area to fully comply with the TMDL Implementation Plan. The TMDL Implementation Plan includes requirements for monitoring, and submittal of plans and schedules to implement short term solutions and develop long-term solutions to achieve TMDL compliance by the specified due dates.

iii. There are two components in the MSAR TMDL (fecal coliform and *E. coli*). The Basin Plan currently does not have an established objective for *E. coli*. The work that is currently being done by SWQSTF is expected to make recommendations for the adoption of *E. coli* objectives and revised WLAs based on *E.coli*. This Order incorporates the current WLAs as WQBELs. If the WLAs are revised, this Order will be reopened to incorporate the new WLAs.

iv. Compliance determination with the WLAs will be based on the Permittees' implementation of BMPs in accordance with the TMDL Implementation Plans or as identified as a result of TMDL special studies approved by the Regional Board. If Water Quality Standards in the Impaired Receiving Waters are met through implementation of appropriate control measures, this would constitute compliance with the WLAs.

b. Canyon Lake and Lake Elsinore Nutrient TMDLs

i. This Order is consistent with the urban WLAs specified in the Canyon Lake and Elsinore Nutrient TMDLs.

ii. Consistent with the TMDL Implementation Plan, this Order requires the Permittees to identify sources of Impairment, propose BMPs to address those sources, and to monitor, evaluate and revise BMPs based on the monitoring results. Specific TMDL Implementation Plan tasks are described in Chapter 5 of the Basin Plan and are assigned to one or more of the Permittees. Requirements of the TMDL Implementation Plan tasks are incorporated into this Order and Chapter 13 of the 2007 DAMP.

iii. In Chapter 13 of the 2007 DAMP submitted with the ROWD, the Permittees have proposed BMP programs, consistent with the aforementioned TMDL Implementation Plan tasks.

iv. This Order also requires the Permittees to monitor at representative Urban Runoff monitoring locations defined in the CMP and TMDL Implementation Plan (Phase 2 TMDL Monitoring specified in the Lake Elsinore and Canyon Lake Nutrient TMDL Monitoring Plan dated February 15, 2006) and to

evaluate the effectiveness of BMPs implemented in the Permit Area in reducing Pollutants of Concern in Urban Runoff to determine progress towards attainment of WLAs by the specified due dates.

v. The Regional Board recognizes that additional research is needed to determine the most appropriate control mechanism ~~for controlling nutrients~~to attain Water Quality Standards in these two lakes. This Order provides the Permittees the flexibility to meet the WLAs through a variety of techniques. Even though, the WLAs for Canyon Lake and Lake Elsinore Nutrient TMDLs are expressed as WQBELs, if Water Quality Standards in the Lakes are met through biological or other in-Lake control mechanisms, the Permittees' obligation to meet the WLAs is satisfied.

V. ~~V.~~ EFFLUENT LIMITATIONS, DISCHARGE SPECIFICATIONS AND OTHER TMDL RELATED REQUIREMENTS

For purposes of this Order, a discharge may include storm water or other types of discharges identified below.

A. ALLOWED DISCHARGES:

The discharges identified need not be prohibited by the Permittees unless identified by the Permittees or the Executive Officer as a significant source of Pollutants. The DAMP shall include public education and outreach activities directed at reducing these discharges even if they are not substantial contributors of Pollutants to the MS4.

1. Discharges composed entirely of storm water;
2. Air conditioning condensate;
3. Irrigation water from agricultural sources ;
4. Discharges covered by a NPDES Permit, Waste Discharge Requirements, or waivers issued by the Regional Board or State Board.
5. Discharges from landscape irrigation, lawn/garden watering and other irrigation waters;These shall be minimized through public education and water conservation efforts, as prescribed under this Order Section XI.E., Residential Program.

6. Passive foundation drains[2];
7. Passive footing drains[3];
8. Water from crawl space pumps[4];
9. Non-commercial vehicle washing,(e.g. residential car washing (excluding engine degreasing) and car washing fundraisers by non-profit organization);
10. Dechlorinated swimming pool discharges (cleaning wastewater and filter backwash shall not be discharged into the MS4 or to Waters of the U.S.)
11. Diverted stream flows[5];
12. Rising ground waters[6] and natural springs;
13. Uncontaminated ground water infiltration as defined in 40 CFR 35.2005 (20) and uncontaminated pumped groundwater (as defined in Appendix 4, glossary),
14. Flows from riparian habitats and wetlands;
15. Emergency fire fighting flows (i.e., flows necessary for the protection of life and property do not require BMPs and need not be prohibited. However, appropriate BMPs to reduce the discharge of Pollutants to the MEP must be implemented when they do not interfere with health and safety issues [see also Appendix K of the DAMP]).
16. Waters not otherwise containing Wastes as defined in California Water Code Section 13050 (d), and
17. Other types of discharges identified and recommended by the Permittees and approved by the Regional Board.

When types of discharges listed above are identified as a significant source of Pollutants to Waters of the U.S., a Permittee must either: prohibit the discharge category from entering the MS4 or ensure that Source Control BMPs and Treatment Control BMPs are implemented to reduce or eliminate pollutants resulting from the discharge. The Permittees shall evaluate the permitted discharges, as listed above to determine if any are a significant source of Pollutants to the MS4 and notify the Executive Officer if any are a significant source of Pollutants to the MS4.

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[2] Allowed discharges only if the source water drained from the foundation is storm water or uncontaminated groundwater. Discharges from contaminated groundwater may require coverage under the De Minimus Permit (Order No. R8-2003-0061, NPDES Permit No CAG998001)2 or its latest version.

[3] See footnote 27, above.

[4] Allowed discharges only if the discharge is uncontaminated, otherwise permit coverage under the De Minimus Permit or Order No. 2006-0008-DWQ (NPDES No. CAG990002), General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Waters (General Permit-Utility Vaults).

[5] Diversion of stream flows that encroach into Waters of the US requires a 404 permit from the US Army Corps of Engineers and a 401 Water Quality Certification from the Regional Board. Stream diversion that requires active pumping also requires coverage under the De Minimus Permit.

[6]Discharge of rising ground water and natural springs into surface water is only allowed if groundwater is uncontaminated. Otherwise, coverage under the De Minimus Permit may be required.

B. DISCHARGE SPECIFICATIONS FOR DISCHARGES FROM PERMITTEE OWNED AND/OR OPERATED FACILITIES AND ACTIVITIES - DE-MINIMUS DISCHARGES[7] :

The following types of discharges from Permittee owned and/or operated facilities and activities are authorized by this Order provided they are in compliance with the terms and conditions of the General De Minimus Permit except that separate coverage under that permit is not required.

1. *Discharges from potable water sources, including water line flushing, superchlorinated water line flushing, fire hydrant system flushing, and hydrostatic test water from pipelines, tanks and vessels*: These discharges shall be dechlorinated to a concentration of 0.1 ppm[8] or less, pH adjusted if necessary, and volumetrically and velocity controlled to prevent re-suspension of sediments.

2. *Discharges from lawn, greenbelt and median watering and other irrigation runoff[9] from non-agricultural operations*: These discharges shall be minimized through requirements consistent with Section 5.3 of the DAMP and Section XIV of this Order.

3. *Dechlorinated swimming pool discharges:* Dechlorinated to a concentration of 0.1 ppm[10] or less, pH adjusted and reoxygenated if necessary, and volumetrically and velocity controlled to prevent resuspension of sediments. Swimming pool cleaning wastewater and filter backwash shall not be discharged to the MS4.

4. *Discharges from facilities that extract, treat and discharge water diverted from Waters of the US*: These discharges shall meet the following conditions:

    a. The discharges to Waters of the US must not contain Pollutants added by the treatment process or Pollutants in greater concentration than the influent;
    b. The discharge must not cause or contribute to a condition of erosion;
    c. Be in compliance with Section 401 of the Clean Water Act; and
    d. Conduct monitoring in accordance with Section XIV.K.2 of this Order.

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[7] General De Minimus Permit for Discharges to Surface Waters, Order NO. R8-2009-0003, NPDES No. CAG 998001 (General De Minimus Permit).

[8] Total residual chlorine = 0.1 mg/l or parts per million (ppm) or less; compliance determination shall be at a point before the discharge mixes with any Receiving Water.

[9] Non-agricultural irrigation using recycled water must comply with the statewide permit for Landscape Irrigation Using Recycled Water and the State Department Health guidelines.

[10] See footnote 27.

5. *Construction dewatering wastes:* The maximum daily concentration limit for Total suspended solids (TSS) shall not exceed 75 mg/L; sulfides shall not exceed 0.4 mg/l; total petroleum hydrocarbons shall not exceed 0.1 mg/L; and oil and grease shall not exceed 15 mg/L.

6. *For all De-minimus type of discharges:* The pH of the discharge shall be within 6.5 to 8.5 pH units and there shall be no visible oil and grease in the discharge.

7. Table 4-1 of the Basin Plan incorporates TDS/TIN objectives for groundwater and surface waters within the Santa Ana Region. Permittees discharging to those Receiving Waters shall ensure compliance with the following for dry weather conditions:

   a. For discharges to surface waters where groundwater will not be affected by the discharge, the maximum daily concentration (mg/L) of TDS and/or TIN of the effluent shall not exceed the Water Quality Objectives for the Receiving Water where the effluent is discharged, as specified in Table 4-1 of the Basin Plan[11].

   b. For discharges to surface waters where the groundwater will be affected by the discharge, the TDS and/or TIN concentrations of the effluent shall not exceed the Water Quality Objectives for the surface water where the effluent is discharged and the affected groundwater management zone, as specified in Table 4-1 of the Basin Plan. The more restrictive Water Quality Objectives shall govern. However, treated effluent exceeding the groundwater management zone Water Quality Objectives may be returned to the same management zone from which it was extracted without reduction of the TDS or TIN concentrations so long as the concentrations of those constituents are no greater than when the groundwater was first extracted. Incidental increases in the TDS and TIN concentrations (such as may occur during air stripping) of treated effluent will not be considered increases for the purposes of determining compliance with this discharge specification.

C. NON-POINT SOURCE (NPS) DISCHARGES:

The Regional Board may add categories of Non-Storm Water discharges that are not significant sources of pollutants or remove categories of Non-Storm Water discharges listed above based upon a finding that the discharges are a significant source of Pollutants.

[11] Resolution No. R8-2004-0001

D. WATER QUALITY BASED EFFLUENT LIMITATIONS - TOTAL MAXIMUM DAILY LOADS (TMDLS)

This section implements requirements of the MSAR and LE/CL TMDLs.

1. MIDDLE SANTA ANA RIVER (MSAR) WATERSHED BACTERIA INDICATOR {tc "1. Middle Santa River (MSAR) Watershed Bacteria Indicator" \f A \l 3} TMDL{tc "Middle Santa River (MSAR) Watershed Bacteria Indicator TMDL" \f C \l 3}

a. **Waste Load allocations:** Urban Runoff discharges from ~~T~~the County of Riverside and the cities of Corona, Riverside and Norco (see Table 13-1 of the DAMP, herein MSAR Permittees) shall ~~comply~~ implement BMPs designed to achieve compliance with the WLA for the Middle Santa Ana River Watershed Bacterial Indicator TMDLs by the compliance date consistent with Section II.K~~:~~.

b. **Dry Summer Conditions** (April 1 through October 31): Compliance shall be achieved ~~no later than~~ by December 31, 2015.

i. Fecal Coliform WLA[12]

5–sample/30–day logarithmic mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.

ii. *e coli* WLA

5–sample/30–day logarithmic mean less than 113 organisms/100mL, and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.

c. **Wet Winter Conditions** (November 1 through March 31): Compliance shall be achieved ~~no later than~~by December 31, 2025.

i. Fecal Coliform WLA[34]

5–sample/30–day Logarithmic Mean less than 180 organisms/100mL, and not more than 10% of the samples exceed 360 organisms/100mL for any 30–day period.

ii. e*. coli* WLA

5–sample/30–day Logarithmic Mean less than 113 organisms/100 mL and not more than 10% of the samples exceed 212 organisms/100mL for any 30–day period.

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[12] The fecal coliform WLA becomes ineffective upon the replacement of the REC1 fecal coliform objectives in the Basin Plan by approved REC1 objectives based on E. Coli.

d. **MSAR TMDL Urban Source Evaluation Program and Waste Load Allocation Monitoring and Reporting**:

i. To comply with the MSAR TMDL, the MSAR Permittees shall implement the following evaluation, monitoring and reporting program.

~~i.~~ii. On June 14, 2007, the TMDL taskforce 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. The ~~MS4~~ 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.~~ By ~~February 15~~March 10, 2010[13],, the MSAR Permittees shall submit to the Executive Officer for approval ~~revise the DAMP to incorporate~~ a preliminary plan and a schedule, including decision points, to achieve Urban bacterial indicator WLAs based on the schedule established in the TMDL Implementation Plan~~s~~. Within 18 months of approval by the Executive Officer, the MSAR Permittees shall revise the DAMP and LIPs to include the approved BMP implementation plan. The plan~~Permittees~~ shall ~~T~~the plan ~~shall be~~ be amended as necessary based on additional data and information and to reflect ~~to at a minimum be based on actual or literature~~ documentation of estimated effectiveness of BMPs and necessary changes to the plan to address identified or potential controllable urban bacterial sources in the watershed. The plan shall include workplans or actions proposed by each MSAR Permittee within the MSAR[14] to be implemented within its jurisdiction ~~to attain necessary Pollution reductions~~. ~~By November 30, 2010, t~~The Permittees ~~shall revise the DAMP and LIPs to include the approved BMP implementation plan.~~

iii. The ~~MS4~~ MSAR Permittees ~~within the MSAR watershed~~ shall track and annually report their progress towards compliance ~~(pre-compliance evaluation monitoring)~~ with the WLAs at the locations specified in the MSAR Bacterial Indicator TMDL Watershed-Wide and USEP and BMP

~~[13] February 15, 2010 is the submittal due date for the next triennial report that evaluates compliance with the TMDLs, WLAs, and LAs. Submittal of the revised MSWMP by the November 15, 2010 annual report due date allows for the review and approval of the BMP implementation plan.prior to incorporation into the MSWMP.~~

[14] The Permittees, either collectively, or as part of the broader TMDL Taskforce may propose a consolidated workplan to address the problem, in lieu of individual workplans and actions.

Effectiveness components of the Middle Santa Ana River Water Quality Monitoring Plan (dated April 3, 2008) and Urban Source Evaluation Plan (dated March 21, 2008) or as updated by subsequent Regional Board approved revisions to the plans~~or at other appropriate urban source monitoring locations upon approval by the Executive Officer.~~ If the Watershed Wide Monitoring locations indicate water quality objectives are not being attained, the MSAR Permittees shall:

~~)~~a) Comply with the Urban Source Evaluation Plan to determine if Urban Runoff is contributing to the exceedance and to prioritize outfalls for investigation. ~~results of the monitoring and assessment at the specified monitoring locations are not met, the Permittees within the affected drainage areas shall comply with the following procedure~~:

~~a) Each Permittee (or the TMDL taskforce) upstream of the urban source monitoring points shall evaluate and characterize discharges from its significant (36 inches or larger in diameter) Outfall locations.~~

b) Each MSAR Permittee (or the TMDL taskforce) shall submit a report to the Executive Officer with proposed actions that describe~~s~~ BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any Pollutants that are causing or contributing to the failure to attain ~~bacterial source reduction goals~~WQS consistent with the requirements of the USEP. .The report~~ Each Permittee~~ shall ~~quantify~~ summarize the basis for presuming the BMPs will be effective~~the BMP effectiveness of BMPs already implemented and newly recommended BMPs to reduce pollutant loads~~. The Permittee shall also recommend a target date in which new BMPs will be implemented.

c) The report may be incorporated in the Annual Report unless the Executive Officer directs a different submittal date. In the annual report due beginning November 30, 2010 and every year thereafter, the MSAR Permittees ~~in the MSAR watershed~~ shall report any revisions to the DAMP, LIP or WQMP in response to TMDL requirements. The Executive Officer may require revisions to the DAMP, LIP or WQMP if reasonable progress is not being demonstrated in the annual reports toward ~~compliance with~~implementation of the dry summer condition WLAs by the 2015 deadline. Future workplans or actions to reduce bacterial

sources shall consider the impact of projected population growth in the watershed and within each jurisdiction. Effectiveness evaluations shall ~~be based on actual~~ consider population change.

~~iv. During the pre-compliance period, a~~An iterative approach is appropriate to demonstrate bacterial source reduction in drainage areas tributary to ~~Receiving Waters with WLAs based on TMDL Implementation Plan requirements~~the MSAR. Compliance with the WLAs at the ~~urban source monitoring~~watershed-wide monitoring locations ~~or as modeled in~~shall be determined in accordance with ~~the TMDL Implementation Plan~~Regional Board approved amendments to the MSAR Water Quality Monitoring Plan and Urban Source Evaluation Plans. ~~must be achieved by the compliance dates.~~

ii.

e. **Watershed-wide Monitoring Program:** The MSAR Permittees shall continue to participate in the watershed-wide monitoring program. Revisions to the watershed wide monitoring plan will be considered through a public participation process once the TMDLs have been achieved.

2. **LAKE ELSINORE/CANYON LAKE (SAN JACINTO WATERSHED) NUTRIENT TMDLS**

a. Urban Runoff discharges from ~~The~~ the Permittees within the San Jacinto Watershed identified in Table 13-1 of the DAMP (LE/CL Permittees) ~~in the San Jacinto watershed~~ shall ~~comply~~ implement BMPs designed to achieve compliance with the WLAs specified in the San Jacinto Watershed Nutrient TMDLs listed in Tables 8 and 9, below (or as amended by the Regional Board), consistent with Section II.K[15]. ~~Compliance may be achieved by implementing the various tasks identified in the TMDL implementation plan.~~

Table 8 - Canyon Lake
Nitrogen and Phosphorus Waste Load and Load Allocations[a]

Canyon Lake Nutrient TMDL	Final Total Phosphorus Waste Load Allocation (kg/yr)[b, c]	Final TN Waste Load Allocation (kg/yr)[b, c]
Urban	306 (675 lbs/yr)	3,974 (8763 lbs/yr)
Septic systems	139 (306 lbs/yr)	4,850 (10692 lbs/yr)

[a] The WLAs for Canyon Lake apply to those land uses located upstream of Canyon Lake.
[b] Final allocation compliance to be achieved ~~as soon as possible, but no later than~~by December 31, 2020.

[c] TMDL and allocations specified as 10-year running average.

Table 9 - Lake Elsinore
Nitrogen and Phosphorus Waste Load and Load Allocations[a]

Lake Elsinore Nutrient TMDL	Final Total Phosphorus Waste Load Allocation (kg/yr)[b, c]	Final TN Waste Load Allocation (kg/yr)[c, d]
Urban	124 (273.3 lbs/yr)	349 (769.4 lbs/yr)
Septic systems	69 (152 lbs/yr)	608 (1340 lbs/yr)

[a] The Lake Elsinore TMDL allocations for septic systems only apply to those land uses located downstream of Canyon Lake.
[b] Final compliance to be achieved ~~as soon as possible, but no later than~~by December 31, 2020.
[c] TMDL and allocations specified as 10-year running average.
[d] WLA for supplemental water should be met ~~as soon as possible~~ as a 5 year running average.
[e] Allocation for Canyon Lake overflows

b. *Lake Elsinore In-Lake Sediment Nutrient Reduction Plan:* Pursuant to Resolution No. R8-2007-0083, each ~~MS4~~ LE/CL Permittee ~~identified in Table 13-1 of the DAMP~~ shall continue to implement the approved strategy for reducing in-lake sediment nutrient loads as summarized in Table 10, below, or as updated by subsequent Regional Board approved tasks or schedule revisions:

Table 10 - Lake Elsinore In-lake Sediment Nutrient Reduction Strategy

Lake Elsinore In-lake Sediment Reduction Strategy Task	Due Date
Submit Phase 2 Alternatives	December 31, 2010
~~Submit Draft Phase 2 Alternatives~~	~~October 15, 2010~~
Submit Final Phase 2 Alternatives	December 31, 2010
~~Submit Draft O&M Agreement for Fishery Management~~	~~October 15, 2010~~
Submit O&M Agreement for Fishery Management Program	December 31, 2010
~~Submit Draft O&M Agreement for Aeration/Mixing Systems~~	~~October 15, 2010~~
Submit Final O&M Agreement for Aeration/Mixing Systems	December 31, 2010
Submit O&M for Agreement for Aeration and Mixing	December 31, 2010

Systems	
~~Submit Draft Phase 2 Project Plans~~	~~March 31, 2011~~
Submit Final Phase 2 Project Plan	June 30, 2011
Submit Phase 2 Projects Plans	June 30, 2011
Complete Phase 2 Project Implementation	December 31, 2014
Implement in-lake and watershed monitoring programs	Annual reports due August 31 every year.

c. Lake Elsinore/Canyon Lake Model Update Plan*:* Pursuant to Resolution No. R8-2007-0083, each ~~MS4~~ LE/CL Permittee ~~identified in Table 13-1 of the DAMP~~ shall continue to implement the Model Update Plan as per the schedule summarized Table 11 below, or as updated by subsequent Regional Board approved task or schedule revisions:

Table 11 - Lake Elsinore/Canyon Lake Model Update Plan

Model Update Task	**Due Date**
In-lake Processes Evaluation Study	December 31, 2009
Linkage Analysis Study	December 31, 2009
Watershed Source Loading Study	August 31, 2010
Model Evaluation	December 31, 2010
Construct/Calibrate Model	June 30, 2011
Conduct Model Scenarios	August 31, 2011
Model Update Final Report	November 30, 2011

d. Lake Elsinore/Canyon Lake Pollutant Trading Plan: Pursuant to Resolution No. R8-2007-0083, each ~~MS4~~ LE/CL Permittee ~~identified in Table 13-1 of the DAMP~~ shall continue to participate in the development and implementation of the Pollutant Trading Plan and schedule as per Table 12 below, or as updated by subsequent Regional Board approved schedule revisions:

Table 12 – Lake Elsinore/Canyon Lake Pollutant Trading Plan

Description	**Due Date**
Conduct Feasibility analysis and ID Pollutant Trading Framework	March 2012
Create and Adopt Program Protocols and Program Implementation	August 2012
Pollutant Trading Program	November 30, 2012

~~Submit Draft Pollutant Trading Program~~	~~September 30, 2012~~
Submit Final Pollutant Trading Program	November 30, 2012

e. ~~*Canyon Lake Sediment Nutrient Treatment Plan*~~*TMDL Compliance Plan*: ~~No later than February 28, 2010~~Within 18 months ~~each MS4~~ LE/CL Permittees ~~identified in Table 13-1 of the DAMP~~ shall submit a ~~draft Canyon Lake Sediment Nutrient Treatment Plan.~~preliminary TMDL Compliance Plan and Schedule[16]. The Plan shall identify the schedule and phasing of studies, BMPs, decision points, effectiveness assessments and other actions necessary to implement the TMDL WLA. The Permittees may, as part of the Annual Report, evaluate and amend the plan based on new information. Upon approval of the Executive Officer, the plan shall be incorporated into the DAMP and appropriate LIPs. ~~appropriate treatment options to reduce internal nutrient loading from the sediment and contain a schedule of specific tasks to implement these treatment options~~. ~~The Plan shall also include a plan and schedule for the development of a monitoring plan to assess the effectiveness of the lake treatment options implemented~~

~~No later than May 31, 2010, each MS4 Permittee identified in Table 13-1 of the DAMP shall submit the final Canyon Lake Sediment Nutrient Treatment Plan.~~

f. Consistent with Section VI.D.2.e, ~~T~~the LE/CL Permittees shall annually evaluate their progress towards implementing applicable TMDL WLAs.~~compliance with the adopted TMDLs and TMDL Implementation Plan tasks. If necessary, the Permittees shall propose additional control measures necessary to achieve compliance with the Permittees' WLAs for total phosphorus and TIN~~.

g. ~~Prior to the TMDL compliance date and pending development and approval of a watershed model, pollutant trading plan and other implementation tasks identified above, the Permittees shall monitor and report the effectiveness of the control measures implemented in the watershed to control nutrient inputs into the lakes from Urban Runoff by implementing the following:~~

~~i. By December 31, 2010[17], the Permittees within the San Jacinto watershed shall identify representative urban storm water runoff monitoring locations for discharges into the lakes. Selection of those monitoring locations shall take into account the size of the drainage area and potential sources of nutrients within each drainage area. Those monitoring locations may include existing~~

[16] The Permittees may also submit a joint plan.
[17] ~~This due date coincides with the Implementation Plan submittal of the Phase II sampling plan and may be incorporated as part of that sampling plan.~~

storm water core monitoring locations and the Phase II watershed wide TMDL monitoring locations.

ii. In the third annual report due after adoption of this Order[18], include an evaluation of nutrient source reductions during the prior three years. This evaluation should indicate how the source reduction plans implemented by each Permittee are geared towards meeting the WLAs by the 2020 compliance date. Since the WLAs are based on a 10-year running average, data from storm water core monitoring locations may be used to project loading reductions.

iii. The source reduction plans shall at a minimum be based on actual or literature documentation of estimated effectiveness of BMPs to address identified or potential nutrient sources in the watershed. The plan should include proposed actions and schedules that each Permittee is proposing to implement within its jurisdiction to attain nutrient loading reductions.

iv. The source reduction plans should be reevaluated on a triennial basis[19]. Any needed revisions should consider the impact of projected population growth in the watershed.

v. If triennial nutrient source reduction goals are not met, the Permittees within the affected drainage areas shall comply with the following procedure:

1.) Each Permittee upstream of the representative urban monitoring location shall characterize discharges and identify significant nutrient sources from its significant Outfall locations.
2.) Each Permittee shall submit a report with proposed actions to the Executive Officer that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to further reduce nutrients that are causing or contributing to the failure to attain nutrient source reduction goals.
3.) The report may be incorporated in the annual report unless the Executive Officer directs a different submittal date.

vi.i. Water Quality Standards ~~Nutrient reductions~~ achieved by the ~~dischargers~~ LE/CL Permittees through implementation of in-lake or other control strategies, ~~rather than urban runoff source controls,~~ may be used to achieve compliance with the WLAs in lieu of urban runoff source controls.

vii.ii. The TMDLs explictly support the trading of pollutant allocations among sources to the extent that such allocation tradeoffs optimize point and non-

[18] This should coincide with the TMDL triennial review.
[19] This should coincide with the TMDL triennial review.

point source control strategies to achieve the numeric WLA targets in the most efficient manner.

~~viii.~~iii. If necessary, the LE/CL Permittees shall update Section 13 of the DAMP to incorporate appropriate tasks in compliance with the approved TMDL Implementation Plan studies and plans.

~~ix.~~iv. As Part of the Permittees' next ROWD (permit renewal application), the Permittees must evaluate their compliance with the approved TMDLs and propose any new or modified BMPs necessary to achieve compliance with the WLAs in the TMDLS by the dates specified in the TMDLs.

3. ~~3.~~ Compliance determination with the WLAs shall be based on implementation of BMPs as specified in the implementation plan for the approved TMDLs or based on plans developed as per the approved TMDLs. The LE/CL and/or MSAR 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 developed and approved as per the TMDLs.

4. It is expected that the TMDL WLA for the MSAR and LE/CL TMDLs will be assessed and revised during or after the term of this Permit. Current WLA were established based on limited and preliminary data and it is expected that ongoing studies will result in more appropriate TMDL WLAs. If the TMDL WLAs are amended within the term of this Order, the Order will be opened and revised to incorporate the TMDL WLA upon approval of the TMDL amendment by the Regional Board, State Board and USEPA.

B.

C.

~~B.~~D. COMMERCIAL FACILITIES

~~1.~~ Each Permittee shall continue to implement the CAP or equivalent, pursuant to Section 8 of the DAMP and Section XI.A.9 (complaints) of this Order; Section 8 shall be modified to clarify the types of facilities specifically addressed by the CAP. Within 18 months, the Co-Permittees shall also identify any facilities that transport, store or transfer pre-production plastic pellets within their jurisdiction and determine if these facilities warrant additional inspection to protect water quality. ~~The Permittees shall update the Santa Ana Specific Elements of Section 8 of the DAMP to include the following facility types not covered by the CAP inspection and the local POTW inspection programs:~~

~~1. Transport, storage or transfer of pre-production plastic pellets;~~

~~2. Marinas and boat repair, maintenance, fueling or cleaning;~~

~~3. masonry facilities;~~

~~4. Building materials retailers and storage facilities; and~~

~~5. The facilities listed under the Santa Margarita Region Specific Elements.~~

~~2.~~1. The Permittees shall continue to develop BMPs applicable for each of the Commercial Facilities described in Section 8 of the DAMP.

~~3.~~2. The Co-Permittees shall continue to prioritize Commercial Facilities within their jurisdiction as a high, medium, or low threat to water quality based on such factors as the type, magnitude, and location of the commercial activity, proximity and sensitivity of Receiving Waters, potential for discharge of pollutants to the MS4, Commerical Facilities that handle or generate pollutants for which the Receiving Water is Impaired, frequency of ~~CAP~~ inspections and facilities with a high potential for or history of unauthorized, Non-Storm Water discharges.

~~4.~~3. All high priority Commercial Facilities shall be inspected at least once per year; all medium priority Commercial Facilities shall be inspected at least every two years; and all low priority Commercial Facilities shall be inspected at least once during the term of this Order. At a minimum, each Commercial Facility shall be required to implement source control and pollution prevention BMPs consistent with the requirements of Section 8.4.1 of the DAMP. Co-Permittee CAP (or equivalent) follow-up inspections should include a review of BMPs implemented, their effectiveness and maintenance; written and photographic documentation of materials and waste handling and storage practices; evidence of past or present unauthorized, Non-Storm Water discharges; and an assessment of management/employees awareness of storm water pollution prevention measures.

~~5.~~4. In the event that inappropriate material or waste handling or storage practices are observed, or there is evidence of past or present unauthorized, non-storm water discharges, a written enforcement order shall be issued at the time of the initial inspection for CAP equivalent inspection programs or at the time of the CAP follow-up inspection, to bring the Commercial Facility into compliance.

~~6.~~5. Within 18 months of adoption of this Order, the Co-Permittee shall notify all mobile businesses based within their jurisdiction concerning the minimum Source Control and Pollution Prevention BMPs that they must develop and implement. For purposes of this Order, mobile businesses include: mobile auto washing/detailing; equipment washing/cleaning; carpet, drape, furniture cleaning; and mobile high pressure or steam cleaning activities that are based out of a Co-Permittee's jurisdiction. The mobile businesses shall be required to implement appropriate BMPs within 3 months of being notified by the Co-Permittees. The Co-Permittees shall also notify mobile businesses discovered operating within their jusrisdiction.

~~7.~~6. Within 24 months of adoption of this Order, the Co-Permittees shall develop an enforcement strategy to address mobile businesses.

8.7. The Co-Permittees should continue to maintain the CAP restaurant inspection program, or equivalent. Inspections for Commercial Facilities with restaurants shall, at a minimum, address:

a. Oil and grease disposal to verify that these wastes are not poured onto a parking lots, streets or adjacent catch basins;

b. Trash bin areas, to verify that these areas are clean, the bin lids are closed, the bins are not used for liquid waste disposal and wash water from the bins is not disposed of into the MS4;

c. Parking lot, alley, sidewalk and street areas to verify that floor mats, filters and garbage containers are not washed in those areas and that no wash water is disposed of in those areas;

d. Parking lot areas to verify that they are cleaned by sweeping, not by hosing down, and that the facility operator uses dry methods for spill cleanup; and,

e. Violations of the Storm Water Ordinance shall be enforced by the jurisdictional Co-Permittee.

IX.
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XI.

IX.XI. NEW DEVELOPMENT (INCLUDING SIGNIFICANT REDEVELOPMENT)

A. GENERAL REQUIREMENTS:

1. Each Co-Permittee, consistent with the DAMP, and requirements of this Order, when considering any map or permit for a New Development or Significant Redevelopment project for which discretionary approval is sought, must continue to require such map or permit to obtain coverage under the General Construction Permit, where applicable, prior to the issuance of grading or construction permits. Each Co-Permittee shall specify its verification procedure and any tools utilized for this purpose in its LIP.

2. Each Co-Permittee must continue to implement those BMPs identified in Section 7.1 of the DAMP. Each Permittee shall ensure that the erosion and sediment control plans it approves include appropriate erosion and sediment control BMPs (i.e., erosion measures for slopes greater than a certain length or hill-side developments, ingress/egress controls, perimeter controls, run-on diversion, if significant) such that a distinct and effective combination of BMPs consistent with site risk is implemented through all phases of construction.

3. The land use approval process of each Co-Permittee must continue to require post-construction BMPs, Source Control BMPs and Treatment Control BMPs and identify their locations and long-term maintenance responsibilities consistent with the requirements of this Order.

4. Each Permittee shall ensure, consistent with the MEP standard and within the limits of its legal authority, that runoff from New Development and Significant Redevelopment projects not regulated under this Order but that require encroachment permits for connections to the MS4 regulated under this Order are consistent with the requirements of this Order including the model WQMP for the Permit Area.

5. Each Permittee shall ensure that appropriate BMPs to reduce erosion and mitigate Hydromodification are included in the design for replacement of existing culverts or construction of new culverts and/or bridge crossings to the MEP[20].

6. Each Permittee shall ensure, consistent with the maximum extent practicable standard, that runoff from development projects it approves~~, or runoff from its MS4s~~ does not cause ~~erosion or~~ nuisance to ~~adjacent or~~adjoining downstream properties~~ and stream channels~~. ~~or allowed to flow onto private property unless appropriate easements and maintenance agreements have been approved~~.

7. Each Permittee shall require applicants to minimize the short and long-term adverse impacts on Receiving Water quality from New Development and Significant Redevelopment maps or permits where discretionary approval is sought, as required in Section XII.D below, by: (1) continuing to review, approve, and verify implementation of project-specific WQMPs, implementation of LID principles, where feasible; (2) addressing Hydrologic Conditions of Concern; and (3) ensuring that long term BMP operation and maintenance mechanisms are in place prior to project closure or issuance of certificates of occupancy.

8. The requirements of Section XII.D below shall apply to Permittee projects that meet the New Development and Significant Redevelopment criteria.

9. Each Permittee shall participate in the development of a Watershed Action Plan, described in Section XII.B, below, to integrate water quality, stream protection and storm water management and re-use within the Permit Area with land use planning policies, ordinances, and plans.

[20] This type of project may require a CWA Section 404 Permit

D. WATER QUALITY MANAGEMENT PLAN (WQMP) FOR URBAN RUNOFF (FOR NEW DEVELOPMENT/ SIGNIFICANT REDEVELOPMENT):

1. Each Permittee shall continue to require project-specific Water Quality Management Plans (WQMP) for those maps and permits described below for which discretionary approval is sought and as further described in Section 6 and Appendix O of the DAMP. Within 12 months of adoption of this Order, the Principal Permittee shall submit a revised WQMP to incorporate new elements required in this Order. The primary objective of the WQMP, by addressing Site Design, Source Control and Treatment Control BMPs applied on a regional, sub-regional or site specific basis, is to ensure that the land use approval process of each Co-Permittee will minimize Pollutant loads in Urban Runoff from maps or permits for which discretionary approval is given.
2. Each Co-Permittee shall ensure that an appropriate WQMP is prepared for the following categories of New Development and Significant Redevelopment projects for which a map or permit for discretionary approval is sought:

    a. *All significant re-development projects:* Significant re-development is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site. Significant Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of the facility, or emergency redevelopment activity required to protect public health and safety. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing developed site, and the existing development was not subject to WQMP requirements, the numeric sizing criteria discussed below applies only to the addition or replacement, and not to the entire developed site. Where redevelopment results in an increase of more than fifty percent of the impervious surfaces of a previously existing developed site, the numeric sizing criteria applies to the entire development.

    b. For purposes of this Order, the categories of development identified below, shall be collectively referred to as “New Development”

    c. *New developments that create 10,000 square feet or more of impervious surface (collectively over the entire project site) including* commercial and industrial projects and residential housing subdivisions requiring a Final Map. (i.e., detached single family home subdivisions, multi-family attached subdivisions, condominiums, apartments, etc.); mixed use and public projects (excluding Permittee road projects). This category includes development projects on

public and private land, which fall under the planning and building authority of the Co-Permittees.

d. Automotive repair shops (with SIC codes 5013, 5014, 5541, 7532-7534, 7536-7539).
e. Restaurants (with SIC code 5812) where the land area of development is 5,000 square feet or more.
f. Hillside developments disturbing 5,000 square feet or more which are located on areas with known erosive soil conditions or where the natural slope is twenty-five percent or more.
g. Developments of 2,500 square feet of impervious surface or more adjacent to (within 200 feet) or discharging directly into ESAs.
h. Parking lots of 5,000 square feet or more exposed to storm water. Parking lot is defined as land area or facility for the temporary parking or storage of motor vehicles.
i. ~~Street, roads, highways, and freeways[21] of 5,000 square feet or more of paved surface shall incorporate USEPA guidance, "Managing Wet Weather with Green Infrastructure: Green Streets" to the maximum extent practicable. This category includes any paved surface used for the transportation of automobiles, trucks, motorcycles, and other vehicles and excludes any routine road maintenance activities and widening projects where the footprint has not changed the grade and line is not changed. [22] Municipal road projects requirements are covered in Section F below.~~
j. Retail Gasoline Outlets (RGOs) that are either 5,000 sq feet or more with a projected average daily traffic of 100 or more vehicles per day.
k. Emergency public safety projects in any of the above-listed categories may be excluded if the delay caused due the requirement for a WQMP compromises public safety, public health and/or environmental protection.

3. WQMPs shall reflect consideration of the following goals, which may be addressed through on-site-and/or watershed-based BMPs:

~~a. The pollutants in post-development runoff shall be reduced using controls that utilize best available technology (BAT) and best conventional technology (BCT).~~

~~b.~~a. WQMPs shall include BMPs for the discharge of any urban sourced 303(d) listed Pollutant to an Impaired Waterbody on the 303(d) list such that the

[21] ~~Provide a waiver for high pollution potential areas such as gas stations, convenience stores, industrial sites with significant exposure of materials, equipment and processes.~~
[22] ~~Excludes public road projects. See Section F for requirements for municipal road projects.~~

discharge shall not cause or contribute to an exceedance of Receiving Water Quality Objectives.

4. Treatment Control BMPs. shall be in accordance with the approved WQMP and must be sized to comply with one of the following numeric sizing criteria:

   a. VOLUME - Volume–based Treatment Control BMPs shall be designed to infiltrate, filter, or treat either:

      i. The volume of runoff produced from a 24-hour, 85th percentile storm event, as determined from the County of Riverside's 85th Percentile Precipitation Isopluvial Map; or,

      ii. The volume of annual runoff produced by the 85th percentile, 24-hour rainfall event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998); or,

      iii. The volume of annual runoff based on unit basin storage volume, to achieve 80% or more volume treatment by the method recommended in California Storm water Best Management Practices Handbook – Industrial/Commercial (1993); or,

      iv. The volume of runoff, as determined from the local historical rainfall record, that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile, 24-hour runoff event;

      OR

   b. FLOW - Flow-based BMPs shall be designed to infiltrate, filter, or treat either:

      i. The maximum flow rate of runoff produced from a rainfall intensity of 0.2 inch of rainfall per hour; or,

      ii. The maximum flow rate of runoff produced by the 85th percentile hourly rainfall intensity, as determined from the local historical rainfall record, multiplied by a factor of two; or,

      iii. The maximum flow rate of runoff, as determined from the local historical rainfall record that achieves approximately the same reduction in pollutant loads and flows as achieved by mitigation of the 85th percentile hourly rainfall intensity multiplied by a factor of two.

5. Within 24 months of adoption of this Order, the Principal Permittee shall develop a procedure for streamlining regulatory agency approval of regional Treatment Control BMPs. The recommendations should include information needed to be submitted to Regional Board for consideration of regional Treatment Control BMPs.

At a minimum, it 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.

6. The Permitees shall continue to require other development projects for which a map or permit for discretionary approval is sought (projects that are not New Developments or Significant Developments required to develop project-specific WQMPs) to incorporate conditions of approval, to require appropriate Site Design, Source Control and any other BMPs which may or may not include Treatment Control BMPs.
7. The Permittees shall ensure that the revised WQMP addresses:
    a. A review and update of Source Control BMPs required for New Development and Significant Redevelopment.
    b. Update of the list of Treatment Control BMPs, including an evaluation of their effectiveness based on national, statewide or regional studies.
8. Groundwater Protection:

    Treatment Control BMPs utilizing infiltration [exclusive of incidental infiltration and BMPs not designed to primarily function as infiltration devices (such as grassy swales, detention basins, vegetated buffer strips, constructed wetlands, etc.)] must comply with the following minimum requirements to protect groundwater:

    a. Use of structural infiltration treatment BMPs shall not cause or contribute to an exceedance of groundwater Water Quality Objectives.

    b. Use of structural infiltration treatment BMPs shall not cause a nuisance or pollution as defined in Water Code Section 13050.

    c. Use of structural infiltration treatment BMPs shall not be used in areas of known soil or groundwater contamination[23], without written authorization from the Regional Board Executive Officer.

    d. Located at least 100 feet horizontally from any water supply well.

    e. The vertical distance from the bottom of any infiltration structural treatment BMP to the historic high groundwater mark shall be at least 10 feet. Where the

[23] Extra diligence should also be performed when proposing infiltration BMPs in areas where the proposed land use is often associated with soil and groundwater contamination,

groundwater basins do not support beneficial uses, this vertical distance criteria may be reduced, provided groundwater quality is maintained.

f. Source control and pollution prevention control BMPs shall be implemented to protect groundwater quality.

g. Adequate pretreatment of runoff prior to infiltration shall be required in gas stations and large commercial parking lots.

h. Unless adequate pre-treatment of runoff is provided prior to infiltration, structural infiltration treatment BMPs must not be used for areas of industrial or light industrial activity, such as: areas subject to high vehicular traffic (25,000 or more daily traffic), car washes; nurseries; or any other high threat to water quality land uses or activities[24].

i. Class V injection wells or dry wells must not be placed in areas subject to vehicular[25] repair or maintenance activities[26], such as an auto body repair shop, automotive repair shop, new and used car dealership, specialty repair shop (e.g., transmission and muffler repair shop), or any facility that does any vehicular repair work.

E.
~~E.~~F. ~~Municipal~~ Road Projects

Within 24 months of adoption of this Order, the ~~Principal Permittee, in cooperation with~~ the Co-Permittees, shall develop standard design and post-development BMP guidance to be incorporated into projects for ~~public~~ streets, roads, highways, and freeway improvements,under the jurisdiction of the Co-Permittees to reduce the discharge of pollutants from the projects to the MEP. The draft guidance shall be submitted to the Executive Officer for review and approval and shall meet the performance standards for site design/LID BMPs, source control and treatment control BMPs as well as the HCOC criteria. The guidance and BMPs shall address ~~any paved surfaces~~streets, roads or highways under the jurisdiction of the Co-Permittees used for transportation of automobiles, trucks, motorcycles, and other vehicles, and excludes routine road maintenance activities where the surface footprint is not increased. The guidance shall incorporate principles contained in the USEPA guidance, "Managing

[24] Unless a site assessment pursuant to criteria developed in Section XI.F.1 shows that site operations do not pose a threat to ground water.
[25] Vehicles include automobiles; motor vehicles include trucks, trains, boats, motor cycles, farm machineries, airplanes, and recreation vehicles such as snow mobiles, all terrain vehicles, and jet skis.
[26] United States Environmental Protection Agency, Office of Water, EPA 816-R-00-008, September 2000 *State Implementation Guidance - Revisions to the UIC Regulations for Class V Injection Wells and* "Class V Rule" (*Revisions to the Underground Injection Control Regulations for Class V Injection Wells*, 64 FR 68546) *indicate that these activities are prohibited from Class V injection wells.*

Wet Weather with Green Infrastructure: Green Streets" to the maximum extent practicable and at a minimum shall include the following:

1. Guidance specific to new road projects;
2. Guidance specific to projects for existing roads;
3. Size or impervious area criteria that trigger project coverage;
4. Preference for green infrastructure approaches wherever feasible;
5. Criteria for design and BMP feasibility analyses on a project –specific basis.

ATTACHMENT 5

5. Hydrologic Condition of Concern (HCOC):

   a. 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 Redevelopment projects do not pose a hydrologic condition of concern due to increased runoff volumes and velocities.

   b. A New Development and Significant Redevelopment project does not cause a Hydrologic Condition of Concern if any one of the following conditions is met:

      i) The project disturbs less than one acre and is not part of a common plan of development.

      ii) The volume, ~~duration,~~ and time of concentration[1], of storm water runoff for the post-development condition is not significantly different from pre-development condition for a 2~~- and 10~~-year return frequency storms (a difference of 5% or less is considered insignificant) ~~for flow rates greater than 10% of the 2 year event~~. This may be achieved through Site Design and Treatment Control BMPs.

      ~~If the project site infiltrates, harvests and re-uses or evapotranspires at least the design capture volume.~~

      iii) All downstream conveyance channels to an adequate sump (e.g. Prado Dam, Lake Elsinore, Canyon Lake, Santa Ana River or other lake, reservoir or natural resistant feature) that will receive runoff from the project are engineered and regularly maintained to ensure design flow capacity, and no sensitive stream habitat areas will be affected; or not identified in the Permittees hydromodification sensitivity maps required in Section XII.B.3.., and no sensitive stream habitat areas will be affected.

      iv) ~~If there is no discharge from the project site to receiving waters under the 2- and 10-year storm event.~~The Permittees may request a variance from these criteria based on studies conducted by the Southern California Stormwater Monitoring Coalition, Southern California Coastal Watershed Research Project, CASQA, or other regional studies. Requests for consideration of any variances should be submitted to the Executive Officer.

   c. If a hydrologic condition of concern exists, the WQMP shall include an evaluation of whether the project will adversely impact downstream erosion, sedimentation or stream habitat. This evaluation should include consideration of pre- and post-development hydrograph volumes, time of concentration and peak discharge velocities for a 2-~~and 10-~~year storm event, construction of sediment budgets, and a sediment transport analysis., If the evaluation

[1] Time of concentration is defined as the time after the beginning of rainfall when all portions of the drainage basin are contributing simultaneously to flow at the outlet.

determines adverse impacts are likely to occur, the project proponent shall implement additional Site Design BMPs, on-site BMPs, Treatment Control BMPs and/or in-stream BMPs[2] to mitigate the impacts. The project proponent should first consider Site Design BMPs and on-site BMPs prior to proposing in-stream BMPs; in-stream BMPs must not adversely impact Beneficial Uses or result in sustained degradation of Receiving Water quality.and shall require all necessary regulatory approvals[3].:

d. Hydrologic conditions of concern are considered mitigated if they meet one of the following conditions:

   i. Require additional onsite or offsite mitigation to address potential erosion or habitat impact using LID BPs

   ii. BMPs address sensitivity of the Receiving Waters in proximity to the project site to changes in storm water discharge, flow rates, velocities, durations, time of concentration and volumes.

   iii. The project is developed consistent with an approved Watershed Action Plan that addresses hydrologic conditions of concern for the downstream Receiving Waters.

   iv. Mimicking the pre-development hydrograph with the post-development hydrograph, for a 2-~~year and 10~~ year return frequency storm. Generally, the hydrologic conditions of concern are not significant, if the post-development hydrograph is no more than ~~5~~10% greater than pre-development hydrograph. In cases where excess volume cannot be infiltrated or captured and reused, discharge from the site must be limited to a flow rate no greater than 1100~~50~~% of the pre-development 2~~- and 10~~-year peak flow.

e. If site conditions do not permit items i, through iv, above, the alternatives and in-lieu programs discussed under Section XII.G, below, may be considered.

[2] In-stream measures involve modifying the receiving stream channel slope and geometry so that the stream can convey the new flow regime without increasing the potential for erosion and aggradation. In-stream measures are intended to improve long-term channel stability and prevent erosion by reducing the erosive forces imposed on the channel boundary.

[3] In-stream control projects require a Stream Alteration Agreement from the California Department of Fish & Game, a CWA section 404 permit from the U.S. Army Corps of Engineers, and a section 401 certification from the Water Board. Early discussions with these agencies on the acceptability of an in-stream modification are necessary to avoid project delays or redesign.

ATTACHMENT 6

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE RIVERSIDE COUNTY MUNICIPAL STORMWATER PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES

ORDER No. R8-2009-0033 (NPDES No. CAS618033)

MARK ONLY ONE ITEM 1. ☐ New Construction/Reconstruction ~~☐ 2. Reconstruction~~ ~~3~~2. Change of Information for WDID#

I. OWNER

Name	Contact Person		
Mailing Address	Title		
City	State CA	Zip	Phone ( ) – Fax ( ) – Email :

II. ~~-~~CONTRACTOR INFORMATION

Name	Contact Person		
Local Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email:

III. ~~-~~SITE INFORMATION

A. Project Title	Site Address		
City/Unincorporated Area	State CA	Zip	Contact Person Phone ( ) –
B. Construction commencement date: (Month / Day / Year)	C. Projected construction completion date: (Month / Day / Year)		

D. Type of Work: ☐ Utility ☐ Flood Control ☐ Transportation ☐ Other (Specify)

Description of Work: _____

E. ~~——~~Total size of project/construction site: ____ Acres

~~E.~~ Total size of area to be ~~construction~~disturbed ~~site~~: ____ Acres.

~~_____ Acres~~

IV. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (~~C~~check all that apply):

1. ☐ Indirectly to ~~w~~Waters of the U.S.
2. ☐ MS4 Facility~~Storm drain system~~ - Enter owner's name: _____
3. ☐ Directly to ~~w~~Waters of U.S. (e.g. , river, lake, creek, stream, or to a pipe/channel that flows without inflow from other sources between site and water body ~~bay, ocean,~~ etc.)

V. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (mark one)

☐ A SWPPP has been prepared for this project~~facility~~ and is available for review

☐ A SWPPP will be prepared and ready for review by (date): ___/___/___

B. Date WQMP approved by MS4 Permittee~~local agency~~: ___/___/___ Not Applicable.

C. MONITORING PROGRAM ~~-~~(MP) (mark one)

☐ A MP has been prepared for this facility and is available for review

☐ A MP will be prepared and ready for review by (date): ___/___/___

VI. CERTIFICATIONS

"I certify under penalty of law that this document and all attachments were prepared under my direction and 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 or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted 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 or imprisonment. In addition, I certify that ~~the Provisions No. 15-20 of~~ Order No. R8-~~96-30~~2009-0033; (specifically Sections XII.F., XIV, XVI, and XX), including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: _____ **Title:** _____

Signature: _____	**Date:**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD – SANTA ANA REGION

NOTICE OF TERMINATION

OF COVERAGE UNDER THE RIVERSIDE COUNTY MUNICIPAL STORMWATER PERMIT
FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

ORDER No. R8-2009-0033 (NPDES No. CAS618033)

I. ~~I.~~ WDID No. _____

~~I~~II. OWNER

Name	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone ( ) – Fax ( ) – Email:

II. SITE INFORMATION

A. Original Project Title	Site Address		
City/Un-incorporated Area	State CA	Zip	Site Contact Person
B. Contractor Name	Phone ( ) – Fax ( ) – Email:		Title
Local Mailing Address	City	State	Zip
Qualified SWPPP Practitioner	Phone ( ) – Fax ( ) – Email:		

~~A. Original Project Title &/ WDID assigned by Regional Board.~~	~~Site Address~~		
~~City/Unincorporated Area~~	~~State~~ **~~CA~~**	~~Zip~~	~~Phone ( ) –~~
~~B. Contractor Name~~	~~Contact Person~~		
~~Local Mailing Address~~	~~Title~~		
~~City~~	~~State~~	~~Zip~~	~~Phone ( ) –~~ ~~Fax ( ) –~~ ~~Email:~~

I~~V~~I. BASIS OF TERMINATION

__ 1. The construction project is completed and the following conditions have been met.
- ☐ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ☐ Construction materials and waste have been disposed of properly.
- ☐ The site is in compliance with all local storm water management requirements.
- ☐ A post-construction storm water operation and management plan is in place (Attach a description of the post construction BMPs, the location (Latitude /Longitude), and a map of the locations of the ~~P~~post ~~C~~construction BMPs).
- ☐ Date ~~F~~field ~~V~~verification ~~I~~inspection performed and include a copy of the field verification report . ___/___/___

__ 2. Construction activities have been suspended; either temporarily ____ or indefinitely ___ and the following conditions have been met.
- ☐ All elements of the Storm Water Pollution Prevention Plan have been completed.
- ☐ Construction materials and waste have been disposed of properly.
- ☐ ~~An effective combination of erosion and sediment control is in place for all denuded areas and other areas of potential erosion.~~ The site is permanently stabilized (greater than 3 years without maintenance).
- ☐ The site is in compliance with all local storm water management requirements.

Date of suspension ____ / ____ / ____ Expected start up date ____ / ____ / ____

IV. CERTIFICATION

I certify under penalty of law that all storm water discharges associated with construction activity from the identified site that are authorized by NPDES General Permit No. CAS000002 have been eliminated or that I am no longer the owner of the site. I understand that by submitting this Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under the General Permit, and that discharging pollutants in storm water associated with construction activity to ~~w~~Waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this Notice of Termination does not release an owner of liability for any violation of the General Permit or the Clean Water Act.

Printed Name: _____ **Title:** _____

Signature: _____ **Date:** _____

ATTACHMENT 7

TMDLs and WQBELs

The MS4 Permittees believe that the approach of implementing the TMDLs with narrative water quality based effluent limitations (WQBELs) based on the TMDL Implementation Plan and iterative best management practices (BMPs) designed to attain the WLAs is consistent with the TMDL. This is an approach that would achieve the goal of ensuring that the Order contains enforceable benchmarks for the attainment of the WLAs. Use of this approach is also critical as the WLAs for MSAR and LE/CL TMDLs are preliminary and expected to be revised based on additional data, modeling and regulatory actions. Further, the LE/CL TMDL WLA is subject to land use changes, and as such is explicitly variable. Over time, the Urban WLA is expected to increase as agricultural, CAFO and Open Space WLA decrease. Incorporating the WLA as numeric effluent limits would place increasingly stringent requirements on the MS4 Permittees unless annual updates to the TMDL and this Permit were conducted.

1) However, the numeric approach incorporated into the Tentative Order is not required. The Regional Board has the authority to incorporate narrative WQBELs expressed through implementation of BMPs consistent with the TMDL Implementation Plan. Such an approach is consistent with the State Water Resources Control Board's statement in Order No. 2009-0008, that the implementation of TMDLs in stormwater permits not be merely an "academic exercise." Such an approach also is consistent with federal law and regulation. *See* 40 C.F.R. § 122,44(k), which provides that BMPs may be used "to control or abate the discharge of pollutants when: . . . (2) authorized under section 404(p) [of the Clean Water Act] for the control of storm water discharges; (3) numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purpose and intent of the [Clean Water Act]." *See also Communities for a Better Environment v. State Water Resources Control Board* (2003) 109 Cal.App.4th 1089, 1104-05. Further, the narrative WQBEL approach was the course followed by the San Francisco Bay Regional Board in its recent incorporation of a TMDL for Mercury in the MS4 Permit for the San Francisco Bay Region, Order No. R2-2009-0074, adopted five weeks ago (October 14, 2009). Order R2-2009-0074 is explicitly consistent with our request and was not challenged or remanded by US EPA staff.

Expressing the WQBELs in the context of BMP implementation is consistent with the goal of ensuring that the work of the task forces assessing Beneficial Uses and TMDL implementation in Riverside County, including the Storm Water Quality Standards Task Force and the LE/CL TMDL Task Force and the MSAR TMDL Task Force, can be utilized. In particular, the employment of WQBELs measured via BMP implementation would allow the Regional Board the flexibility to address the Beneficial Uses in the Middle Santa Ana River and to ensure that the appropriate bacterial criterion is employed. Moreover, such an approach would allow the Permittees the flexibility to address, in addition to nutrient loading into Lake Elsinore and Canyon Lake, the potential achievement of the Beneficial Uses impacted by nutrients through implementation of BMPs within the lakes themselves.

Flexibility is particularly important in these times of economic distress to the Riverside County MS4 Permittees which have been particularly and severely affected by the downturn in housing prices, construction activity, and employment, all of which have contributed to the loss of tax revenues. Notwithstanding such economic distress, the Permittees remain committed to improving Urban Runoff quality and protecting Beneficial Uses in the Receiving Waters. By expressing the WQBELs measured via BMP implementation, consistent with achievement of the ultimate TMDL WLAs, the

Order would provide the needed flexibility to the MS4 Permittees, who might otherwise be required to focus monitoring and implementation away from the approaches being developed by the Task Forces or who might, through application of anti-backsliding provisions, be locked into WLAs that will be revised in light of the best science and emerging technologies. Such a diversion would result in a waste of resources already invested in the work of the Task Forces by not only the Permittees, but also by the Regional Board.

Unfortunately, it appears that the Tentative Order goes only part way to providing for flexibility through support of the task force approach, by mandating numeric WLAs and compliance dates and then indicating that compliance may be achieved through the implementation of BMPs. This leaves the MS4 Permittees in the position of both having to adopt the available, but potentially ineffective BMPs and then still being in violation of the Permit if the preliminary WLAs are not achieved. As we set forth below, the apparent adoption of numeric effluent limitations by the incorporation of the numeric WLAs in the MSAR and LE/CL TMDLs is in fact infeasible for a number of reasons.

In addition to the issues raised in the Permittees' previous comment letters and in the October 20, 2009 letter from the Hunton & Williams law firm regarding the proposed San Bernardino County NPDES MS4 Permit, the following additional and specific issues need to be brought to the Board's attention:

1) The WLAs have been inappropriately incorporated into the Order, in violation of the LE/CL TMDL. The entire Urban WLA has been incorporated into both the Tentative Order for the March Air Reserve Base (MARB) Industrial Stormwater Permit as well as the Tentative Order for the Riverside County MS4 Permit. In so doing, staff has not properly determined the proportion of WLAs that should be established under each permit, nor have WLAs been established for individual Permittees. As each permit has been assigned the full Urban WLA, the Board has effectively exceeded the allowable loads established for the lakes. Further, there is not sufficient information at this time to divide the WLA into discharger-specific quantities. Thus, incorporation of the WLAs into the Order at this time is improper, as the WLAs do not represent the actual allocations that will be established under the TMDLs. Until the Regional Board has sufficient data to support discharger-specific distribution of the WLA, and the WLA have been reviewed and updated consistent with the intent of the Phased TMDL approach, it would be inappropriate to incorporate WLA as potentially enforceable numeric effluent limits in the Tentative Order or in the MARB permit.

2) The record of the adoption of both the MSAR and LE/CL TMDLs establishes that the present WLAs are not feasible. There is substantial evidence in the record of both TMDLs indicating that the WLAs established at the time of TMDL adoption were preliminary in nature and not achievable as written. We note the following examples from the records of both TMDLs:

    a. District's October 13, 2004 Comment Letter on the LE/CL TMDL:

        "During the June workshop, several issues were raised by District and other stakeholders regarding the feasibility of the TMDL. As you [Gerard Thibeault] noted at the close of the workshop, the Regional Board is effectively being required to implement legal requirements without practical solutions. In recognition of this, however, Regional Board staff has made efforts to provide flexibility to the TMDL by incorporating adaptive management concepts. The adaptive management concepts are premised on allowing the science upon which the TMDL is based to continue to develop, then allowing for review and modification of the TMDL based on the improved science at specified future dates."

b. RWQCB Peer review comments regarding the LE/CL TMDL (Robert Gearheart, Ph.D., P.E., Professor of Environmental Engineering Humboldt State University, October 10, 2004):

> "While it appears to me, given the watershed condition, the climate, the land use activities, and the historical limnological conditions in the lake that there would a strong possibility that the requisite P and N loading to reduce eutrophic conditions in the lake would not be possible. This is an example where the TMDL has no real application in terms of a likely outcome that removes the impaired water body status. Based upon the increasing pressure of development in eastern Riverside County and the internal loads in the lake system it is probably non-reversible (Anderson 2002 and 2003)."
>
> "From this reviewers' observation the methods and data sets used in these reports are representative of accepted scientific and engineering procedures and protocols. The report supports the conclusions and recommendations with the exception of the role of P fixation in the sediment via precipitation/adsorption processes. The only caveat is that there is no analysis of BMP's to meet these loads in terms of effectiveness, reliability, level of participation, and special and temporal application. I would tend to be very pessimistic in terms of being able to reverse the impaired nature of these water bodies in both the interim (2015) and final (2020) time frame."

c. RWQCB Peer review comments regarding the LE/CL TMDL (Michael Josselyn, Ph.D., PWS, Professor Emeritus of Biology, San Francisco State University, July 29, 2004):

> "The proposed targets rely heavily on controls for internal nutrient cycling for Lake Elsinore which may not be achievable for practical and methodological reasons. The staff needs to demonstrate such technologies as suggested could actually work in this system. Otherwise further reductions in external loadings may be required, though they are relatively insignificant compared to internal sources. In addition, other options for controls on release of water from Canyon Lake in wet years should be explored such as wetland treatment ponds (Page 05/07)."
>
> "The staff made conservative assumptions throughout their analysis and therefore incorporated the margin of safety within these assumptions. As stated above, the role of internal nutrient cycling is significant for both lakes and external loading is a seasonal event. The proposed reduction will require a substantial undertaking in controlling external sources and implementing promising, but not yet locally demonstrated technologies to remove very large sources of nutrients. (Page 06/07)."
>
> "The most important (studies that are necessary or recommended to fill in the data gaps and fine tune the TMDL) will be calibration of the LSPC model with actual conditions during wet years. The model, while a very useful tool, has not been specifically developed to deal with the climatic situation in the arid west and is not specific to the soil conditions of this watershed. Staff propose to continue to collect data and to adjust the standards as the data becomes available."

d. The following table, developed by the Permittees and incorporated into the LE/CL TMDL staff report by Regional Board staff (See LE/CL TMDL Resolution R8-2004-0037, December 20, 2004 TMDL Workshop Documents, Attachment 2, Response to Comment 21), indicates the fantastic and infeasible costs associated with watershed-based controls for TMDL compliance. As noted in the table, costs would exceed several billion dollars, depending on the combination of BMPs implemented in the watershed. Such an effort would in no sense represent adherence to the MEP standard applicable to the Order. There are approximately 600,000 people living in the San Jacinto watershed. Presuming an implementation cost of $10 billion, the cost per resident to comply with this TMDL alone would be $16,666. Presuming a typical household typically includes a family of four, the total cost is $66,666, or approximately 50% of the cost of the median home in Riverside County.

BMP	EPA, 2003 $s (per ft^3 treated)	Cost, 2003 $s ($V_{wet}$ = 6 Billion ft^3)
Constructed Wetland	$0.60 - $1.13	$ 3.6 B – $ 6.78 B
Infiltration Trench	$4.00	$ 24 B
Infiltration Basin	$1.18	$ 7.08 B
Sand Filter	$2.72 - $5.96	$ 16.3 B – $ 35.7 B
Bioretention	$4.79	$ 28.7 B
Retention & Detention Basin	$0.45 - $0.90	$ 2.7 B – $ 5.4 B
Grass Swale	$0.45	$ 2.7 B
Filter Strip	$0.00 - $1.18	$0 – $ 7.1 B

e. The MSAR TMDL was adopted with explicit recognition that the TMDL would be amended upon the collection of additional data and completion of a parallel REC Water Quality Standards Basin Plan amendment process being conducted by the Storm Water Quality Standards Task Force, as noted in Finding 15 of Resolution R8-2005-0001:

> "Stakeholders throughout the Santa Ana Region have formed the Storm Water Quality Standards Task Force (SWQSTF) to evaluate USEPA's bacterial indicator recommendations and appropriate recreational beneficial use designations for waterbodies throughout the Region. The SWQSTF is expected to make recommendations for the adoption of alternative bacterial quality indicators such as *E.coli,* based on USEPA's "Ambient Water Quality Criteria for Bacteria - 1986". These and other recommendations of the SWQSTF for revisions to recreational beneficial use designations will be considered through the Basin Planning process. When and if the Basin Plan is amended to incorporate new bacterial indicators, these TMDLs will be revised as appropriate."

The REC Use revisions proposed by the Storm Water Quality Standards Task Force include:

1) Wet weather REC Water Quality Standard exemption;
2) Conversion of REC 1 Water Quality Objectives for pathogen indicators from fecal coliform to *E. Coli;*
3) Revision of REC 2 Water Quality Standards from the current independent numeric standard to a water-body specific anti-degradation based standard;

4) Elimination of the need for the explicit 10% margin of safety currently incorporated into the MSAR TMDL WLA;
5) Revision of the REC Water Quality Objectives to be based on controllable sources of pathogen indicators, as opposed to the current REC WQS, which do not differentiate between controllable and non-controllable sources of pathogen indicator bacteria; and
6) Use Attainability Analyses and revisions of several MS4 systems to allow for appropriate designation of MS4 systems as REC 2 or Non-REC (REC X) as appropriate. These re-designations would allow for regional treatment solutions.

These revisions would basically eliminate the need for the wet weather WLAs and be a necessary precursor to making TMDL implementation feasible. This was also recognized in the Regional Board's Finding 17:

> "The Regional Board has considered the costs associated with implementation of this amendment, as well as costs resulting from failure to implement bacteria control measures necessary to prevent adverse effects on beneficial uses. The implementation plan in the TMDLs/Basin Plan amendment, *which includes extended compliance schedules and employs a phased TMDL approach to provide for refinement based on additional studies and analyses*, will ensure that implementation expenditures are reasonable and fairly apportioned among responsible parties."
>
> (emphasis added).

The TMDL Basin Plan Amendment also supports an iterative approach to BMP Implementation (Section E, pg. 5 of 15):

> "Implementation is expected to result in compliance with the water quality objectives/numeric targets for fecal coliform and with the numeric targets for *E. coli*. The intent is to ensure protection of the REC1 beneficial uses of Middle Santa Ana River Watershed waterbodies. *Collection of additional monitoring data is critical to developing long-term solutions for bacterial indicator control, as well as to consider whether changes to the TMDL are appropriate.* With that in mind, the requirements for submittal of plans and schedules to implement the TMDLs take into consideration the need to develop and implement effective short-term solutions, as well as allow for the development of long-term solutions once additional data have been generated."
>
> (emphasis added).

Task 6 of the MSAR TMDL Implementation Plan also contemplates an iterative and adaptive approach to TMDL Management (See Task 6, Page 14 of 15):

> "The basis for the TMDLs and implementation schedule will be re-evaluated at least once every three years[1] to determine the need for modifying the load and WLAs, numeric targets and TMDLs. Regional Board staff will continue to review all data and information generated pursuant to the TMDL requirements on an ongoing basis. *Based on results generated through the monitoring*

[1] The three-year schedule will coincide with the Regional Board's triennial review schedule.

programs, special studies, modeling analysis, efforts of the Storm Water Quality Standards Task Force5[2] *and/or special studies by one or more responsible parties, changes to the TMDLs, including revisions to the numeric targets, WLAs and LAs, may be warranted.* Such changes would be considered through the Basin Plan Amendment process.

The Regional Board is committed to the review of this TMDL every three years, or more frequently if warranted by the results of monitoring and/or other relevant studies"

(emphasis added)

The February 3, 2005 MSAR TMDL Staff Report (Section 2.6, Page 46-47; Section 4, Page 55; Section 6, Page 79; Section 7.3, Page 81-82) also clearly indicates recognition of the Storm Water Quality Standards Task Force activities on the TMDL, the need to phase the TMDL to collect additional data, and the intent of the Regional Board to amend the TMDL based on the actions of the Storm Water Quality Standards Task Force and receipt of other data findings.

Further, the Regional Board's July 2005 and August 2005 response to comments regarding the MSAR TMDL clearly indicate the intent to implement a phased TMDL and the intent to revise the TMDL consistent with Basin Plan Amendments expected as a result of the work of the Storm Water Quality Standards Task Force (see particularly response to Comment 7 and Comment 11, Attachment B, June 24, 2005 Staff Report). The Regional Board was clearly depending on the work of the Storm Water Quality Standards Task Force to ensure the feasibility of the TMDL. However, the work of the Storm Water Quality Standards Task Force was expected to be completed several years ago. Due to the political, technical and legal complexities of the issue, the Storm Water Quality Standard Task Force recommendations have not yet been proposed to the Regional Board. Although these recommendations are now "fast-tracked" for adoption in 2010, there is still no guarantee that the Storm Water Quality Standards Task Force Basin Plan Amendment, followed by a separate Basin Plan Amendment for the MSAR TMDL, will be considered by the Board prior to the 2015 dry weather WLA deadline. As the Regional Board and staff always presumed these steps would precede the implementation date for the WLA, no analysis was completed to determine if the TMDL was feasible as written. See the responses to Comments 11 and 61 (challenging the feasibility of the existing TMDL):

"Board staff does not believe that the District has demonstrated that compliance with the TMDL is infeasible for either technological or economic reasons. *Again, the District's comments do not reflect the phased nature of the proposed TMDLs, or the extended compliance schedules that will allow the work of the SWQSTF to be completed and the TMDLs to be revised appropriately.*"

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[2] Stakeholders formed the Storm Water Quality Standards Task Force (Task Force) in 2002 to support review and update of the bacterial quality objectives for REC1 waters and to review the REC1 designations themselves to assure their accuracy. Participants include representatives from the Santa Ana Watershed Project Authority, (SAWPA) flood control agencies from the 3 counties within the Santa Ana Region, POTW dischargers and stormwater staff from various municipalities in the watershed. Environmental groups, Regional Board staff and USEPA staff are also participants. SAWPA staff serve as facilitators for the Task Force.

"*Board staff notes that an intensive economic analysis is premature until more information regarding bacteria indicator sources and BMPs is gathered.* Board staff believes that the proposed TMDL implementation approach is consistent with the comment".

(emphasis added).

Further, other stakeholder concerns regarding viable paths to compliance with the existing TMDL, addressing natural and uncontrollable source of bacteria, regrowth, and other issues were largely deflected by Regional Board staff, who indicated in comment responses that these issues would be addressed as additional was collected and evaluated with the intent of making future modifications to the TMDL. (See [example]).

As noted in our October 8, 2009 comments, the Regional Board has significant discretion regarding how to incorporate TMDL WLAs into NPDES MS4 Permits. Federal regulations do not require WLAs to be incorporated as numeric effluent limits, as was discussed above. In fact, US EPA guidance indicates that it is only in rare cases that it would be appropriate or feasible to incorporate numeric effluent limits into NPDES MS4 Permits and that TMDL WLAs can be expressed in the form of BMPs. (See "Establishing Total Maximum Daily Load WLAs for Storm Water Sources and NPDES Permit Requirements Based on those Waste Load Allocations," EPA Office of Water, November 22, 2002). Despite the suggestion of US EPA Region IX in its October 8, 2009 letter to staff that this guidance document was outdated, it has been expressly incorporated into the draft "TMDLs to Stormwater Permits Handbook" released by the US EPA Office of Water on November 17, 2008. And, as further noted above, in October the San Francisco Bay Regional Board incorporated TMDLs into an NPDES MS4 Permit as BMPs, as recommended by the November 22, 2002 US EPA Memo. As also discussed in the Permittees' October 8, 2009 comment letter, incorporation of the TMDLs as enforceable iterative BMP requirements would be consistent with the recommendations of the 2006 State Board Blue Ribbon panel charged with examining the feasibility of numeric effluent limits in stormwater permits. US EPA has even drafted permits as recently as 2008 that are consistent with this guidance[3].

Incorporating Numeric Effluent Limits into the draft Order would effectively be an act of state discretion in excess of federal requirements. As such, the Regional Board would be obligated to consider the factors set forth in California Water Code Section 13241. *City of Burbank v. State Water Resources Control Board* (2005), 35 Cal. 4th 613. Because the TMDLs were based on preliminary data with explicit recognition that they would be revised, the WLAs cannot be broken down into discharger specific WLAs, and the true economic costs of complying with the current WLAs were never calculated or assessed; any reasonable person could presume that the existing TMDL WLA are infeasible. Finally, the WLA for the LE/CL TMDL is dependent on land use distribution. As land use changes, so will the allocation of load between TMDL dischargers. This will require constant update of the TMDL and this Permit if the TMDL WLA is incorporated as numeric effluent limits. It is therefore inappropriate to establish numeric effluent limits based on the existing LE/CL or MSAR TMDL WLA and we therefore support the Regional Board's position to incorporate the Water Quality Based Effluent limits based on a BMP based approach to WLA compliance.

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[3] See City of Worchester Authorization to Discharge Under the National Pollutant Discharge Elimination System Draft NPDES Permit No. MAS010002, Section I.C

ATTACHMENT 8

WQBEL Policy Issues

TMDL WLAs for urban runoff have been adopted for Permittee discharges to Canyon Lake, Lake Elsinore and the Middle Santa Ana River. Although the Permittees support efforts to restore the beneficial uses of these important waterbodies, the Tentative Order is vague and ambiguous as to whether the TMDL WLAs are incorporated as water quality based effluent limits (WQBELs) based on narrative BMP approach, numeric effluent limits, or both. Some commenters may (and have) interpreted them to require compliance with numeric effluent limitations. As such, our technical staff and legal counsel have determined that compliance with the draft Tentative Order is technically and economically infeasible and exposes the Permittees to significant compliance costs and enforcement penalties. Once established, these numeric effluent limit requirements are potentially irreversible. Without clarification that the Tentative Order requires narrative WQBELs consistent with iterative implementation of best management practices to the maximum extent practicable, and not compliance with numeric effluent limitations, the Permittees cannot support adoption of the Tentative Order.

The alternative language included in Attachment 4 to this letter addresses the WLA issue in a manner that is feasible, would avoid unnecessary and potentially severe fiscal impacts to Riverside County, be equally protective of receiving water quality, and is within your Board's discretion as administrator of the NPDES MS4 Permit. This alternative language is consistent with existing federal regulations and policy and the recent findings of the State Water Resource Control Board's Storm Water Blue Ribbon Panel Report regarding the feasibility of numeric effluent limits. Further, this language is consistent with similar permit requirements in the San Francisco Bay Regional MS4 Permit (Order No. R2-2009-0074) adopted in October by the San Francisco Bay Regional Water Quality Control Board.

Reluctance to incorporating the Permittees' alternative language into the draft Tentative Order appears to be in response to a position taken by staff from US EPA Region IX. US EPA staff has indicated that the existing US EPA Headquarters guidance[4] that the Permittees are relying upon is no longer accepted. However, this guidance is still in effect. Further, this guidance has been incorporated into the draft US EPA Handbook for Developing Watershed TMDLs[5]. Finally, the recently adopted San Francisco Bay Regional NPDES MS4 Permit relied on this guidance to incorporate TMDLs in a manner consistent with our requested revision. US EPA did not challenge that MS4 Permit or refute the use of the guidance. US EPA has even drafted permits consistent with this guidance as recently as 2008[6].

The Regional Board has the discretion to adopt the revisions proposed by the Riverside County Permittees.

Ramifications of the Current Language

It is imperative that the Regional Board carefully consider the attached revisions requested by the Permittees prior to taking action on the Tentative Order. The record of the adoption of the TMDLs

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[4] Memorandum from Robert H. Wayland to USEPA Regional Water Division Directors, *Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs* (Nov. 22, 2002).

[5] See Section 5.2, page 86, December 15, 2008, U.S. Environmental Protection Agency, Office of Wetlands, Oceans & Waterways

[6] See City of Worchester Authorization to Discharge Under the National Pollutant Discharge Elimination System Draft NPDES Permit No. MAS010002, Section I.C

themselves supports the approach advocated by the Permittees, and argues strongly against the position advocated by US EPA Region IX staff. The basis for our request follows:

1) Although requiring direct compliance with the numeric WLAs may seem logical, the TMDLs for these waterbodies were adopted based on limited science and preliminary information. The WLA for the Lake Elsinore, Canyon Lake, and Middle Santa Ana River TMDLs were only intended to be "preliminary" targets subject to revision as additional science and data were collected. In the June 2004 Lake Elsinore TMDL workshop Gerry Thibeault noted that the Regional Board was being forced to take legal actions for problems that had no practical solution[7]. Robert Gearheart, academic peer reviewer of the Lake Elsinore and Canyon Lake Nutrient TMDLs on behalf of the Regional Board stated:

> "This is an example where the TMDL has no real application in terms of a likely outcome that removed the impaired water body status... I would tend to be very pessimistic in terms of being able to reverse the impaired nature of these water bodies in both the interim (2015) and final (2020) time frame"[8]

Similarly, in response to comments regarding the Middle Santa Ana River TMDL, Regional Board staff noted that economic analyses of the costs and feasibility of BMP implementation were deferred based on the expectation of TMDL revision based on the pending Basin Plan revisions proposed by the Storm Water Quality Standards Task Force.[9]

Compliance with both TMDLs was expected to result from the collection of additional data and science necessary to refine the TMDLs, the hopeful development of new and innovative BMP technologies, and pending regulatory actions yet to be adopted. All of these facts demonstrate that adopting narrative water quality based effluent limits ("WQBELs") based on the adoption and enforcement of iterative BMPs is called for, not the adoption of numeric effluent limits based on numeric WLAs that were never intended to represent the regulatory "end point" for the TMDLs.

2) Incorporating numeric effluent limits into NPDES MS4 Permits carries with it significant ramifications including mandatory minimum penalties of $3,000 per violation for non-compliance. Should the existing Waste Load Allocations not be revised in a timely manner, the Permittees could be subject to unavoidable non-compliance, excessive and unavoidable fines, and third-party litigation. This would be disruptive to the Regional Board as, in the event of third-party litigation, the pressures of discovery would impact Regional Board staff.

3) Subjecting the Permittees to numeric effluent limitations based on the preliminary Waste Load Allocations may be irreversible. Federal Clean Water Act anti-backsliding requirements are stringent, effectively preclude relaxing numeric effluent limitations incorporated into NPDES MS4 permits unless specific and limited conditions are met. Anti-backsliding can preclude amending numeric effluent limitations even if underlying water quality objectives and/or TMDL WLA requirements change. While staff has argued that the anti-backsliding requirements would not apply here, the Permittees are concerned about the risk of the requirements and also of the effort necessary to counter any enforcement lawsuit asserting the requirements brought by third parties.

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[7] See District October 13, 2004 comments regarding the LE/CL Nutrient TMDL

[8] Robert Gearhart, October 10, 2004 Comments on LE/CL TMDL.

[9] See response to Comment 11, Attachment B, June 24, 2005 Middle Santa Ana River TMDL Staff Report

4) The Regional Board has consistently supported the TMDL Task Force approach. However, the numeric WQBEL alternative could stall years of joint TMDL Task Force effort to develop science and technology to address TMDL requirements. As an example, the Lake Elsinore/Canyon Lake TMDL Task Force has been focused on implementation of innovative in-lake strategies that would address the impact on the beneficial uses directly, rather than through the indirect, lengthy, expensive and highly dubious approach of reducing watershed based sources. If the Tentative Order is adopted, however, instead of using the next five years to develop and implement in-lake alternatives and perfect a workable, yet currently unproven, lake management strategy, Permittees are concerned they would need to choose an engineering solution that focused on the most effective watershed based BMPs available to address compliance with numeric effluent limitations, which take effect through rolling average calculations this year. Such strategies include interception and diversion of flows away from the lakes, as this is the only existing technology that can guarantee long-term compliance. These diversions would ultimately reduce lake levels, and although they may lead toward compliance with the WLA, may not be sufficient to restore beneficial uses[10].

5) The WLA is not sufficiently developed to be specified as numeric effluent limitations. Numeric effluent limitations are required to be specific to individual dischargers (Permittees). The current Urban WLA is assigned jointly to the Riverside County NPDES MS4 Permittees, Phase II NPDES MS4 Permittees, Caltrans, state and federal agencies and a myriad of construction and industrial NPDES stormwater permit holders. However, the WLA assigned in this MS4 Permit is for the entire Urban WLA, not just the portion that would be applicable to the Permittees. Further, the entire Urban WLA has also been assigned in the March Air Reserve Base Storm Water Runoff Order No. R8-2009-0040, also scheduled for adoption on December 10. If the Urban WLA is enforceable numeric effluent limits, they are not consistent with the adopted TMDL as implementation of the Urban WLA would lead to a de facto exceedance of the allowable loads for Lake Elsinore and Canyon Lake. By contrast, if the WQBELs are expressed as iterative BMPs, no issues as to the numeric accuracy of the WLAs arises and there is no conflict between the requirements applicable to Permittees under the Tentative Order and to March Air Reserve Base.

6) The WLA for the Lake Elsinore/Canyon Lake TMDL is dynamic, independent of any future technology, science or regulations that develop. The WLA is subject to changes in land use and, as such, is explicitly variable. Incorporating the WLA as numeric effluent limits would place increasingly stringent requirements on the MS4 Permittees unless annual amendments to the TMDL and this Permit were conducted. Over time, the Urban WLA is expected to increase as agricultural, confined animal feeding operations (CAFO) and Open Space WLA decrease.

As previously noted, incorporation of the WLA as numeric WQBELs is not required. The Regional Board has the authority to incorporate narrative WQBELs expressed through iterative implementation of BMPs consistent with the TMDL Implementation Plan. The Permittees' attached revisions implement the narrative WQBEL approach. The attached alternative approach proposed by the Permittees is consistent with US EPA Headquarters Guidance and NPDES MS4 Permit adopted by the San Francisco Bay Regional Board in October.

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[10] See detailed comments in Attachment 7 of the District's comments submitted by Warren D. Williams.

Conclusion

Flexibility is particularly important in these times of public and private economic distress to ensure that the remaining resources are prudently utilized. Notwithstanding the economic crises, the Permittees remain committed to managing urban runoff quality to protect the beneficial uses of the receiving waters to the extent technically and financially feasible. By incorporating the TMDLs into the Tentative Order as enforceable iterative BMP implementation requirements (requirements which are consistent with the TMDL Implementation Plans) as proposed by the Permittees in the attachment, the Order would provide required flexibility to adaptively manage TMDL implementation. Faced with numeric effluent limitations, the Permittees will otherwise be required to focus monitoring and implementation away from the innovative Task Force approaches and, through application of anti-backsliding provisions, be locked into WLAs that were intended to be revised in light of developing science, changing regulations, changing land use and emerging technologies. Such a diversion would result in a waste of resources already invested in the work of the Task Forces by not only the Permittees, but also by the Regional Board.

Unfortunately, it appears that the Tentative Order goes only part way to implementing the approach developed by the Task Force by setting forth numeric WQBELs and compliance dates and then indicating that compliance may be achieved through the implementation of BMPs. This leaves the Permittees in the position potentially of both having to adopt the BMPs and then still being in violation of the Permit if the WLAs are not achieved. The apparent adoption of numeric WQBEL by the incorporation of the numeric WLAs in the middle Santa Ana River and Lake Elsinore/ Canyon Lake TMDLs is in fact infeasible because:

- Current WLA was intended to be placeholder values subject to revision by future Regional Board action and as changes to land use occurred;

- The required economic analysis of WLA feasibility was deferred until such time that sufficient data and/or other expected, yet pending, regulatory actions occurred that would amend the TMDL[11]; Permittee data provided to Regional Board staff at the Lake Elsinore/Canyon Lake TMDL adoption indicated the potential costs of watershed based BMP compliance at several billion dollars; and

- The WLA are not properly specified at a discharger-specific level.

It has been our experience that the Regional Board staff has advocated adaptive management and regulatory flexibility to resolve complex water quality problems. However, the requirements proposed in the Tentative Order preclude implementation of adaptive management and are inconsistent with the federal regulations, US EPA Headquarters and State Water Resources Control Board policy, and the recent NPDES Permit adopted by the San Francisco Bay Regional Water Quality Control Board. Further, the WLAs have not been allocated in a manner that would support establishment of numerical effluent limitations.

The Permittees request that the Regional Board exercise its discretion and revise the Tentative Order to incorporate the revisions proposed by the Permittees in Attachment 4, which clearly express the narrative Water Quality Based Effluent Approach. These revisions are consistent with federal and state law and policy, and consistent with the requirement of the State Board, that TMDL incorporation not be an "academic" exercise. Given the ramifications of this decision before you, the

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[11] See Response to Comments 11 and 61, Attachment B to the June 24, 2005 staff report (Agenda Item 17) regarding Proposed Basin Plan Amendment – Incorporate of TMDLs for Bacterial Indicators in the Middle Santa Ana River Watershed Waterbodies.

Permittees would recommend that you support this approach even over possible objections by staff and staff representatives of US EPA Region IX.

Despite this substantial concern regarding the incorporation of TMDL WLA into the Tentative Order, the Permittees do look forward to continuing our otherwise cooperative process in implementation of the program elements specified in the Tentative Order. In addition, we look forward to continuing to work with your Board in managing the water resources in the Santa Ana Region of Riverside County.