



Los Angeles Regional Water Quality Control Board

October 30, 2014

Lower San Gabriel River Watershed Management Group
(See Distribution List)

REVIEW OF THE LOWER SAN GABRIEL RIVER WATERSHED MANAGEMENT AREA DRAFT WATERSHED MANAGEMENT PROGRAM, PURSUANT TO PART VI.C OF THE LOS ANGELES COUNTY MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT (NPDES PERMIT NO. CAS004001; ORDER NO. R4-2012-0175) AND PART VII.C OF THE LONG BEACH MS4 PERMIT (NPDES PERMIT NO. CAS004003; ORDER NO. R4-2014-0024)

Dear Lower San Gabriel River Watershed Management Group:

The Regional Water Board has reviewed the draft Watershed Management Program (WMP) submitted on June 30, 2014 by the Lower San Gabriel River Watershed Management Group. This program was submitted pursuant to the provisions of NPDES Permit No. CAS004001 (Order No. R4-2012-0175), which authorizes discharges from the municipal separate storm sewer system (MS4) operated by 86 municipal Permittees within Los Angeles County (hereafter, LA County MS4 Permit). The LA County MS4 Permit allows Permittees the option to develop either a Watershed Management Program (WMP) or Enhanced Watershed Management Program (EWMP) to implement permit requirements on a watershed scale through customized strategies, control measures, and best management practices (BMPs). Development of a WMP or EWMP is voluntary and may be developed individually or collaboratively.

NPDES Permit No. CAS004003 (Order No. R4-2014-0024) authorizes MS4 discharges from the City of Long Beach (hereafter, Long Beach MS4 Permit). The Long Beach MS4 Permit similarly allows for the City of Long Beach to develop either a WMP or EWMP to implement permit requirements, with the option of collaborating with LA County MS4 Permit Permittees. For simplicity, this letter and its enclosures cite provisions in the LA County MS4 Permit, though the City of Long Beach is a member of the Lower San Gabriel River Watershed Management Group and is permitted under its own individual permit.

The purpose of a WMP or EWMP is for a Permittee to develop and implement a comprehensive and customized program to control pollutants in MS4 discharges of stormwater and non-stormwater to address the highest water quality priorities. These include complying with the required water quality outcomes of Part V.A (Receiving Water Limitations) and Part VI.E and Attachments L through R (Total Maximum Daily Load (TMDL) Provisions) of the LA County MS4 Permit. If a Permittee opts to develop a WMP or EWMP, the WMP or EWMP must meet the requirements, including conducting a Reasonable Assurance Analysis (RAA), of Part VI.C (Watershed Management Programs) of the LA County MS4 Permit and must be approved by the Regional Water Board.

As stated above, on June 30, 2014, the Lower San Gabriel River Watershed Management Group submitted a draft WMP to the Regional Water Board pursuant to Part VI.C.4.c of the LA County MS4 Permit.

The Regional Water Board has reviewed the draft WMP and has determined that, for the most part, the draft WMP includes the elements and analysis required in Part VI.C of the LA County MS4 Permit. However, some revisions to the City's draft WMP are necessary. The Regional Water Board's comments on the draft WMP, including detailed information concerning necessary revisions to the draft WMP, are found in Enclosure 1 and Enclosure 2, respectively. The LA County MS4 Permit includes a process through which necessary revisions to the draft WMP can be made (Part VI.C.4 in the LA County MS4 Permit). The process requires that a final WMP, revised to address Regional Board comments identified in the enclosures, must be submitted to the Regional Water Board not later than three months after comments are received by the Permittees on the draft program. Please make the necessary revisions to the draft WMP as identified in the enclosures to this letter and submit the revised WMP as soon as possible and no later than **January 30, 2015**.

The revised WMP must be submitted to losangeles@waterboards.ca.gov with the subject line "LA County MS4 Permit – Revised Draft Lower San Gabriel River WMP" with a copy to Ivar.Ridgeway@waterboards.ca.gov and Chris.Lopez@waterboards.ca.gov.

If the necessary revisions are not made, the Lower San Gabriel River Cities will be subject to the baseline requirements in Part VI.D of the Order and shall demonstrate compliance with receiving water limitations pursuant to Part V.A and with applicable interim and final water quality-based effluent limitations (WQBELs) in Part VI.E and Attachment P pursuant to subparts VI.E.2.d.i.(1)-(3) and VI.E.2.e.i.(1)-(3), respectively.

Until the draft Lower San Gabriel River WMP is approved, the Cities are required to:

- (a) Continue to implement all watershed control measures in its existing storm water management programs, including actions within each of the six categories of minimum control measures consistent with Title 40, Code of Federal Regulations, section 122.26(d)(2)(iv);
- (b) Continue to implement watershed control measures to eliminate non-storm water discharges through the MS4 that are a source of pollutants to receiving waters consistent with Clean Water Act section 402(p)(3)(B)(ii); and
- (c) Target implementation of watershed control measures in (a) and (b) above to address known contributions of pollutants from MS4 discharges to receiving waters.

In addition on June 30, 2014, the Lower San Gabriel River Watershed Management Group submitted a draft Coordinated Integrated Monitoring Program (CIMP) to the Regional Water Board pursuant to Part IV.C of Attachment E of the LA County MS4 Permit. The Regional Water Board review and comments on the draft CIMP will be provided under separate cover.

If you have any questions, please contact Mr. Chris Lopez of the Storm Water Permitting Unit by electronic mail at Chris.Lopez@waterboards.ca.gov or by phone at (213) 576-6674. Alternatively, you may also contact Mr. Ivar Ridgeway, Chief of the Storm Water Permitting Unit, by electronic mail at Ivar.Ridgeway@waterboards.ca.gov or by phone at (213) 620-2150.

Sincerely,



Samuel Unger, P.E.
Executive Officer

Enclosures:

- Enclosure 1 – Summary of Comments and Necessary Revisions
- Enclosure 2 – Comments on Reasonable Assurance Analysis

cc: John Hunter, John L. Hunter and Associates, Inc.

Los Angeles Regional Water Quality Control Board

**Enclosure 1 to October 30, 2014 Letter Regarding the Lower San Gabriel River Watershed
Management Group's Draft Watershed Management Program**

Summary of Comments and Necessary Revisions to Draft Watershed Management Program

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.1.d (Purpose of Watershed Management Program)</p>	<p>Section 1.1 of the draft WMP states, "the goal of these requirements is to reduce the discharge of pollutants from MS4s to the maximum extent practicable." The goal of the three permits and of a WMP is broader than presented (p. 1-1). Per Part VI.C.1.d of the LA County MS4 Permit, the goals of the Watershed Management Programs are to "... ensure that discharges from the Permittee's MS4: (i) achieve applicable water quality-based effluent limitations in Part VI.E and Attachments L through R pursuant to the corresponding compliance schedules, (ii) do not cause or contribute to exceedances of receiving water limitations in Parts V.A and VI.E and Attachments L through R, and (iii) do not include non-storm water discharges that are effectively prohibited pursuant to Part III.A. The programs shall also ensure that controls are implemented to reduce the discharge of pollutants to the maximum extent practicable (MEP) pursuant to Part IV.A.1." The revised WMP needs to acknowledge the broader goals set forth in the permit.</p>
<p>Part VI.C.5.a.ii.(1) (Category 1 Pollutants)</p>	<p>The MS4 permit requires WMPs to include the applicable numeric WQBELs for each approved TMDL within the WMA. These should be clearly listed within the WMP. They are currently identified in the RAA in Tables 5-4 and 5-5, but do not appear presented in the main document.</p>
<p>Part VI.C.5.a.ii.(2)-(3) (Categories 2 and 3 Pollutants)</p>	<p>The WMP needs to specify the applicable receiving water limitations for Category 2 water body pollutant combinations. These should be clearly listed within the WMP. It appears these are listed in Tables 2-3 to 2-11 in association with monitoring site specific summaries of exceedances of water quality objectives; however, it would provide greater clarity to also summarize them in a single table.</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.5.a.iii.(1)(a)(vii) (Source Assessment)</p>	<p>The MS4 Permit requires a map of the MS4 including major outfalls and major structural controls. Appendix H of the CIMP provides maps showing the major outfalls and Appendix D of the draft WMP provides a tabular list of existing and proposed BMPs. The revised WMP should include a map (or GIS project file) of these BMPs as well. Also, the outfall database should be submitted with the revised WMP. In addition, Section VII.A of Attachment E to the MS4 Permit requires maps of the drainage areas associated with the outfalls and these were not provided. Section 1.3.2 of the WMP does note that 107 catchments are located in the watershed, and maps showing these drainage areas should be provided. If these are not readily available, a process and timeline for developing this spatial information should be included in the revised WMP.</p>
<p>Part VI.C.5.a.iv (Watershed Control Measures)</p>	<p>Where data indicate impairment or exceedances of RWLs and the findings from the source assessment implicate discharges from the MS4, the Permit requires a strategy for controlling pollutants that is sufficient to achieve compliance as soon as possible. Although Section 3 includes a compliance strategy, the program needs to more clearly demonstrate that the compliance schedules (Section 5) ensure compliance is "as soon as possible."</p> <p>The WMP needs to provide a clear schedule that demonstrates implementation of the BMPs will achieve the required interim metal reductions by the compliance deadlines. The WMP schedule should at the least provide specificity on actions within the current and next permit terms.</p> <p>Also, given the Gateway Proposition 84 project has received funding as of May 2014, and sites have been identified for BMP installation, it would be reasonable to update the WMP to contain project milestones and implementation timeframes for projects that will be implemented under this grant.</p>

<p>LA County MS4 Permit Provision*</p>	<p>Regional Water Board Staff Comment and Necessary Revision</p>
<p>Part VI.C.5.b.iv.(5)(c) (Selection of Watershed Control Measures)</p>	<p>For waterbody-pollutant combinations not addressed by TMDLs, the MS4 Permit requires that the plan demonstrate using the reasonable assurance analysis (RAA) that the activities and control measures to be implemented will achieve applicable receiving water limitations as soon as possible. The RAA demonstrates the control measures would be adequate to comply with the limitations/deadlines for the "limiting pollutants" for TMDLs and concludes that this will ensure compliance for all other pollutants of concern. However, it does not address the question of whether compliance with limitations for pollutants not addressed by TMDLs could be achieved in a shorter time frame.</p>
<p>Part VI.C.5.b.iv.(1)(a)(ii) (Minimum Control Measures – Industrial/Commercial Facilities Program)</p>	<p>The Group proposes to alter the commercial and industrial facility inspection frequencies in Parts VI.D.6.d and VI.D.6.e of the LA County MS4 Permit.</p> <p>The proposed modification includes a prioritization process in which the member Cities rate applicable facilities as high, medium, or low priority. High priority facilities are inspected more frequently and low priority facilities are inspected less frequently. The prioritization scheme included in Figure ICF-2 prioritizes facilities by their potential water quality impact. However, the draft WMP also notes that Cities "may follow an alternative prioritization method provided it results in a similar three-tiered scheme." The revised WMP should ensure that any alternative prioritization method used by a City must also be based on water quality impact. No statement to this effect was included.</p> <p>Furthermore, the draft WMP also notes that Cities can prioritize and reprioritize facilities at any time based on their discretion. The Group should revise their draft WMP to clearly state when the initial prioritization of facilities will occur. Additionally, the Group should be explicitly clear that during any reprioritization, the ratio of low priority to high priority facilities must always remain at 3:1 or lower to maintain inspection frequencies identified in the draft WMP.</p>
<p>Part VI.C.5.b.iv.(4)(b)-(c) (Selection of Watershed Control Measures)</p>	<p>The RAA identifies potential areas for green street conversion and assumes a 30% conversion of the road length in the suitable areas; however, the specific locations and projects are not identified. Although it may not be possible to provide detailed information on specific projects at this time, the WMP should at least commit to the construction of the necessary number of projects to ensure compliance with permit requirements per applicable compliance schedules.</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.5.b.iv.(4)(d) (Watershed Control Measures – Milestones)</p>	<p>The MS4 Permit requires that the WMP provide specificity with regard to structural and non-structural BMPs, including the number, type, and location(s), etc. adequate to assess compliance. In a number of cases, additional specificity on the number, type and general location(s) of watershed control measures as well as the timing of implementation for each is needed. (Regional Water Board staff notes, for example, that many watershed control measures in the implementation schedule only reference the year (or years) that a measure or milestone will be implemented. This should be revised to include more specific and/or exact dates where appropriate.)</p> <p>Additionally, many watershed control measures in the implementation schedule are ongoing measures that are not new interim milestones (e.g. MCMs, implementation of SB 346, enhanced street sweeping, etc.). For transparency, Regional Water Board staff recommends that ongoing measures clearly be separated from interim milestones for structural controls and non-structural BMPs in the implementation schedule.</p> <p>Regional Water Board staff recognizes uncertainties may complicate establishment of specific implementation dates, however there should at least be more specificity on actions within the current and next permit terms to ensure that the following interim requirements are met: (1) a 10% reduction in metals loads during wet weather and a 30% reduction in dry weather by 2017 and (2) a 35% reduction in metals loads during wet weather and a 70% reduction during dry weather by 2020.</p>
<p>Part VI.C.5.b.iv.(4)(c) (Watershed Control Measures – SB 346 Copper Reductions)</p>	<p>The draft WMP appears to rely mostly on the phase-out of copper in automotive brake pads, via approved legislation SB 346, to achieve the necessary copper load reductions. Given the combination of other Cu sources identified in various LA TMDLs such as building materials, other vehicle wear, air deposition from fuel combustion and industrial facilities, and that SB 346 progressively phases out Cu content in brakes of new cars (5% by weight until 2021, 0.5% by weight until 2025), then other structural and non-structural BMPs may still be needed to reduce Cu loads sufficiently to achieve compliance deadlines for interim and/or final WQBELs.</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.5.b.iv.(5) (Reasonable Assurance Analysis – Limiting Pollutant)</p>	<p>The RAA identifies zinc as the limiting pollutant and notes that this pollutant will drive reductions of other pollutants.</p> <p>If the Group believes that that this approach demonstrates that activities and control measures will achieve applicable receiving water limitations, it should explicitly state and justify this for each category 1, 2, and 3 pollutant.</p>
<p>Part VI.C.5.b.iv.(5) (Reasonable Assurance Analysis – New Non-Structural Controls)</p>	<p>The draft assumes a 10% pollutant reduction from new non-structural controls. Although 10% is a modest fraction of the overall controls necessary, additional support for this assumption should be provided, particularly since the group appears to be relying almost entirely on these controls for near-term pollutant reductions to achieve early interim milestones/deadlines. Additionally, as part of the adaptive management process, the Permittees should commit to evaluate this assumption during program implementation and develop alternate controls if it becomes apparent that the assumption is not supported.</p>
<p>Part VI.C.5.b.iv.(5) (Reasonable Assurance Analysis – Irrigation Reductions)</p>	<p>For dry weather, the WMP assumes a 25% reduction in irrigation (RAA, section 7.1.2). Additional support should be provided for this assumption, particularly since the group appears to be relying almost entirely on this non-structural BMP for near-term pollutant reductions to meet early interim milestones/deadlines. Additionally, as part of the adaptive management process, the Permittees need to commit to evaluate this assumption during program implementation and develop alternate controls if it becomes apparent that the assumption is not supported.</p>
<p>Part VI.C.5.b.iv.(5) (Reasonable Assurance Analysis – Regional BMPs)</p>	<p>Section 1.4.2 of Attachment A to the RAA points out that additional potential regional BMPs were identified to provide the remaining BMP volume noted in Table 9-4. It indicates they can be found in Section 4 of the WMP (actually, they are found in Section 3). The RAA should clarify that sufficient sites were identified so that the remaining necessary BMP volume can be achieved by those sites that were not “excluded for privacy.”</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.5.b.iv.(5) (Reasonable Assurance Analysis – Permitted Industrial Facilities)</p>	<p>The draft WMP, including the RAA, excludes stormwater runoff from non-MS4 facilities within the WMA from the stormwater treatment target. In particular, industrial facilities that are permitted by the Water Boards under the Industrial General Permit or an individual stormwater permit were identified and subtracted from the treatment target.</p> <p>Regional Water Board staff recognizes that this was done with the assumption that these industrial facilities will retain their runoff and/or eliminate their cause/contribution to receiving water exceedances, as required by their respective NPDES permit. However, it is important that the Group's actions under its Industrial/Commercial Facilities Program— including tracking critical industrial sources, educating industrial facilities regarding BMP requirements, and inspecting industrial facilities—ensure that all industrial facilities are implementing BMPs as required.</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.5.b.iv.(5) (Reasonable Assurance Analysis – Caltrans Facilities)</p>	<p>The draft WMP, including the RAA, takes a similar approach for areas under the jurisdiction of the California Department of Transportation (Caltrans). Caltrans facilities that are permitted under the Caltrans MS4 permit (Order No. 2012-0011-DWQ) were also identified and subtracted from the treatment target.</p> <p>It should be noted that the Amendment to the Caltrans Permit (Order WQ 2014-0077-DWQ) includes provisions to address TMDL requirements throughout the state. Revisions to Attachment IV of the Caltrans Permit require that Caltrans prioritize all TMDLs for implementation of source control measures and BMPs, with prioritization being “consistent with the final TMDL deadlines to the extent feasible.”</p> <p>Additionally, the Caltrans Permit also includes provisions for collaborative implementation through Cooperative Implementation Agreements between Caltrans and other responsible entities to conduct work to comply with a TMDL. By contributing funds to Cooperative Implementation Agreements and/or the Cooperative Implementation Grant Program, Caltrans may receive credit for compliance units, which are needed for compliance under the Caltrans Permit.</p> <p>In a similar manner, the LA County MS4 Permit includes provisions for Permittees to control the contribution of pollutants from one portion of the shared MS4 to another portion of the MS4 through interagency agreements with other MS4 owners—such as Caltrans—to successfully implement the provisions of the Order (see Parts VI.A.2.a.viii and VI.A.4.a.iii). Therefore, the Group should ensure that it is closely coordinating with appropriate Caltrans District staff regarding the identification and implementation of watershed control measures to achieve water quality requirements (i.e. applicable Receiving Water Limitations and WQBELs).</p> <p>Regional Water Board staff recognizes that the Group has taken the initial steps for such collaboration since Caltrans participates in the Group.</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
<p>Part VI.C.5.b.iv.(4)(a) (Watershed Control Measures, page 63)</p>	<p>In Section 3.4.1.1, the draft WMP states, “[a]s recognized by the footnote in Attachment K-4 of the Permit, the Participating Agencies have entered into an Amended Consent Decree with the United States and the State of California, including the Regional Board, pursuant to which the Regional Board has released the Participating Agencies from responsibility for toxic pollutants in the Dominguez Channel and the Greater Los Angeles and Long Beach Harbors.”</p> <p>This statement misinterprets the Regional Water Board’s findings. Footnote 1 to Table K-4 of the LA County MS4 Permit states, “[t]he requirements of this Order to implement the obligations of this TMDL do not apply to a Permittee to the extent that it is determined that the Permittee has been released from that obligation pursuant to the Amended Consent Decree entered in United States v. Montrose Chemical Corp., Case No. 90-3122 AAH (JRx).” As stated in the responses to comments received on the Dominguez Channel and Greater Harbor Waters Toxic Pollutants TMDL, “...primarily one pollutant, DDT, is associated with the Superfund site and also addressed by the TMDL. The TMDL addresses numerous pollutants and utilizes a different process than Superfund. The other pollutants – heavy metals, PAHs, PCBs and other legacy pesticides are not within Superfund’s focus at the Montrose OU2 Site...”</p> <p>Further, the WQBELs in Attachment P, Part E of the LA County MS4 Permit and Part VIII.P of the Long Beach MS4 Permit are for ongoing discharges from the MS4, not for the historic contamination of the bed sediments. Therefore, the statement in the draft WMP incorrectly concludes that the aforementioned Consent Decree releases MS4 Permittees from any obligation to implement the WQBELs in the MS4 permits.</p>
<p>Part VI.C.5.b.iv.(6) (Legal Authority)</p>	<p>Appendix 7 to the draft WMP includes a copy of legal certifications for all Group members except for Long Beach. The legal certification for Long Beach should be submitted in the revised WMP.</p>

LA County MS4 Permit Provision*	Regional Water Board Staff Comment and Necessary Revision
Part VI.C.5.c (Compliance Schedules)	Page 6-1 notes that "[t]he final non-TMDL water quality standard compliance date is projected to be sometime in 2040." However, the pollutant reduction plan milestones in Section 5 only appear to go up to the year 2026. For watershed priorities related to addressing exceedances for receiving water limitations, the permit requires milestones based on measureable criteria or indicators, a schedule with dates for achieving the milestones, and a final date for achieving the receiving water limitations as soon as possible. These need to be included in the revised WMP.

* Equivalent provisions are also found in the Long Beach MS4 Permit

Los Angeles Regional Water Quality Control Board

TO: Lower San Gabriel River Watershed Management Group

FROM: C.P. Lai, Ph.D., P.E. and Thanhloan Nguyen
LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

DATE: October 30, 2014

SUBJECT: COMMENTS ON REASONABLE ASSURANCE ANALYSIS FOR LOWER SAN GABRIEL RIVER WATERSHED MANAGEMENT AREA

This memorandum contains comments on the Reasonable Assurance Analysis (RAA), dated June 6, 2014, which was submitted by the Lower San Gabriel River Watershed Management Group.

- A. General comments on the draft Reasonable Assurance Analysis section (Section 4 and Appendix A-4-1) of the Watershed Management Program.
1. The Lower San Gabriel River Watershed Management Area (LSGR WMA) is subject to interim and final water quality-based effluent limitations pursuant to Attachment P, Part A "San Gabriel River Metals and Impaired Tributaries Metals and Selenium TMDL" for both wet and dry weather conditions. The LSGR WMA is required to analyze a strategy to implement pollutant controls necessary to achieve applicable interim and final water quality-based effluent limitations for metals and selenium consistent with the interim and final implementation deadlines in the Basin Plan Amendment, Resolution No. R13-004 - Implementation Plan for the TMDLs for Metals and Selenium in the San Gabriel River and Impaired Tributaries. These include:
 - By September 30, 2017, for WQBELs applicable in wet weather a 10% reduction, and dry weather a 30% reduction in the difference between current pollutant loads and the WQBEL.
 - By September 30, 2020, for WQBELs applicable in wet weather a 35% reduction, and in dry weather a 70% reduction in the difference between current pollutant loads and the WQBEL.

As proposed in the WMP, the 10% load reduction was assumed to result from the cumulative effect of nonstructural BMPs. There is uncertainty in the ability of these BMPs to meet the required reductions by September 2017. Additional support for the anticipated pollutant load reductions from these non-structural BMPs and source control measures over the next two to three years should be provided to increase the confidence that these measures can achieve the near-term interim WQBELs by September 2017.

2. Section 5 Compliance Schedule of the draft Watershed Management Plan only provided implementation schedule for non-structural targeted control measures up to 2017. The LSGR Watershed Management Group must provide measureable milestones for implementing each one of the proposed control measures that will allow an assessment of progress toward the interim and final WQBELs and receiving water limitations every two years.
 3. LSGR WMA is also subject to Category 2 priority pollutants, including coliform bacteria. The LSGR WMP proposes to address bacteria with the same runoff reduction and stormwater capture measures proposed for Category 1 pollutants as well as ongoing implementation of minimum control measures. However, this might not be sufficient to reduce bacteria loading to the required levels. The LSGR WMP acknowledges that it will address bacteria more directly during the second and third adaptive management cycles. The LSGR WMP should include a more specific strategy to implement pollutant controls necessary to address this and other Category 2 pollutants prior to the second and third adaptive management cycles.
- B. Modeling comments regarding analysis of copper, lead, zinc, DDT, PCB, PAH, and bacteria concentrations/loads:
1. The model predicted stormwater runoff volume is used as a surrogate for required pollutant load reductions for wet weather conditions. Thus, the predicted flow volume becomes a very important parameter for evaluating required volume reductions and BMP scenarios. Based on the results of the hydrology calibration shown in Table 4-3, the error difference between modeled flow volumes and observed data is 19% for the Lower San Gabriel River. The higher error percentage could be due to the exclusion of contributions of flow volume from upstream. For calibration purposes, upstream flow volume should be included to determine whether that improves the model performance to within the "Good" or "Very Good" range, per the RAA Guidelines. Once model calibration has been completed, the upstream flow volume can then be excluded when presenting the volume reduction targets in Tables 8-3 to 8-4.
 2. While we understand that there is significant reliance on a volume-based approach, the predicted baseline concentrations and loads for all modeled pollutants of concern, including TSS, should be presented in summary tables for wet weather conditions. This model output should be available, since it is the basis for the percent reductions in pollutant load presented in Table 5-6. (See Table 5. Model Output for Both Process-based BMP Models and Empirically-based BMP Models, pages 20-21 of the RAA Guidelines).
 3. Further, the differences between baseline concentrations/loads and allowable concentrations/loads should be presented in time series for each pollutant under long-term continuous simulation and as a summary of the differences between pollutant concentrations/loads and allowable concentrations/loads for the critical wet weather period. (See Table 5. Model Output for Both Process-based BMP Models and Empirically-based BMP Models, pages 20-21 of the RAA Guidelines).
 4. We note that modeling was not conducted for organics (DDT, PCBs, and PAHs). It is not clear why these pollutants were not modeled or why previous modeling of these pollutants could not be used, such as that conducted during the development of the

Dominguez Channel and Greater LA and Long Beach Harbor Waters Toxic Pollutants TMDL. An explanation for the lack of modeling is needed.

5. The report presents the existing runoff volumes, required volume reductions and proposed volume reductions from BMP scenarios to achieve the 85th percentile, 24-hour volume retention standard for each major watershed area (e.g., LLAR, LCC and LSGR) and by jurisdiction. The same information on the runoff volume associated with the 85th percentile, 24-hour event and the proposed runoff volume reduction from each BMP scenario also needs to be presented for each modeled subbasin (e.g., a series of tables similar to 8-3 and 8-4 and 9-6 and 9-7). See Table 5 of the RAA Guidelines. Additionally, more explanation is needed as to what constitutes the “incremental” and “cumulative” critical year storm volumes in tables 9-6 and 9-7 and how these values were derived from previous tables.
6. The report needs to present the same information, if available, for non-stormwater runoff. Alternatively, the report should include a commitment to collect the necessary data in each watershed area, through the non-stormwater outfall screening and monitoring program, so that the model can be re-calibrated during the adaptive management process to better characterize non-stormwater flow volumes and to demonstrate that proposed volume retention BMPs will capture 100 percent of non-stormwater that would otherwise be discharged through the MS4 in each watershed area.
7. The ID number for each of the subwatersheds from the model input file should be provided and be shown in the simulation domain to present the geographic relationship of subwatersheds, within each watershed area, that are simulated in the LSPC model.